INTERNATIONAL ENVIRONMENTAL GOVERNANCE

Master of Arts in Law and Diplomacy Thesis

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Abstract

The potential for a systemic failure of the natural cycles that support human activities has resulted in the development of international environmental law. States, responding to calls for international cooperation, have concluded several hundred bilateral and multilateral environmental agreements. Paradoxically, scientific evidence continues to present alarming trends of environmental degradation, while choices of economic development continue to imperil the human well-being. Through an examination of efforts to create an international system of governance, this study demonstrates that the institutional arrangement for the promotion of sustainable development has failed to mitigate the crisis that is threatening the future of the planet.

The study identifies four causal factors: [1] compliance with international environmental law is weak; [2] protocols to conventions fall short of the broad objectives of environmental regimes; [3] provisions of regimes are duplicated or can contradict one another; and [4] environmental regimes fail to reflect complex natural cycles in order to explain the prevalent paradox. Applying the observations of regime theory, this study emphasizes the need for the creation of an integrated system of international environmental governance.

"Remember, we cannot buy another planet,
and our lives and those of future generations depend on this."

*Excerpt from the Children's Speech to World Leaders at the World Summit on
Sustainable Development, Johannesburg, South Africa, 2 September 2002.*

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I. Summary

The potential for a systemic failure of the natural cycles that support human activities has resulted in the development of international environmental law. States, responding to calls for international cooperation, have concluded several hundred bilateral and multilateral environmental agreements. Paradoxically, scientific evidence continues to present alarming trends of environmental degradation, while choices of economic development continue to imperil the human well-being. The study identifies four driving forces that lead to the existence of a largely weak and ineffective international institutional arrangement that has failed to reverse, or at least to mitigate, the crisis that is threatening the future of the planet. However, the contribution of international environmental law in setting environmental concerns on the international political agenda cannot be ignored. Moreover, it is recognized that it was due to the efforts to promote environmental protection that the principle of sustainable development emerged. Giving equal importance to three interlinked areas of priority, namely economic development, social cohesions and environmental protection, sustainability has the potential of bridging the striking contrasts that characterize the world today. Applying the observations of regime theory, the study emphasizes the need for the creation of an integrated system of international environmental governance. Such a system cannot merely coordinate international environmental instruments; rather it can link the environmental protection with efforts to bridge economic and social disparities that imperil the human well-being.

Realizing the complexities entailed in creating such a system of governance, States, most recently at the World Summit on Sustainable Development, have mandated

international institutions, most significantly the United Nations to determine the components of a restructured international system. International institutions, therefore, yield significant leverage in creating through both hard and soft instruments a normative framework for the promotion of the principle of sustainable development. Following the conclusion of a series of conferences organized during the 1990s, the United Nations, including its organs and programs, is undergoing a "process of reform" which aims to realize the all-encompassing commitments expressed at the Millennium Summit.

Examining these efforts, the study demonstrates that the institutional arrangement for the promotion of sustainable development has been unable to administer the required change that would translate sustainability into national action. Governments are responsive to the domestic demands of the most influential constituencies. It is for this reason that greater public participation, holding governments accountable to their claims, is considered indispensable. However, it is understood that local action could not have surfaced had the States not created the international legal and institutional framework through which nongovernmental groups can operate. In order for environmental agreements to be effective, States need to be strong in their role as authoritative architects of the normative and legal edifice within which social, political, and economic actors can interact. As a result, although influenced both by international and domestic forces, States have the ultimate authority and responsibility of shaping a new paradigm that integrates vision and action. Creating a system that will be conducive to the application of the principle of sustainable development, States have the potential of reversing the pending and imminent ecological crisis that is clouding the future of the planet.

II. Introduction

The world today is characterized by a dichotomy between wealth and poverty, education and illiteracy, obesity and famine, lavish villas and unsanitary shacks, guaranteed income and unemployment, political participation and political marginalization, peace and conflict and the list goes on. The age of globalization for some means easy travel, speedy transactions facilitated by high technology, democratic institutions, openness, and plurality. For others, it means lack of decent standards of living, dependence on an underground, unstable and uncontrolled economy, and deprivation of rights and freedoms. These striking contrasts should not be translated simplistically into a division between North and South, developed and developing, since they contain contrasts evident within the domestic framework of any country – perhaps in different forms – in all five inhabited continents. These contrasts that compose the picture of the world today, demonstrate that humanity has failed to relieve people from unnecessary suffering and struggle.

Indeed, not only has humanity failed to achieve its full potential, but also, through its choices has exerted unprecedented pressures on the global ecosystem jeopardizing the goods and services on which all human activities are dependent. For more than thirty years, scientists have been sounding the alarm regarding the health of the planet, signaling the possibility of a systemic collapse, which is already being witnessed through the extinction of flora and fauna species and the consequences of the disruption of natural cycles, such as the hydrological, carbon and nitrogen cycles. Increasing evidence indubitably confirms that the rate and magnitude of the present environmental degradation is the result of anthropogenic pressures, which include population growth and irresponsible and wasteful exploitation and use of natural resources.

Being faced with such realities, States, some more enthusiastically than others, have created domestic institutions, including a domestic regulatory framework, whose purpose is to appease the contrasts presented above. The new threats that plague humanity, however, do not respect national borders. Domestic measures by States alone are incapable of addressing these threats. International cooperation and coordination are, therefore, considered as indispensable in mitigating present threats. As a result, a series of conferences and meetings have been convened to address these new challenges that humanity is faced with. Concerns on the pace and consequences of ecological degradation led the topic of the protection of the environment to be included, rather hesitantly, in the political agenda. Consequently, a broad set of environmental rules, principles, and laws has evolved both at the domestic and the international level.

The most significant development that has evolved from these efforts, which have been taking place during the last four decades, to address present challenges is the emergence of the principle of sustainable development. Sustainable development means the ability of the ecologic, social, and economic systems to nourish literally and figuratively the human population, both present and future, ensuring that such an effort is not in the detriment of other humans, future generations or the ecosystem. It is interesting to note that although sustainability, as the principle is commonly referred to, was derived from efforts to ensure environmental protection, its endorsement by both State and non-State actors has been underway while ecological degradation persists and the economic and social disparities of the world citizenry continue to grow.

The fundamental and underlying concern that is addressed in this study is to identify the means that would induce environmental improvement while at the same time

achieve sustainable development, at the local, national, regional, and global levels. While a variety of approaches that could be applied in this endeavor exists, the focus of this study is on identifying the elements that would create an effective system of international environmental governance. This system of governance has been chosen because it was through discussions that would have focused on environmental protection alone, that the world community realized the potential of the concept of sustainable development. Promoting sustainability entails discerning and addressing the driving forces of environmental degradation and their multiple interactions rather than focusing on reversing epiphenomena, which constitute the evidence of underlying systemic failures. It is for this reason, that the integration of the principle of sustainable development is considered a strengthening factor to the efforts to create a system of environmental governance.

The first part of the study presents briefly the state of the world today, reflecting a rather gloomy picture that substantiates the urgency for an orchestrated system of environmental governance. Establishing that sustainable development serves as the commonly agreed upon doctrine, whose implementation would result in the alleviation and reversal of the current trends, the discussion continues on presenting the evolution of international environmental law during the past thirty years.

The second part of the study explains the paradox between the two trends outlined in the first section – the proliferation of international instruments to alleviate the pressures on the ecosystem and the persistent and ever more ominous degradation of the environment. Presenting four factors that have contributed to the ineffectiveness of international environmental law the section concludes by arguing that international

environmental law as it has evolved comprises a fragmented set of separate environmental regimes that fail to address the complexities and linkages, to which they are called to respond. As a result, environmental law has failed to fully integrate the most significant outcome of its evolution, the principle of sustainability.

Not surprisingly, the forum in which the shortcomings of the emerged international environmental regime have been mostly discussed is in the United Nations. Since the organs of the United Nations have been instrumental in the development of international environmental law, it is appropriate that States, as well as other actors, have brought their concerns to this body seeking greater coordination of efforts and cooperation among agencies that work on the same topic. Responding to calls for the restructuring of the UN System, the Secretary-General has initiated a process of reform to improve the capacity of the Organization to address the challenges that humanity faces. Although the reform cuts across the full agenda of the United Nations, it necessarily includes the environmental field, the process of which is presented in the third part of the study. Nevertheless, the calls for the establishment of an effective system of international environmental governance are consistent. As a result, the initiatives of the United Nations Environment Programme (UNEP) are also presented in the same section. The propositions are examined in terms of their value in addressing the present causes of the ineffectiveness of international environmental law as well as their viability given the political realities in which these changes would be adopted.

Having presented the alternatives available to the international community, that is, the international community of States, to ameliorate the present institutional arrangements, the discussion in the fourth part focuses on the World Summit on

Sustainable Development (WSSD), held in Johannesburg in August and September, 2002, which constitutes the latest effort to address the driving forces of the unsustainable trajectory on which humanity has set itself. The first observation that cannot be overlooked given the previous discussion is that the Summit focused only marginally on the question of institutional change required to oversee implementation of already agreed upon goals. In addition, the WSSD gave emphasis to the concept of partnerships, making non-State actors, credible and respected members of the international community, perhaps for the first time in a conference that hosted more that 100 heads of State and Government. In spite of the presence of political leaders, the emphasis lay on the agreement of soft provisions. It is interesting to offer a critique of whether the soft rules agreed upon could result in the creation of a system of effective environmental governance, through the Economic and Social Council of the United Nations, which is the responsible authority for the follow-up and implementation of the agreements reached in Johannesburg.

The study's final section draws from the conclusion of the earlier sections, which outlined the reasons that proposals for a system of environmental governance have been ineffective in responding to the environmental crisis that humanity faces. Unlike other analyses in the field, this study does not present a revised model of governance; rather, the fifth part of the study presents the necessary elements of a system of environmental governance.[1] It seeks to identify the conditions that would allow for international environmental law to be effective. In other words, it outlines the conditions that would

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[1] For an overview of proposals that have been introduced in order to support environmental governance see Hillary F. French, *After the Earth Summit: The Future of Environmental Governance*, Paper 107 (Washington, DC: Worldwatch Institute, 1995), 53-56; Also see discussion of the proposal for the creation of a global environmental facility in the conclusions of the study.

lead States as well as every citizen, every entrepreneur, farmer, energy producer, factory owner, businessperson, lawyer, architect, policy maker to comply with its provisions, which means translating globally agreed upon principles into national law and local action. Such a system of international environmental governance will use the complex findings of science, the dynamic character that distinguishes international environmental law, and the participation of all stakeholders in order to ensure that decisions of States, which remain the most significant actors at the international level, will not defer to the interests of distinct domestic constituencies of effective accountability.

III. Part I

    i.   A world of contrasts

During the 1990s, 94 million hectares of forested land were lost, an area equal to three times that of Italy or Egypt, resulting in the parallel loss of the ecological services that forests provide; habitat for species, prevention of soil erosion, control of water runoff, among others.[2] More than 70% of this previously forested area was converted permanently to agricultural land, where extensive and inefficient farming and irrigation practices will lead to waterlogging, salinization, and alkanization. Such changes in land use, in addition to pollution, unsustainable harvesting, the introduction of exotic species and climate change have lead to considerable loss in biological diversity, which includes species, genetic, and ecosystem diversity. The estimates of biodiversity loss remain considerably uncertain, since a full account of the diversity of life on the planet has not been completed. Indicatively, the *Red List of Threatened Species* includes 11,167 threatened species, of which 5,611 are plants. In addition, 24% of mammals, 12% of birds, and 30% of fish species are regarded as globally threatened, while 811 species are considered extinct or extinct in the wild.

At the same time, 80 countries, representing 40% of the world's population, that is 2.5 billion people, are water stressed. Freshwater resources are polluted, unsustainably managed and degraded. While the share of rural families with access to safe water has grown more than fivefold during the last thirty years, 1.1 billion people, equal to the

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[2] The data used in this section can be found in the World Bank's *World Development Report 2003: Sustainable Development in a Dynamic World*; UNEP's *GEO: Global Environmental Outlook 3: Past, Present and Future Perspective*s; UNDP's *Human Development Report 2001: Making New Technologies World for Human Development* and *Human Development Report 2002: Deepening Democracy in a*

population of India or to the combined population of the United States, the European Union, Russia, Canada, Japan and Indonesia, lack access to safe drinking water and 2.4 billion people, equal to the combined population of India and China, lack access to adequate sanitation.

Human settlements pose significant pressures on local environments creating ecological as well as social repercussions. For example, marine environments have been degraded, as more than a third of the world population lives within 60km of the coastline. The degradation is evidenced by the increased levels of eutrophication and toxicity in coastal areas, produced by sewage contamination and agricultural runoff, among other sources of pollution. Furthermore, more than 1 billion people live in regions prone to further environmental degradation; 500 million people in developing countries live in arid regions without access to irrigation systems. In addition, 400 million people live in areas were the soil is unsuitable for agriculture, 200 million in slope-dominated areas, and 130 million in fragile forest ecosystems.

The growth of cities around the world presents another example of the impact that human settlements have on the ecological and social quality of life. Today almost half of the world's population are urban dwellers, 70% of whom live in Africa, Asia and Latin America. Unplanned urbanization leads to the congregation of people in areas without adequate provisions for their needs contributing to increasing levels of unemployment, poverty, inadequate provision of urban services, overburdening of existing infrastructure, lack of housing, land, finance and environmental degradation. Urban slums, which account for 837 million people, create hygienic and health threats. Furthermore, although

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Fragmented World and IUCN's *Red List of Threatened Species 2002*. Specific note is made if the source used is different from the reports included in this note.

air pollutant emissions have declined or stabilized in most industrialized countries, air pollution continues to plague cities in developing countries, most strikingly in Asia. Present urbanization trends will most likely persist in the upcoming decades resulting in 65% of the world population living in large urban centers by 2050. It is significant to note, also, that 2.2 million people in both rural and urban areas die annually from indoor air pollution.

In the meantime, the chemical composition of the atmosphere continues to be changed by anthropogenic activities. The Antarctic stratospheric ozone hole covered more than 28 million km^3, a record high level, in September 2000. Nevertheless, there is evidence to suggest that, if all countries adhere to the provisions agreed upon within the international ozone regime, the ozone layer would recover to pre-1980 levels by the middle of the 21st century. At the same time, however, emissions of greenhouse gases continue to grow contributing to climate change, whose impacts are already evident and overwhelming. Some link the increased frequency of hydrometeorological disasters, which led to the death of 90% of those killed in natural disasters in the 1990s, with changes in the climatic balance of the planet.

One of the driving forces that has created the environmental crisis humanity is faced with is linked to the unprecedented increase of the world population, exceeding today 6.2 billion.[3] Only 40 years ago the population was 3 billion.[4] This strikingly short doubling time constitutes the reason for concern regarding population growth.[5] Only

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[3]United Nations Population Fund, *The State of the World Population 2002: people, poverty, possibilities: making development work for the poor* (New York: UNFPA, 2002), 72.
[4] United Nations Population Fund, The State of the *World Population 2001: Footprints and Milestones: Populations and Environmental Change* (New York: UNFPA, 2001), 1.
[5] J.J. Rischard, *High Noon: Twenty Global Problems, Twenty Years to Solve Them* (New York, Basic Books, 2002), 5.

within the span of the last decade the world population increased by one billion.[6] Today,

the world population continues to grow although at slower rates, and in varying rates in

each country and region, compared to earlier decades.[7] Nevertheless, although indications

suggest that the present trends of population growth will continue, reaching an

unprecedented absolute number of people before beginning to decline, we cannot assert

whether the population will have leveled off by 2020, 2050 or 2100 since projecting

population increase is an impossible task.

While the population demonstrates a trend of continuing growth, natural resources

continue to be exploited, degraded and depleted. The growing realization of the existence

of "limits to growth", leads to the daunting challenge of determining the number of

people which the planet can adequately nourish without degrading the very conditions

that sustain life on the planet.[8] In other words, the population level that can live on the

planet without overwhelming the carrying capacity of the planet remains uncertain.[9]

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[6] United Nations Population Fund, *The State of the World Population 1999: 6 Billion – A Time for Choices* (New York: UNFPA, 1999).
[7] United Nations Population Fund, *"The State of the World Population 2001"*, 2.
[8] Donella H. Meadows, et al., *The Limits to Growth* (New York: Universe Books, 1972).
[9] The notion of carrying capacity was first presented by Thomas Malthus (*An Essay on the Principle of Population*, 1798) who was mostly concerned with the impact and the pressures that the significant increase of population witnessed at his time would impose on agricultural production. Significantly, Malthus did not account in his studies for the possibility of technological input into the agricultural sector or the possibility of addition of nutrients to the ground. The idea of the "green revolution" was not included in his discourse. Technological innovation has allowed many more hectares of land to become available for agricultural use, mostly by increasing the intensity of agricultural mechanization in existing arable land. The basic premise of Malthus, that there might be limits to the maximum levels of agricultural yield and healthy produce, nevertheless might be true. Indeed, in spite of the possibility for increasing yields per acre, no additional land remains accessible for harvesting purposes, unless it is the result of abrupt land use change. Being faced with the existence of limits, the new paradigm tries to identify solutions that will allow human development, which is not to be confused with economic growth to proceed without degrading the ecosystem balance. Technological innovation continues proposing solutions to overcome the persistent conditions of hunger and malnourishment in many areas of the world. However, the risks of genetic interferences with humanity's food sources are high. Indeed, the experience of the chemical interference to the food chain, through the application of pesticides and fertilizers, has demonstrated already the range of effects that such impositions can create. The effort to manipulate the carrying capacity of the planet should be cautious of potential consequences that might lead to the creation, instead of the alleviation, of new pressures on nature.

Understandably perhaps, some would argue that the carrying capacity has already been reached, since the preponderance of evidence presents declining levels of the quality of human and environmental condition.

While humans have the ability to take space tours, communicate instantaneously via the Internet and through cell phone and travel to any corner of the world in only a few hours bridging distances of thousands of kilometers, more than two thirds of the world's population lives in suffering. Indeed, 2.8 billion people live on less than $2/day. While countries' efforts, most significant in China, to alleviate poverty elevated 200 million people from extreme poverty, 1.2 billion people, that is one fifth of the world's population, continue to earn less than $1/day. Furthermore, despite the progress made in East and South Asia, the level of poverty in Sub-Saharan Africa continues to rise steadily. Demonstrating the world of contrasts we live in, it is significant, also, to notice that in developed countries, 130 million people, equal to the population of Japan or almost half of the population of the United States, live in income poverty, that is with less than 50% of median income, and 34 million people remain unemployed. Indeed, although the contrasts presented given the data available are translated simplistically into a division between North and South, they contain contrasts evident within the domestic framework of any country, developed or developing.

Although humanity can be proud of many of its accomplishments it has failed to use its full potential, leaving in misery a significant number of its members. In 1998, 163 million children, under the age of five were underweight in developing countries. Even in developed countries, where obesity is being viewed as a serious symptom of over-consumption, 8 million people were undernourished. Famine accounts for 42% of the

deaths due to natural disasters but only for 4% of the economic damage of natural disasters over the past decade, while earthquakes, which account for 30% of estimated damage, are responsible for only 9% of all fatalities. Such observations illustrate that there are crises around the world, which although devastating in human terms, might not appear as significant in mere economic terms.

Although children born today are likely to live 8 years longer than those born 30 years ago, 11 million children per year, or 30,000 children per day, under the age of five die from preventable diseases. In addition, in spite of successfully eliminating small-pox and river blindness which devastated communities in earlier decades, today, almost 40 million people live with HIV/AIDS, 34 million of which are in developing countries. In Botswana, a third of the adult population is infected, while in Swaziland and Zimbabwe more than a quarter of the population has the disease. Being surrounded by death, as the adults slowly die off, young people are devastated psychologically, thinking of their future in terms of weeks and months, instead of years. Indeed, in Africa, life expectancy in some countries remains at only 49 years.

At the same time, adult literacy has increased from 47% in 1970 to 73% in 1999. However, 854 million adults, 543 million of which were women remained illiterate in 2000. The same year, 325 million children, of which more than half girls, were out of school at the primary and secondary levels. Even in developed countries, during the period 1994-1998, 15% of the adult population lacked functional literacy.

Such distressing disparities are evident at the same time as economic activities, which account for a gross world product of more than 30 trillion dollars, become increasingly globalized, transcending boundaries bringing goods and, to a smaller extent,

services in areas whose physical distance in earlier decades would not allow them to have any substantive links to the rest of the world. High income countries, with 15% of the world population, account for more than 80% of this world product, while low income countries, with 40% of the world's population, account for only 3% and low and middle income countries together, with more than 80% of the world's population, account for 20%. Moreover, data on the value of world trade flow, which equals more than 12 trillion dollars, illustrates that to a large extent low income countries continue to remain in the periphery of trade activities, since they account for only 400 billion dollars, or 3.3% of the world trade flow, while high income countries account for than 9 trillion dollars, or 75%. Furthermore, the gross national income of high income countries is more than 24 times that of low income countries and 4 times that of low and middle income countries combined. Presently, the richest 20 countries have an average income 37 times larger than the income of the poorest 20 countries. Moreover, the purchasing power per capita in high income countries is 13 and 7 times greater than that in low and low and middle income countries together, respectively. It should be noted, however, that inequality is widening both within and between countries. The contrast perhaps is most striking when one considers that the richest 5% of the world's population has 114 times the income of the poorest 5%.

The presentation of these statistics serves to emphasize the acute contrasts that shape the world today. Unequal access to power, discrimination in and marginalization from the political process, and civic repression should also be added to the list of socioeconomic pressures that restrict individuals and communities to employ available opportunities that would guarantee them their security. In other words, international

challenges today are not merely threats to the national security of a State, but also are threats to human security, which is interpreted to mean fundamental freedom of fear and want. Conventionally, threats to human security have been addressed by applying an approach that is confined by a framework that is perceived as appropriate for the solution of each separate problem. However, it is important to recognize the connections that link what are seemingly distinct problems. Poverty, malnutrition, political marginalization and environmental stress are too often found in the same areas affecting the same group of people. Trying to respond to one challenge without recognizing the inherent linkages between social, economic and environmental problems is tantamount to adopting a piecemeal approach that will contribute to only minute improvement of the particular condition. In the recent years, protesters in Seattle, Washington, and Genoa, having identified the shortcoming of the existing system, point out that the past four decades of development policies, despite sporadic evidence of success, provides plentiful examples of attempts to alleviate human suffering resulting in the creation of greater contrasts, both in absolute and relative terms. As they gather from distant places around the world, to protest the proceedings of meetings, whose outcomes will influence global development, they request that the political authorities recognize these failed attempts of the past and recommend that they strive to adopt a revised system of governance that would reflect an integrated and comprehensive approach to the threats we face.

ii.   The principle of sustainable development and the evolution of international environmental law

Seeking to identify an approach that would take into account the plurality of challenges and their complex interconnections, the concept of sustainable development was born as a policy guideline for policy-making that will contribute to the alleviation of the pressures that both humanity and the global ecosystem have been burdened with. Sustainable development means the ability of the ecologic, social, and economic systems to nourish literally and figuratively the human population, both present and future, ensuring that such an effort is not in the detriment of other humans, future generations or the ecosystem. The implementation of the principle of sustainability as a guiding framework of decision-making requires the existence of an international system of cooperation among State and non-state actors. As a result, it is no surprise that the forum in which discussion on determining the means to achieve sustainability has been the United Nations. The inclusion of socio-economic provisions in the Charter of the United Nations shows the early recognition by States that international cooperation is instrumental in creating a world of peace, dignity and freedom.[10]

The need for international coordination of policies became evident as scientific findings confirmed that the depletion of natural resources transcends national borders. Furthermore, scientific study and analysis provided data that demonstrated that environmental degradation was not only transboundary, but also could acquire regional and global dimensions. As environmental research became more sophisticated, the

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[10] Provisions for the role of the United Nations in the field of economic development and human security, and implicitly environmental protection, derives from the mandate granted to the international organization in the Preamble, Article 1 and Chapter IX of the *Charter of the United Nations*. http://www.un.org/aboutun/charter.

evidence collected suggested the existence of ecological interconnections that had not been understood earlier. Illustratively, the correlation and causation of increased carbon dioxide (CO_2) concentration in the atmosphere and the increases in global temperature was supported by data collected in remote Hawaii by Charles David Keeling for a period of several decades, starting in 1957. His findings complemented by additional research introduced to the international political agenda what might perhaps be the greatest challenge that humanity has yet to face: climate change. Indeed, as our conception of the complexities of the ecosystem broadens, our knowledge of the dynamic nature system expands leading to the identification of additional forces that exert pressures on the global ecosystem. Most significantly, it is becoming increasingly clear that human activities have been responsible for the changes that scientists are in the process of detecting and understanding. Despite existing scientific ambiguity regarding ecosystem dynamics, the preponderance of scientific evidence presents, without doubt, that the global ecosystem is presently severely impacted by human activity. As a result, decision-makers, recognizing the significance of addressing the environmental challenge humanity is facing, have initiated through the United Nations the development of a new sub field of International Law, namely, international environmental law.

It should be noted that the efforts of policy-makers and international lawyers, has now been complemented by a new field of economics, namely environmental economics, which has tried to estimate the value of ecological services, services that are absolutely necessary in order for humanity to survive.[11] Although such a task is difficult, and full of uncertainties and approximations, it provides an additional impetus to convincing

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[11] Gretchen C. Daily et al., "Ecosystem Services: Benefits Supplied to Human Societies by Natural Ecosystems," *Issues in Ecology* 2 (Spring 1997).

decision-makers that the costs of avoiding environmental commitments are enormous. By implementing measures that are designed to promote the protection of the environment and, therefore, conserve the services provided by nature, society is saving on resources that instead could be used to address socioeconomic pressures. Environmental economists have estimated the annual value of ecological services to be approximately $33 trillion. It is perhaps not surprising that this amount is of the same magnitude as the gross world product, demonstrating the dependence of human activity on natural services.[12] Although moral and ethical arguments should also be included when presenting the case for the responsibility that present generations have to protect the sources that create and nourish life on the planet, while providing the foundations of all human activities, the mere economic cost of replacing ecological services with technological means justifies international action for the protection of the environment. Such a conclusion, however, is incomplete since, although viable technological solutions could be found, substitutes to the ecological services can generate additional harmful consequences. Due to our limited understanding of the system dynamics that govern the global ecosystem the application of new methods may create negative repercussions that were not initially envisioned, demonstrating the weakness of strict technological optimism. The principle of sustainability, therefore, requires a change of present human activities rather than relying on the potential of technical solution. Focusing on efforts to achieve international environmental protection, the principle can strengthen the effectiveness of environmental law while at the same time contribute to the amelioration of the human condition.

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[12] Robert Constanza et al., "The Value of the World's Ecosystem Services and Natural Capital," *Nature* 387 (15 May 1997): 253-260.

In spite of evidence of international environmental law in earlier decades, the United Nations Conference on the Human Environment, held in Stockholm in 1972, is widely considered as the first attempt to develop global guiding principles for addressing the, already, evident environmental degradation.[13] As a result, the 1972 Conference and, more precisely, the Stockholm Declaration, the final document which includes the agreed upon principles, serve as landmarks for the integration of issues of environmental protection into the agendas of international fora and into the United Nations, in particular. The Stockholm Conference had a monumental impact as it triggered the codification of legal instruments to protect the environment.

Indeed, since the completion of the Stockholm conference there has been a proliferation of international treaties that address the common environmental challenges that humanity faces. The treaties that were agreed upon shortly following the Conference constitute efforts to address problems of pollution, which is reflective of the priorities of the constituents of the most influential states, namely those of the industrialized North, where the environmental movement had ripened to such an extent that its priorities were already included within domestic legislation, for example through the Clean Water Act of 1972 in the United States. Indicatively, the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter was also completed in 1972. During this period, environmental organizations were undergoing transition from nature protection societies supported mainly by privileged elites, in the tradition of the romantic

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[13] Records demonstrate that the first treaty of environmental character was a regulatory regime on fishing in the Rhine adopted in 1885. Patricia Birnie W. and Alan Boyle E., *International Law and the Environment* (Oxford: Oxford University Press, 1992), 425. Although this is considered as the first international agreement, it should be recognized that environmental concerns have been included historically in domestic political and legal developments. Indicatively in 1273 an English statute was passed against air pollution. Mostafa K. Tolba, *Global Environmental Diplomacy: Negotiating Environmental Agreements for the World, 1973-1992* (Cambridge, MA: The MIT Press, 1998), 11.

ecology that characterized the poetry of William Wordsworth (1770-1850), to international political actors whose missions are not bound by state boundaries. Their membership is multinational. Their budget is almost equal to that of the United Nations Environment Programme, which was founded at the Stockholm Conference.[14] Such organizations used emblem-species, such as whales, or what are today termed as charismatic megafauna, in an effort to attract supporters to their note of alarm regarding the future of the planet and influence decision-makers.[15] Their efforts were influential on the adoption of the Convention on Wetlands of International Importance Especially as Waterfowl Habitats, known as the Ramsar Convention, which was adopted in 1971 and the Convention on International Trade in Endangered Species of Wild Fauna and Flora, which was adopted in 1973, as well as the moratorium on commercial whaling which was agreed upon by the International Whaling Commission in 1982.

The Stockholm Conference also marked the birth of the United Nations Environment Programme, which is to serve as a catalyst of environmental activities throughout the United Nations System.[16] UNEP has had a less significant impact on reversing deteriorating environmental trends than one would anticipate given the central role it holds as the only authority within the United Nations with a genuine environmental

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[14] Paul Wapner, "Governance in Civil Society," in *Global Governance: Drawing Insights from the Environmental Experience*, ed. Oran R. Young (Cambridge, MA: The MIT Press, 1997), 76.

[15] During the United Nations Conference on Human Environment non-governmental organizations paraded with an inflatable whale through the streets of Stockholm influencing decision makers in adopting a resolution that advocated for a moratorium on commercial whaling. The whale was perceived in the particular setting also as symbol of the endangered biological resources of the planet. Peter J. Stoett, *The International Politics of Whaling* (Vancouver: UBC Press, 1997), 65.

[16] One of the most significant contributions of UNEP has been the collection, assessment and dissemination of information regarding the health of the global environment. Through Earthwatch and in particular through programs such as the Global Environment Monitoring System (GEMS) and the International Referral system for Sources of Environmental Information (INFOTERRA) as well as topic or region specific initiatives, such as the International Register of Potentially Toxic Chemicals (IRPTC) and the World Conservation and Monitoring Center (WCMC), UNEP has contributed to the understanding of the

focus. As UNEP forms an integral part of the United Nations System, it enjoys broad State membership, allowing the institution to take a lead on those threats that cannot be resolved by national efforts alone as they transcend national borders or are beyond the jurisdiction of any one state, and, therefore, are part of the global commons. Limited funding and the remote location of its headquarters, in Nairobi, qualify as two of the central reasons due to which the organization has partially failed to fulfill its mandate.[17] Nevertheless, and, in spite of its shortcomings, UNEP has consistently initiated and supported international negotiations, which have resulted in the development of international environmental law.

These international treaties adopted under the auspices of UNEP should be viewed as complementary to the ever-growing number of bilateral and regional environmental agreements, which mostly concentrate on resolving transboundary pollution disputes or facilitating the management of shared natural resources, and usually originate from initiatives that lie outside of the United Nations. It should be noted, however, that other international organizations have also contributed to the development of environmental treaties. For example, the United Nations Economic Commission for Europe contributed to the development of the 1979 Convention on Long-Range Transboundary Air Pollution, while the International Law Commission of the United Nations codified the 1997 United Nations Convention on the Law of the Non-navigational Uses of International Watercourses. Moreover, some environmental agreements have emerged from the revision of preexisting international legal regimes, which did not necessarily have an environmental scope, such as The Convention on the

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ecological complexities that are under threat today. Most recently, UNEP established the United Nations Environment Network, an online database, which can be found at: http://www.unep.net.

Conservation of Antarctic Marine Living Resources, the International Whaling Commission and most fisheries treaties.

Negotiators of environmental agreements, noting the need to adjust the initially agreed upon treaty to new and additional scientific findings, have included provisions for future adjustments and revisions of the initially agreed upon text. Consequently, environmental agreements are often vague and general constructing the framework on which a new international regime can be built through the adoption of amendments or protocols. To agree on additional provisions required as well to review the impact a particular treaty has had on mitigating the environmental threat that it is called to address, States, having ratified a treaty, meet periodically, usually on an annual or biennial basis. The Conference of the Parties, as this assembly of States is usually referred to, constitutes a continuous forum, in which parties are able to negotiate the adjustments required. In addition to States, which retain their central role in the international arena, other actors, such as environmental organizations, representatives of civil society, and scientists share their expertise on the particular topic addressed ensuring that a diverse range of perspectives is included in the decision-making process. Their participatory role has been unprecedented in encouraging the establishment of a holistic, comprehensive system, which reflects the interests of all parties, or stakeholders. Such a process creates not only additional binding protocols but also generates a set of principles that are commonly agreed upon by those participating in the development of each regime. It is, therefore, appropriate that environmental conventions are referred to as "framework conventions", a term that it is almost peculiar to international environmental agreements.

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[17] Hillary F. French, *After the Earth Summit*, 29.

Furthermore, environmental agreements usually provide for the establishment of Secretariats or Offices, as well as subsidiary bodies, to ensure that in between the meetings of the parties, the environmental regime continues operating. Although each Secretariat has its distinct mandate, the role of convention offices is to monitor the implementation of and promote compliance with the treaty provisions. At the same time, through dissemination of information and technological advancement Secretariats facilitate member States to fulfill their commitments to the particular agreement. In other words, the environmental treaty-making process is being designed is such a way as to advance the greatest level of State compliance, since without universal participation in an international environmental treaty the reversal of the present environmental crisis would constitute a Herculean task.

The realization of the need for additional international cooperation in achieving environmental protection became evident when UNEP assessed the improvement of the global environment a decade after the Stockholm meeting. Although air and water quality in developed countries had slowly been ameliorated through the adoption of domestic and regional agreements, the global commons were degrading, while the developing countries were faced with the consequences of their efforts to attain the goals elaborated in the New International Economic Order doctrine. Intensive industrialization led to severe exploitation of resources, which was justified in order for Southern economies to enter the world economy. The Cold War dynamics focused minimum attention on environmental concerns, leading to the degradation of regions of the world that were already suffering from lack of development and poverty. During the 1980s, it became evident that environmental problems were broader than initially conceived, crossing

national boundaries and affecting the global commons.[18] Stockholm had been successful in recognizing two contesting priorities: the need for development espoused mostly by the newly independent countries of the global South and the need for environmental protection articulated by the countries of the global North. However, it was not able to bridge the gap between the two priorities except in spreading the seeds for the formulation of the term sustainable development, which thirty years later, as was demonstrated at the recent World Summit on Sustainable Development, has become a recognized priority of the world community, despite the persistent debate among States on the means of achieving this goal.

The follow-up conference to the Stockholm meeting held twenty years later in Rio de Janeiro, tried once more to balance the calls for economic development and environmental protection. During the United Nations Conference on Environment and Development, referred to commonly as the Rio Earth Summit, strong divisions between the interests of industrialized and developing countries were manifested, in regard to the global threats with which the planet is faced. Nevertheless, participants, who were inspired by the optimistic ambiance of the end of the Cold War and the victory of multilateralism that marked the post-Persian Gulf War world, were able to strike a balance between the positions of the global North and the global South. The agreement, expressed in the Rio Declaration, endorsed the principle of sustainable development, which was first introduced by the Brundtland World Commission on Environment and

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[18] For an evaluation of the decade following the Stockholm Conference see Robin Clarke and Lloyd Timberlake, *Stockholm Plus Ten: Promises, Promises? The decade since the UN Environment Conference* (London: Earthscan, 1982). It is interesting to note that within this first evaluation there are references to sustainable development and sustainable use of natural resources, as well as clear recognition of the relation between poverty and environmental degradation, while recognizing that greater responsibility lies with the industrialized countries, a concept that has developed into the principle of common but differentiated responsibilities.

Development in its final report, *Our Common Future*, completed in 1987.[19] The formal definition of the principle of sustainability presented in the Brundtland report is "the development that meets the needs of the present without compromising the ability of future generations to meet their own needs." Since 1987, a broader and more appropriate understanding of the principle has identified three pillars of sustainability, that is, three areas in which concerted and integrated efforts are required, namely environmental protection, social and economic development. As a result, sustainable development, as is used in this study, means the ability of the ecologic, social, and economic systems to nourish literally and figuratively the human population, both present and future, ensuring that such an effort is not in the detriment of other humans, future generations or the ecosystem.

It is important to note that the declarations, including the Stockholm and Rio Declarations, that are generated in the United Nations conference and are later on adopted in the form of resolution by the General Assembly of the United Nations, are not binding international treaties. Indeed, guidelines, rules, and resolutions do not form part of binding law; rather, they form part of what is referred to as soft law.[20] Soft rules, as these suggestions, principles, and declarations, are often termed, create norms of behavior that respond to concerns expressed by other actors in the international arena, including international governmental and non-governmental organizations. As the process matures, provisions that were initially considered as soft law, by virtue of evidence of State practice, can be crystallized as customary law, which in turn can become codified in an

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[19] World Commission on Environment and Development, *Our Common Future* (Oxford, Oxford University Press, 1987).

[20] Edith Brown Weiss, ed. *International Compliance with Nonbinding Accords* (Washington, DC: The American Society of International Law, 1997), 3-7. Patricia Birnie, "International Environmental Law: Its

international treaty, as evidenced by the proliferation of environmental treaties following both the Stockholm and the Rio UN Conferences. In other words, these normative agreements constitute the foundation for the drafting of binding international treaties. As a result the leverage of soft law lies with its potential to becoming law. By creating a sense of obligation, these expressions of commitments made at United Nations conferences, are perceived by most States as instruments that need to be complied with as if they were binding. Studying the past thirty years of the development of international environmental law, since the completion of the Stockholm Conference, considerable progress has been made, as most countries, developed or developing, have established Environment Ministries, following the recommendation of non-binding final documents of the Conference. Furthermore, international agencies such as the World Bank and other multilateral and bilateral institutions conform, at least in principle, with these soft instruments, creating an additional motive for State observation of and compliance with these provisions.

The significance of soft instruments can be demonstrated further by the seriousness with which States participate in negotiations and the tone of their statements during the deliberation of the Conferences that produce these documents, including the proceedings of the United Nations General Assembly, whose resolutions constitute part of soft law, rather than binding hard law. Initiating a discourse whose conclusions are non-binding allows for flexibility and innovation during the deliberations. It is significant to note that members of the civil society have been influential in elevating the role of soft law in the decision-making process, as actions of States, both at the domestic and the

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Adequacy for Present and Future Needs," in eds. Andrew Hurrell and Benedict Kingsbury, *The International Politics of the Environment* (New York: Oxford University Press, 1992), 51-84.

international levels, are scrutinized and held accountable based on their positions in the development of soft rules. Indeed, discussing potential resolutions to a particular problem serves as an affirmation by the States that they recognize the importance of the addressing the issue at hand. The fact that that environmental meetings, which have witnessed the greatest presence of Head of States and Governments, and have generated the Stockholm, Rio and, most recently, the Johannesburg rules serve as evidence of the role of soft law in the development of international environmental law.

International environmental law, whether through binding or non-binding provisions, has been successful in elevating environmental concerns within the global political agenda. Contrary to thirty years ago, when the Stockholm Conference had been organized, today environmental problems have been recognized as deeming immediate and orchestrated responses. Moreover, environmental law, in order to ensure universal compliance with its provisions as it tries to safeguard the global ecosystem has been able to integrate within its provisions concerns of economic development that affect equally the human well-being in the North as well as in the South. By endorsing the principle of sustainable development, earlier resistance to environmental protection, due to fears of impeding development priorities, has been reduced to some extent. Nevertheless, as will be shown in the following section, reaching this agreement has not resulted in improvement of the state of the world, since implementation of sustainable development has not been realized.

iii.   Relevance of regime theory

Having noted the significance of soft rules and the impact of norm-creating processes facilitates the application of regime theory in understanding the development of framework environmental conventions, rather than stagnant treaties for the resolutions of environmental concerns. In the introductory section of this study, it became evident that human activities impose additional complexities to an already interlinked natural cycle. As a result, international environmental law, whether developed within the United Nations System or not, moves beyond responding to the complex ecological threats and seeks to address the driving forces that lead to environmental degradation, calling for changes in economic activities and societal preferences.

Regimes constitute institutions – a concept that should not be equated with the term organizations – which share commonly agreed upon principles and norms, rules, and decision-making procedures that govern the interactions of actors in a specific topic.[21] Environmental agreements, which are designed in such a way as to include provisions for change and continuous interaction of state actors, complemented by the increasing participation of non-state actors, can be regarded as regimes dealing with a particular environmental concern. The Conferences of the Parties should be perceived as forums that allow for the interactions to occur while the Secretariats and Offices can be viewed as international organizations that support the particular regime.[22] The structure of the environmental conventions that incorporates provisions for revisions which are agreed upon following vigorous dialogue and a sophisticated bargaining process, renders the use

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[21] For a discussion of international regimes see Marc A. Levy, et al., "The Study of International Regimes," *European Journal of International Relations* 1 (1995): 267-330.

of regime theory as appropriate in our discussion of the political character of the negotiations.

Indeed, it should be remembered that environmental negotiations often entail political and economic dimensions that are much broader than the immediate context of the environmental problem being addressed. At the same time, it is often the case that due to the nature of ecological threats, which permeate across economic and political fields, environmental agreements require that changes occur within established economic and political traditions, engaging participants of various fields and disciplines during the negotiations. Understandably, therefore, it is appropriate to refer to an established climate change regime, a revised whaling regime, a failed fisheries regimes and a developing chemicals regime, to list only a few examples of a growing list of environmental regimes that require that numerous and diverse actors participate and agree on new rules and processes in order to mitigate imminent crises.[23]

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[22] Helmut Breitmeier, "International Organizations and the Creation of Environmental Regimes," in ed. Oran. R. Young *Global Governance: Drawing Insights*, 88.

[23] Although the concept regime could be limited to the institutions that derive from the adoption of a specific treaty, such as the International Convention for the Regulation of Whaling, it can also be applied to describe a group of environmental agreements and their institutions, such as the biodiversity or the chemicals regime. The coherence of the regime is dependent on the level of cooperation between the different institutions that compose it. Calestous Juma, "Sustainable Development and Institutional Change: Challenges and Options for Improving International Environmental Governance" in eds. Guri Bang Søfting, et al., *The Brundtland Commission's Report – 10 Years*. (Oslo, Scandinavian University Press, 1998), 140-141.

IV. Part II

   i.   Effectiveness of international environmental regimes

In spite of claims of 18th and 19th century theorists that the introduction of mechanized processes, which led to the Industrial Revolution, would free humans from the limits of nature, humans remain confined by their environmental surrounding. Actually, it seems that as humans confront limits to growth, enlightenment ideas that humans form part of a well-tuned clock which continues to tick despite human activity guided by the laws of nature are being rediscovered. Indeed, impressed by the potential of human reason in articulating the universal laws of nature, such as the three laws of motion elaborated by Isaac Newton in his *Principia* (*Mathematical Principles of Natural Philosophy, 1687),* as well as, other natural philosophers of the late Renaissance period, thinkers of the 18th century tried to identify the laws that govern human society. The enlightenment period, which witnessed the birth of modern political and economic theory, was dependent on a rational understanding of the functions of nature. The "invisible hand" of the economy, namely the natural forces of demand and supply, presented by Adam Smith (*Inquiry in to the Nature and Causes of the Wealth of* Nations, 1776) is inspired by the identification of otherwise unseen forces that orchestrate nature's magnificent balance – a balance we are in the process of upsetting. In addition to not being able to "dominate" nature, humanity has failed to provide adequate goods and services to the growing world population so that it would ensure individual dignity to all its members. Today, social and economic disparities are present both between and within States, creating additional pressures and challenges that the legal system, in spite of its efforts, has not been able to mitigate. Indeed, despite the proliferation of international environmental treaties, which today number approximately 500 agreements, the

environmental degradation persists while the goals of sustainable development have become more difficult to meet.[24] In other words, the effectiveness of the environmental regimes has been weak in reducing the threats they are called to address.

The effectiveness of a regime can be measured by evaluating whether the regime has had a direct impact on changing social behavior as well as by a qualitative assessment of the type and adequacy of this behavioral change in resolving, reversing, or at least mitigating the specific problem it was called to address.[25] In order to make such an assessment, it is important to understand as comprehensively as possible the full extent of the esoteric dynamics of the natural ecosystem, as this reacts to the equally complex economic and social forces that humanity has imposed on it. Evaluating effectiveness in this manner is a very difficult task.[26] Nevertheless, continuous efforts should be made to evaluate whether environmental treaties have an impact on environmental improvement, since even successful compliance with and implementation of the provisions of a treaty might be inadequate in resolving the environmental challenge. It is for this reason, that scientific research should consistently and continuously make its findings known illustrating to decision-makers the breadth and width of the gap of knowledge surrounding our understanding of the ecological system dynamics.

Before addressing in more detail the question of ineffectiveness, it is important to consider an argument presented mostly by neo-classical economists, who suggest that

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[24] According to the United Nations Environment Program, "there are more than 500 international treaties and other agreements related to the environment, of which 323 are regional. Nearly 60 per cent, or 302, date from the period between 1972, the year of the Stockholm Conference, and the present." *International Environmental Governance: Report of the Executive Director.* Open-Ended Intergovernmental Group of Ministers or Their Representatives on International Environmental Governance. New York, 4 April, 2001. (UNEP/IGM/1/2).

[25] Olav Schram Stokke, "Regimes as Governance Systems," in ed. Oran R. Young *Global Governance: Drawing Insights*, 34-35.

environmental degradation is inevitable as economic growth priorities are pursued by developing countries. Applying what is conventionally referred to as the environmental Kuznets curve, economists argue that increase in income leads to short term environmental degradation. Having bypassed a particular threshold annual income level per capita, usually at approximately $5,000 - 6,000, economists argue, the trend is reversed towards environmental protection.[27] These economists argue for a non-interventionist approach to environmental concerns, grounding their conviction to the fact that increasing income levels accompanied by increases in education will lead to greater regulation, and, therefore, to environmental improvement. The observation by these theorists is accurate in linking poverty to environmental problems. Indeed, poverty leads to further exploitation of natural resources. However, access to these resources is limited, resulting in an inequitable distribution and in further social disparities – a vicious cycle that is best exemplified by the increasing marginalization of the poor in remote and environmentally strained regions, such as the margins of the Sahara in Africa, or the steep slopes along the Yangtze River in China, among other examples including the non-hygienic congregation of the urban poor in compacted slums.[28]

Countering, therefore, the conclusion reached by this group of economists, it is interesting to note, that, in spite of efforts for economic development, the gap between

[26] Oran R. Young, "Rights, Rules and Resources in World Affairs," in ed. Oran R. Young *Global Governance: Drawing Insights*, 13.

[27] For a general discussion of the Environmental Kuznets Curve see Gene M. Grossman and Alan B. Krueger, "Economic Growth and the Environment," *The Quarterly Journal of Economics* 110 no 2 (May 1995): 353-377; Theodore Panayotou, *Economic Growth and the Environment* Harvard University, CID Working Paper no. 56, (July 2000). It should be noted that there are few instances such as air pollution, for which the observations of this group of economists may be reflective of actual trends. However, to generalize that higher incomes will automatically generate an improved environmental protection system contradicts substantiated and well documented cases of environmental degradation.

[28] Paul Harrison, *The Third Revolution: environment, population and a sustainable world* (New York: St. Martin's Press: 1992), 127-139; UNHCR, "The Environment: A Critical Time," *Refugees* 2 no. 127 (2002).

the privileged and the destitute has been widening rather than narrowing – at least in absolute terms, and in many cases in relative terms as well. In other words, humans are degrading the environment while not offering any substantial improvement to the living standards of those that actually need it. Consequently, the fundamental moral dilemma that decision-makers are faced with is whether to ignore the present conditions and await for a solution to arise naturally at a later stage of development or to identify the process and introduce regulatory mechanisms that would reverse the present trends and could ultimately lead to the attainment of sustainable development.

Observing the practice of States, it seems that even in the most austere or corrupt systems of government, the ruling authority will claim that it is providing at least modest services to the population even if such demagogy serves no other reason but merely to appease potential disruptive forces. In any political system, either as a direct response to the demands of the public or merely as a survival tactic of those in power, governments will claim that their policies address the fundamental needs of their people. While governments may be corrupt and reflective of the immediate interest of the privileged elite, the domestic political pressures in any country will not allow policy-makers to completely ignore social problems. In most democratic political systems, the electorate is able to influence, more directly, the role of the state in providing social welfare. An accountable democratic political structure represents the concerns of the people and acts to address them. Taking for granted that a healthy environment, including access to clean water and air, and a nutritious diet, constitutes a precondition for meeting fundamental human needs, environmental measures will be considered, even though not necessarily provided, in any country, in spite of its level of economic growth. In other words, the

argument presented by economists that environmental protection enters the radar screen of policy-makers only after a certain level of affluence has been reached, assumes that concern for the environment is irrelevant to attaining development goals. However, the principle of sustainable development strongly affirms that unless economic activities consider the ecological balances in which they operate, the long-term result of the efforts will be reduced as the costs of environmental degradation could outweigh the short term benefits resulting from focusing strictly on meeting economic targets. However, it is fully understood that the proclamations of any government do not necessarily mirror its acts, which often are in complete contrast and opposition to goals set in a public setting.

Even if we follow the argument presented by economists and assume that regulation will be adopted at some point, there is no evidence to indicate that the environmental degradation created by unsustainable practices will be easily reversible. Indeed, the experience of polluting practices in the industrialized countries, demonstrates that environmental degradation incurs large costs to polluters and society, making the argument of a life-cycle – a holistic – approach to development essential. The industrializing process that has been taking place during the past two centuries illustrates that the decisions made by a country have an impact beyond the natural resources within its own territory. They have such detrimental consequences that are almost impossible to reverse, such as upsetting the chemical composition of the atmosphere, without changing the fundamental premises that guide present production and consumption patterns. Being faced with such threats, national efforts alone are unable to reverse global trends, making the case for immediate and effective international agreements even stronger. In other words, since the scale and range of consequences of unsustainable development are

already witnessed, there is no rational argument in obligating countries to follow the trends of the past, instead of providing them with the opportunity to bypass these obstacles and forge ahead based on revised assumptions.[29]

In addition, the introduction of regulation without the parallel institutionalization of compliance, implementation and enforcement measures can result in a hollow effect on environmental quality. Indeed, the international community is witnessing that States, in spite of their assertions, are, in reality, unwilling or unable to fulfill the sustainability obligations to which they have committed. Hence, the assumptions made by these economists, who claim that market forces will provide the social and political will to introduce change, are flawed. Instead, it is argued that by providing incentives for States to partake in the development of international treaties and, most significantly, by assisting States in the implementation process, international environmental regimes can be effective in generating the change in social behavior needed to foster a parallel fair development process and environmental improvement. In other words, compliance with and implementation of international environmental law, which constitutes a dynamic entity that allows for the incorporation of additional societal concerns, can effectuate the transition to a sustainable future. In other worlds, international environmental law can be effective in flattening the Kuznets curve by preventing environmental degradation and allowing for economic development, while increasing the level of international

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[29] The basis of this argument is founded in the ideas presented by those that believe that technological innovation can help developing countries adopt a new strategy for development. The revised approach would replace the current paradigm which assumes that developing countries should follow the path of industrialization that originated in 19th century Britain, in other words, the gradual application of technologies that have been proven to be detrimental either to the health of the workers, the general public, or to the surrounding environment. The revised paradigm, suggests that developing countries could learn from the development process of the North and adopt the latest and cleaner technologies. This transition to practices that are more sustainable is referred to as leapfrogging, since it allows developing countries to break from the path marked by industrialized countries.

cooperation. International environmental law creates the framework within which States can act in order to meet the goals of sustainable development they have agreed upon.

ii. Ineffectiveness of international environmental law in reversing environmental degradation

In spite of such arguments on the inherency of environmental degradation within the context of economic development, States, demonstrating that in spite of their economic level consider environmental problems, have already committed to taking action in operationalizing the principle of sustainable development. Presently, however, humanity is faced with a paradox. While States, under the influence and with the assistance of other actors in the international arena, most notably environmental non-governmental organizations, continue to negotiate and agree upon environmental regimes to address environmental degradation, the threats to the environment persist, making the possibility of a systemic failure of the ecological cycles imminent. Indeed, recent scientific evidence provides us with abundant evidence that these efforts have not been successful in mitigating the present environmental crisis. The most notable example of the failure of international efforts and the classic example of a tragedy of the commons is the continuous depletion of the global fisheries around the world. In spite of a series of treaties, including the United Nations Law of the Sea, and numerous regional as well as species-specific conventions, to prevent over-fishing of the world's seas and ocean, species of fish continue to become endangered, while the capacity of fisheries in terms of fleets and equipment, has rendered the legal efforts to mitigate the present threats moot.[30] In other words, environmental law has been ineffective in meeting its main objective, that

is, to provide the means that would improve overall environmental quality, while alleviating the pressures that jeopardize it. The following section provides an examination of the causes of this paradoxical situation with which the international community is now faced.

a.   Compliance with international environmental law is weak

One of the most significant reasons that has led to an ineffective environmental regime is the fact that State compliance with international environmental agreements has been weak. Prior to determining the factors that lead to non-compliance with environmental agreements, it is important to comprehend the meaning of the term as it is used in this study. Compliance with the provisions of a treaty acquires a broader meaning than the mere signing on and ratification of an agreement. As a result, a country is considered to be compliant with an international environmental treaty if it moves beyond the mere introduction of domestic legal measures at the national legislative body of the particular country. Compliance with international agreements requires the establishment of the means of implementing the provisions of the treaty at both the national and local levels and the institution of enforcement mechanisms – in the form of both carrots and sticks– to assure that individuals, firms, and the government itself act in conformity with the regime's provisions. Compliance, therefore, assumes the technical requirements of State endorsement of a treaty and examines further whether this endorsement has led to a change in the domestic institutional provisions that would facilitate the change of

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[30] Patricia W. Birnie and Alan E. Boyle, *International Law and the Environment*, 538-542.

behavior required in order for a treaty to become effective in reversing deleterious global environmental trends.[31]

Although several hundred environmental treaties have entered into force during the past thirty years, having been adopted by a majority of the 191 countries that comprise the United Nations today, compliance with their provisions has been lax. The reasons that lead to this paradoxical situation reflect the fact that principles, commonly agreed upon, can be ignored by those that, at least in the short-term benefit from the source of environmental degradation.[32] Due to the fact that the deleterious consequences of what seem to be rational decisions of specific states, the degradation of the global environment can be best described as a tragedy of the commons, an approach elaborated first by Garrett Hardin in 1968.[33] In other words, the actors that are politically more powerful or economically more influential have the leverage to block the process towards reversing environmental degradation, since it is only with universal participation that environmental agreements can become effective. The structure of the international legal order as it stands today, allows for free riders to prosper, since a State reinforcing its sovereignty can choose to ignore international rules and norms with impunity, in the absence of an enforcement authority above the State to ensure compliance with agreed upon provisions. In such a system, a country is free to act in furtherance of its own short-term interests, regardless of the implications these activities may have on other members of the so called international community, as well as of the long-term consequences the State itself may incur.

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[31] For discussion of the definition of compliance with international environmental law see Edith Brown Weiss and Harold K. Jacobson, eds., *Engaging Countries: Strengthening Compliance with International Environmental Accords* (Cambridge, MA: The MIT Press, 1998), 2-18.

The case of non-compliance with agreements at the international level due to the relevant leverage of a particular country is exemplified in the case of the climate change regime, in which the United States can ignore with impunity the calls of survival expressed by the small island states, which are the politically and economically most marginalized in the international arena. The United States, which accounts for the greatest level of human induced CO_2 emissions, has declined to ratify the Kyoto Protocol to the United Nations Framework Convention on Climate Change (UNFCCC). As a result, while being a party to the UNFCCC, which envisions the introduction of a additional measures in order to mitigate climate change, the United States, continuing to profit from the combustion of fossil fuels, refuses to reduce its emissions to 7% lower than its 1990 level of emissions, becoming the most significant contributor to upsetting the delicate chemical balance that regulates our climate system.

Moreover, and in accordance with the definition of compliance provided above, it is evident that in spite of the fact that countries are parties to international conventions their domestic policies are in contrast to the commitments made at the international level. The Convention on Biological Diversity serves as an additional example of non-compliance since countries, which have already adopted the Convention have acted in defiance of its provisions, having granted only limited resources to *in-situ* conservation, which constitutes the most fundamental form of conservation, since it designates parks and areas of protection within the borders of each state. Only a few areas around the world have been identified as protected, while alien species continue to be introduced and, most significantly, the rate of extinction of species has all but been curtailed. States

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[32] Ioli Christopoulou, *Compliance with International Environmental Law*, Senior Honors Thesis (South Hadley, MA: Mount Holyoke College, 2001), not published.

have not complied with the main objective of the Convention which is to be attained most fundamentally through the adoption of national strategies that will allow for conservation measures to be integrated with economic decisions. However, the economic interests of those exploiting the biological diversity of the planet, whether it is logging firms destroying the rich tropical rainforest ecosystems, plantation farmers limiting the species diversity of food grains, or biotechnological corporations jeopardizing the genetic diversity of life systems, have prevailed over the commitments espoused by 186 countries.[34] Lobbying forces that represent those who benefit, at least in the short term, from activities that are environmentally unsound, exert significant pressure on the domestic political process requesting that international obligations be sidelined in exchange of partisan loyalty. As a result, States, instead of acting as trustees of the public goods, including the health of the natural environment, are paralyzed by the specific interests of influential stakeholders.

Since the environment has no political voice in either the domestic or the international political system its supporters, usually in the form of non-governmental organizations, have tried to emphasize the need for stewardship of the natural resources. Although it was shown earlier that their actions have proven influential in the past, more often than not, these groups are politically marginalized as they often constitute the outcasts of the political process. Examples include the indigenous communities of the rainforests, the traditional farmers and other wardens of nature. When marginalized groups organize in accordance with internationally agreed upon principles to oppose

[33] Garrett Hardin, "The Tragedy of the Commons," *Science* 162 (1968): 1243-1248.
[34] The member-States of the United Nations that have not ratified the Convention are: Andorra, Brunei-Darussalam, Iraq, Thailand, Tuvalu, and the United States of America. The Convention on Biological Diversity. http://www.biodiv.org/world/parties.asp.

large infrastructure projects, such as the construction of large dams or oil pipelines, they are faced with State brutality and violence that serves the interests of those benefiting from the short-term but lavish returns of these investments. This is particularly true in countries characterized by limited accountability, restricted public participation and lack of transparency. In such countries, those not belonging to the ruling circles are marginalized, discriminated against and often persecuted with impunity, since they are granted no access to political or judicial institutions. However, such practices can be found also in democratic countries, where, for example, waste, often toxic or nuclear, is dumped in the neighborhoods of the least powerful members of the political systems, including minority and immigrant populations, which have no voice in the political process, giving rise to what has become known in the United States as the "environmental justice" movement and led to the adoption of the Convention on Access to Information, Public Participation, in Decision-Making and Access to Justice in Environmental Matters (Aarhus Convention), among the members of the United Nations Economic Commission for Europe in 1998.

b. *Protocols to conventions fall short of the broad objectives of environmental regimes*

An additional factor to weak compliance that results in the evident ineffectiveness of international environmental law lies with the nature of objectives of international treaties, to which negotiators, trying to reach a global consensus, agree upon. An illustrative example of the shortcomings of the objective of a particular regime can be found by examining the development of the climate change regime. The Kyoto Protocol,

agreed upon in 1997, to the 1992 United Nations Framework Convention on Climate Change will require a 5.2% global reduction of greenhouse gases emissions by industrialized countries from 1990 levels, when it enters into force. However, such a reduction will not reverse the climate change process that is already underway, since States in effect are given the right to continue to increase their overall greenhouse gas emissions. In contrast to this development, the objective of the UNFCCC, presented in Article 2, is to stabilize the concentration of greenhouse gases in the atmosphere at levels that would prevent anthropogenic interference with the climatic system in a way that could jeopardize human and natural well-being. Indicatively, the lower level of emissions targeted by the Kyoto Protocol is not adequate to meet this objective since already by the year 1990, the chemical imbalances of the atmosphere acting as driving forces of climate change were well underway and CO_2 levels have long exceeded the historical natural average CO_2 concentration in the atmosphere of 280 parts per million (ppm).

In other words, "compliance effectiveness", that is, meeting the Kyoto provisions, which, as demonstrated in the previous section, is weak, cannot be equated with "result effectiveness", which in this particular case would entail stabilizing greenhouse gases and, if not reversing climate change, at least, mitigating its impact.[35] At the same time, it is increasingly recognized, especially by delegates of the developing countries, that the Kyoto Protocol, even if its targets are met, will not revoke the trends of climate change that the scientific community have asserted. As a result, at the recent Conference of the Parties in New Delhi, in October 2002, discussions focused on adaptation to climate change, as an immediate concern not only of the small island states, but of all developing

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[35] M. J. Peterson, "International Organizations and the Implementation of Environmental Regimes," in ed. Oran R. Young *Global Governance: Drawing Insights*, 116.

countries, which are considered to be the most vulnerable to the climatic changes, due to their lack of resources to respond to extreme weather conditions. The proposals that were reached at the latest COP tried to balance the long-term need to mitigate climate change, with the increasingly accepted reality of change that necessitates adaptation to the new conditions.[36] It should be noted that this conclusion is not intended to negate the significance and contribution of the Kyoto Protocol, especially following the clarification of the compliance mechanisms agreed in Marrakech in October, 2001.[37] On the contrary, as it has already been discussed, the advantages of the convention-protocol approach allow for further revision of the specific treaty requirements. Indeed, the 5.2% reduction of emissions by the 2008-2012 period, if achieved will serve as a vote of confidence for the regulatory process. The significance of the Marrakech Accords is considerable, since until this final agreement was reached, the meaning, nature, or the processes of enforcement, regulation and monitoring of the implementation mechanisms identified under the Kyoto Protocol had not been clarified. With this agreement, the Parties to the Kyoto Protocol have agreed on a rulebook based on which they will act following the entry into force of the Protocol.

Other examples of conventions whose protocols do not serve the objectives set at the framework conventions can be found, most notably in the Cartagena Protocol on Biosafety to the Convention on Biological Diversity which consumed the efforts of the COPs for six years, resulting in the elaboration of an instrument that reflects only a specific set of interests, rather that trying to reach the objectives of the Convention as a

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[36] *The Delhi Ministerial Declaration on Climate Change and Sustainable Development.* Advanced United Copy (Decision _/CP.8) http://unfccc.int/cop8/latest/1_cpl6rev1.pdf.
[37] *The Marrakech Accords* and *The Marrakech Declaration.* (Advanced unedited version) http://unfccc.int/cop7/documents/accords_draft.pdf.

whole. The Protocol, whose mode of development and adoption is illustrative of the dynamic nature of international environmental law, does not constitute an implementation instrument of the Convention, in the way that the Kyoto Protocol establishes mechanisms in order for Parties to the UNFCCC to meet the mutually agreed upon goals of greenhouse gas reduction. The Cartagena Protocol consists of an elaboration on a particular aspect of biodiversity, that is, biosafety, which entails the safe transfer, handling and use of living modified organisms that may have a negative effect on biodiversity – an aspect that does not necessarily constitute a priority within the context of the objectives of the Convention.[38] However, it should be noted, that the objective of the Convention is expressed in such broad terms that unless a series of protocols are negotiated to agree upon specific measures that are needed, the Convention will continue to be ineffective in protecting the invaluable resources that it tries to conserve.

c.   *Provisions of regimes are duplicated or contradict one another*

Moreover, even result effectiveness as it pertains to meeting the particular objectives of a specific regime is not an adequate measure of the overall effectiveness of international environmental law, which requires communication and cooperation both at the international and the domestic levels. The first impediment to such cooperation is largely administrative and related to the location of environmental organizations. The Secretariats of environmental regimes are spread in different cities, including in Nairobi, Montreal, and Bonn, among others, which, even in the age of improved

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[38] Alexander Kiss and Dinah Shelton, *International Environmental Law*, (Ardsley, NY: Transnational

telecommunications, creates an obstacle to direct communication among offices whose mandate falls within the same broad category of environmental concerns. Moreover, the meetings of the Conference of the Parties are held at different times and places, leading to a lack of coordination among efforts adopted by separate environmental conventions. States, most significantly developing countries, are particularly aggravated by the proliferation of meetings and conferences. Limited resources available to them are sacrificed in order to meet these bureaucratic and administrative obligations, setting them at a clear comparative disadvantage when trying to comply with the agreed upon provisions. However and, perhaps, most importantly, there is also frustration with the level of lack of coordination among Secretariats regarding the completion of separate national reports for each Convention that a country is Party to. Often, these reports require States to submit similar information, but under different formats. Indeed, Secretariats tend to focus only on improvements within the confines of the specific topic they were assigned, ignoring, consciously or not, the developments in other environmental regimes. As a result, provisions of regimes are duplicated or contradict one another resulting in a wasteful use of modest resources that could be used to improve effectively the state of the global ecosystem. Such unnecessary bureaucratic nuisances have sprung up due to the proliferation of environmental conventions as well as due to the lack of an overarching environmental authority that can ensure compatibility among requirements set by each Convention.

In addition, most environmental conventions have separate scientific and technical advisory boards, which do not necessarily communicate with one another. This situation has contributed to a fragmentation of knowledge, analysis and discourse of

environmental studies. This lack of a cross-discipline holistic approach leads to a misunderstanding of the complexities that formulate the dynamic global ecosystem. As a result, the implementation of a particular regime, although successful in reversing deteriorating trends that led to the creation of the peculiar problem that is addressed, might have adverse consequences on another environmental problem, due to the interlinkages of the global ecosystem, which may have been identified had a more constructive system of communication been elaborated. It should not be surprising, therefore, that the legal instruments agreed upon and the political measures adopted are reflective of this divergence of focus, epitomizing the need for synchronization of both scientific and political endeavors that would allow the reintegration of natural and social sciences providing a good foundation for the attainment of effective environmental law.

The implementation of the Montreal Protocol on Substances that Deplete the Ozone Layer and its amendments, which advocates for the use of hydro-chlorofluorocarbons (HCFCs) as substitutes to the chlorofluorocarbons (CFCs) that deplete the stratospheric ozone constitute an example of the creation of a negative feedback effect. Although these substances were promoted by the chemical industry as non ozone-depleting chemicals, HCFCs contribute to climate change as they act as heat absorbent gases, similar to water vapor, CO_2 and methane (CH_4). In other words, even though the ozone regime has been considered a success because of the impressive levels of compliance with the provisions of the regime, and the potential of delaying the depletion rates of the stratospheric ozone – meeting both the compliance and result effectiveness criteria – the chemical substitutes contribute in the aggravation of the climate change threat. Indeed, HCFCs have been included in the list of greenhouse gases

whose emissions need to be reduced through the implementation of the Kyoto Protocol. Although provisions for the elimination of HCFCs have been included both in the Copenhagen and the Beijing amendments, demonstrating that the Montreal Protocol is agile in responding to new scientific evidence, the crisis would have been avoided, had their been an full-cycle analysis of the alternatives available to the ozone-depleting CFCs.[39] Strict adherence to the objectives of a particular regime, without considering their impact on the overall ecosystem, therefore, does not serve as an adequate guide to effectiveness, as it does not account for unforeseen or unpredicted consequences.

d.   Environmental regimes fail to reflect complex natural cycles

A further indication of the incapacity of the international political system to create institutional arrangements that take into consideration the variety of factors that influence change is based on the disinclination to follow a particular problem through the dynamics of its natural cycle. Climate change modeling has enabled scientists as well as policy-makers, for whom this constitutes a rather innovative thinking approach, to view ecosystems as comprehensive and integrated cycles, or more appropriately as dynamic systems, rather than as a compilation of independent events, usually with a life-span that extends well beyond the next electoral challenge.[40] The models used in climate change have encouraged the study of other natural cycles, such as the nitrogen cycle.

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[39] Gareth Porter, Janet Welsh Brown, and Pamela S. Chasek, *Global Environmental Politics*, 3rd ed. (Boulder, Colorado: Westview Press, 2000), 87-93.
[40] For a broader discussion of the contribution that scientific findings and, in particular, large-scale ecology can make in decision-making process, see Fred Bosselman, "What Lawmakers can Learn from Large-scale Ecology," *Journal of Land Use and Environmental Law* 17 (Spring 2002): 207-325.

Naturally occurring nitrogen, an essential element for life, is insufficient to meet increasing human needs. The development of chemical studies in the early 20th century, however, allowed for the tapping of nitrogen from the atmosphere – nitrogen accounts for 80% of the atmospheric chemical composition – to be introduced in food production as a fertilizer. This development has been critical in providing the nutritional needs of millions of people. However, its introduction has led to severe regional and global consequences, including acid rain, smog, climate change, coastal eutrophication, stratospheric ozone depletion among others. As noted earlier in the study, several domestic and international legal instruments have been developed since the early 1970s to address each of these problems separately. Many have been significantly successful, as for example the decrease of smog levels in most urban environments in North America and Europe, while the problem of air pollution remains present in South America and Africa and continues to grow at significant rates in Asia. In addition, important steps have been taken to curtail release of nitrogen from industrial production and gas emissions reducing the impact of acid rain in temperate forests.[41]

However, little attention has been given to the interconnections of these problems, which are evident as one studies the movement of reactive nitrogen through a variety of natural ecosystems after it has been produced in the chemical plant, creating what has been identified as the "nitrogen cascade".[42] It is perhaps understandable, therefore, that although several measures have been adopted to mitigate the pressures exerted by the overabundance of reactive nitrogen on the global ecosystem, no framework convention

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[41] See, for example, the 1979 United Nations Convention on Long-Range Transboundary Air Pollution and its 1988 Protocol Concerning the Control of Emissions of Nitrogen Oxides. http://www.unece.org/env/lrtap/.

on nitrogen exists. Indeed, each regime focuses on the peculiarities of the particular aspect of the nitrogen crisis it is called to deal with ignoring both the driving forces that have led to the emergence of the particular threat and the full impact of the artificial increase of nitrogen in nature. In other words, each of the separate regimes that presently exist to address one of the problems created by the excess of nitrogen in the global ecosystem fails to address the nitrogen crisis as a whole. Indeed, it is for this reason that the Nitrogen Initiative advocates for a comprehensive assessment of the combined human impact on the nitrogen cycle through a profound and integrated understanding of both nitrogen science and management.[43]

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[42] James A. Galloway and Ellis B. Cowling, "Reactive Nitrogen and the World: 200 Years of Change," *Ambio: A Journal of the Human Environment* 31 no. 2, (March 2002): 64-71.
[43] James Galloway and Kilaparti Ramakrishna, *The Nitrogen Initiative: An Ad-hoc Group of Experts on Nitrogen,* 2002. Also, see "Reactive Nitrogen," *Ambio: A Journal of the Human Environment* 31 no. 2 (March 2002).

V. Part III.

    i.   The need for an international environmental governance

The discussion of the driving forces of the paradox of the proliferation of environmental agreements and the concomitant degradation of the environment demonstrates the weaknesses of the present international legal system. Although creating environmental regimes rather than static treaties constitutes revolutionary progress within the context of international law, the analysis shows that each regime evolves independently of the other, resulting in a compartmentalization of environmental law. In other words, within the broad realm of international environmental law, specialization on one issue, while providing expertise on the particular topic, has led to a loss of focus on the larger objective of contributing to one of the three pillars of sustainability – environmental protection.

Similar to the way that regime theory analysis facilitated the study of the effectiveness of specific regimes, conclusions drawn from this discipline can also be applied more broadly, as the focus of study is placed on the integration of efforts that have evolved autonomously. Observations drawn from regime theory can apply to the study of international environmental law perceived as one entity, in other words, as a system of international environmental governance, that is comprised of specialized institutions and a multitude of actors that interact within, through, and because of these institutions, rather than merely as a set of independent treaties. Such a conceptualization is pertinent given the influential role of commonly agreed upon principles and declarations, as well as the emerging recognition of the need to adopt a model of thinking

that can encompass dynamic interrelations at the natural, social, political and economic levels. It should be noted, however, that until recently, the focus of regime theory was in the formation of institutions rather than the examination of their success in meeting the objectives that led to their creation, a task that could perhaps be measured through the calculations of physical scientists. Nevertheless, political and social sciences can be applied in determining the factors necessary in order for progress to be achieved. As a result, regime theory is applied in this study, mostly as a reference framework of the potential that social institutions can have in changing practices that although conventionally accepted are proven to have a destructive impact.

Before elaborating on the efforts that have already been made in reforming the existing system of environmental governance, however, it should be noted that a series of studies have emerged recently identifying means that could strengthen international environmental law. Proposals include an improved system of negotiation of international agreements,[44] a greater understanding of the domestic forces that influence implementation of international obligations,[45] and an examination of both internal and external factors that affect compliance with environmental agreements,[46] among other recommendations. The identification of the reasons that lead States not to comply with environmental regimes has contributed to the elaboration of different options available to States in order to enhance their ability to implement specific provisions to which they have been bound. In other words, the conclusions of these studies provide alternative pathways that States can follow to improve their record with regard to specific

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[44] See Lawrence E. Susskind, *Environmental Diplomacy: Negotiating More Effective Global Agreements* (New York: Oxford University Press, 1994).
[45] David G. Victor, et al., eds., *The Implementation and Effectiveness of International Environmental Commitments: Theory and Practice* (Cambridge, MA: The MIT Press, 1998).

environmental agreements. In spite of their profoundly important contribution, these analyses do not focus on addressing the compartmentalization of international environmental law, which is one of the central and most pressing shortcomings of this sub-field of international law. Hence, a distinction should be drawn between improving the effectiveness of specific environmental treaties and strengthening international environmental governance.

International environmental governance is perceived as a dynamic whole that encompasses the numerous environmental regimes that have specific mandates and objectives, in addition to other institutions that form the mechanisms through which States and non-State actors interact in order to achieve environmental protection, and by extension, promote sustainable development. Given this broad understanding, the revised system of environmental governance requires an improved process of international policy-making that reflects inherent interconnections between ecological and socioeconomic challenges, while recognizing the political realities of the 21st century. Such a decision-making process requires autonomous regimes to coordinate their activities taking into consideration dynamics of natural systems that have not been fully understood by science. An improved structure of environmental governance that will eliminate contradiction between environmental treaties, allow for orchestrated reporting, while adopting an ecosystem approach when considering policy recommendation, proposals that serve as mere indications of potential improvements, can be conducive to making international environmental governance an effective contributor to achieving the objectives encompassed in the principle of sustainable development. In other words, the focus should be on determining the required structural elements of a system that can

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[46] Edith Brown Weiss and Harold K. Jacobson, eds., *Engaging Countries*.

facilitate States to translate into national and local policy the commitments they have made at the international level in a way that will improve the environmental condition of the planet while supporting activities that are necessary in meeting economic and social priorities.

The discussion on improved environmental governance emerged at the international level, most significantly within the framework of the United Nations, following the realization that the conclusion of the Rio Earth Summit served little in reversing the downward spiral of the emergence of additional contrasts that were first noted as early as 1972, during the Stockholm Conference. However, it should be recognized that as international discussions, mostly within UNEP, on environmental governance intensified, during the late 1990s, international environmental law had acquired already an accepted status within the international legal order. Even though environmental protection remained in the periphery of high politics, environmental policy had been validated within the realm of international relations as is evidenced by the fact that most environmental treaties have more than a hundred Parties – a demonstration of an international consensus on the need to address ecological challenges.

Throughout the decade of the 1990s, active members of civil society, most significantly environmental non-governmental organizations, had galvanized constituencies around the world, seeking for additional commitments to protect natural resources. Responding to these pressures, States negotiated new environmental treaties and protocols to address a broad range of environmental threats including desertification, exposure to chemicals, and exploitation of genetic resources, among others.[47] In other

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[47] The Convention on Combating Desertification in Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa was signed in 1994, entering into force in 1996. The Kyoto Protocol

words, the decade following the Earth Summit witnessed both the consolidation of international environmental law, which was developing in a rapid pace, and its compartmentalization into separate regimes that acted independently.[48] During this decade, the United Nations Environment Programme, despite its contribution in distributing information regarding and raising awareness of the need for institutional arrangements for the protection of the environment, was sidelined in terms of the evolution of instruments for the international protection of the environment, as each regime had developed its own institutions, which progressed dynamically and independently. Each regime has developed into an autonomous institution, which, being designed to continuously evolve through the decisions of the respective COPs, has greater clout in shaping State behavior than UNEP, whose decisions are largely consultative rather than directive. As a result, UNEP had lost its role as the central environmental authority within the United Nations system, a role it is trying to reassert as will be demonstrated in the following sections.[49]

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to the United Nations Framework Convention on Climate Change was signed in December 1997, while the Cartagena Biosafety Protocol to the Convention on Biological Diversity was signed in January 2000. Moreover, the United Nations Convention on the Law of the Non-navigational Uses of International Watercourses was completed by the International Law Commission in May 1997.

[48] Vep P. Nanda, "Environment," in ed. Christopher C. Joyner, *The United Nations and International Law* (New York, NY: Cambridge University Press, 1997), 307.

[49] It should be remembered, however, that, as was noted earlier, UNEP, through its Montevideo Programme, which was established in 1981, followed through its commitment to develop international environmental law in three areas of priority: prevention of marine pollution from land-based sources, protection of the stratospheric ozone and the handling and disposal of toxic wastes during the 1980s. The focus is here with the situation following the Earth Summit and in particular the contemporary subsidiary role of UNEP in the evolution of environmental law, in spite of the fact that the chemicals regime continues being developed under its auspices. Marvin S. Soroos, "Global Institutions and the Environment," in ed. Norman J. Vig and Regina S. Axelrod, *The Global Environment* (Washington, D.C.: Congressional Quarterly Press, 1999), 38. Through efforts within UNEP, the earlier Basel Convention on the Transboundary Movement of Hazardous Wastes and their Disposal, signed in 1989, was supplemented by The Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade, which was adopted in 1998 and The Stockholm Convention on Persistent Organic Pollutants, which was agreed upon in 2001.

Indeed, although Agenda 21 called for an enhanced role for UNEP taking into consideration the development perspective in promoting the coordination of international environmental conventions, the Rio Summit concluded that a new Commission on Sustainable Development (CSD) should oversee the implementation of Agenda 21.[50] However, the CSD, which was instituted in order to coordinate the follow-up activities of the Earth Summit, while able to observe the activities of the autonomous regimes that evolved from the Rio conference, has had minimal impact on the variety of environmental regimes that had been agreed upon since the Stockholm Conference, which, in aggregate, form the environmental pillar of sustainable development. The CSD has to a large extent become a discussion forum, lacking the authority to translate the conclusions of the intergovernmental and multi-stakeholder discourse into action. Similarly, to the international environmental regime, although significant in creating a normative framework, the CSD lacks the capacity to orchestrate effectively the activities of the numerous organizations in a new dimension determined by the conclusions of the discussion sessions it hosts. It is for this reason that international environmental governance became the concern of the Governing Council of the UNEP in the late 1990s, as will be shown in the following section of the study.

During the same decade, a series of United Nations Conferences, such as the 1993 Copenhagen Conference on Social Development, the 1994 Cairo Summit on Population, the 1995 Beijing Fourth World Conference on Women, and the 1996 Istanbul United Nations Conference on Human Settlements (Habitat II) took place focusing on additional components of the principle of sustainable development. Each of these conferences produced its own declaration of principles that States committed to observe by

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[50] *Agenda 21*, Chapter 38: International Institutional Arrangements.

implementing the action plans that were drafted following extensive negotiations and deliberations. The success of these conferences in promoting international cooperation on topics of global interest cannot be underestimated, since, although identified at the conception of the United Nations and included in the mandate of the United Nations under the Charter, these topics had been overshadowed by the doctrinal politics of the Cold War years.

ii.   Reform of the United Nations

During the 1990s, the United Nations was overextended as it tried to use limited resources to respond to the variety of demands that member-States imposed on the Organization that had become resistant to change as a result of the bipolar political reality of the post World War II era. Development efforts while trying to improve the human condition were faced with awesome challenges as ethnic conflicts around the world replaced the initial euphoria of the end of the Cold War. In addition, as the global economy became more interconnected, it necessitated a new understanding of development economics to replace the models accepted during a much slower and less interdependent world market – models that had led to a partial success in supporting economic targets of developing countries during the 1960s and 1970s. Moreover, it became evident that the emphasis on sustainable development could only be achieved if the complex nexus of instruments were better coordinated.[51] The inability of the United Nations to use conventional means to achieve the new objectives, as identified in the

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[51] *Renewing the United Nations: A Programme for Reform, A Report of the Secretary-General, Part One* A/51/190 July 14, 1997. See in particular paragraphs 12, 14-15 and 17.

series of conferences led to the emergence of calls for the reform of the United Nations in order to reflect the political and economic changes that marked the end of the 20th century. Faced with such challenges, it did not take long for officials at the United Nations, national bureaucracies, non-governmental organizations, as well as academics to realize the weakness of the structure of the United Nations.[52]

As a result, Kofi Annan, when he was appointed Secretary-General of the United Nations in 1997, committed himself, as the helmsman of the Organization, to retaining the relevance of the United Nations in the new era that followed the four decades of super-Power rivalry.[53] Later that year, he initiated a series of changes within the structure of the organization, pointing out that "reform is not an event; it is a process".[54] The Report, recognizes the need for the establishment of a flexible, yet coherent structure to manage both the administrative capacity and the field operations of the United Nations – a structure that acknowledges interconnections among sectors and interactions among

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http://www.un.org/reform/track2/intro.htm. The Report was endorsed by the United Nations General Assembly Resolution 52/12, which was adopted on 19 December 1997.

[52] During his tenure as the Secretary General of the United Nations, Boutros Boutros-Ghali had initiated a first assessment of the role of the United Nations in the new era following the Cold War. The focus on development was clear. However, the recommendation on ways to achieve sustainable development, that clearly includes the three pillars of economic, social and environmental concerns, had not been successfully considered. As a result, the discussion on a new *Agenda for Development* consumed the efforts of the UN from 1992 to 1997 without necessarily generating the needed proposals for institutional and financial reform of the UN. Perhaps, the most significant effort of examining the direction of the UN in the 21st century was the completion of the *Our Global Neighbourhood* from the Commission on Global Governance, in 1995, which included a series of recommendations on ways to improve the response of the UN to the new and more complex challenges it was faced with. Joachim Müller, ed., *Reforming the United Nations: The Quiet Revolution* (The Hague: Kluwer Law International, 2001), 57-62, 68, 90-98. In particular the Report by the Commission on Global Governance recognized with regards to environmental protection the incoherency of the contemporary system of governance of environmental matters and recommended the adoption of the Earth Charter and the possibility of the Trusteeship Council to be given a revised mandate of being the trustee of the global commons. *Our Global Neighbourhood: The Report of the Commission on Global Governance* (Oxford, Oxford University Press, 1995), 208-217.

[53] Press Release GA/9211. December 16, 1996: "Secretary-General designate outlines goals for term, tells Assembly United Nations still has vital role, deserving global attention and support."

[54] *Renewing the United Nations: A Programme for Reform, Part One.* Paragraph 25.

actors that until that time had been considered unrelated.[55] Being true to the mandate outlined in the United Nations Charter, the recommendations of the Secretary-General pay particular attention to economic and social affairs, which includes environmental protection and human settlement issues.[56] Indeed, the proposed reform constituted a consistent effort to reflect the trends of the time as it included the promotion of both "sustained economic growth and sustainable development" – terms, which at the time were considered as compatible, but are perceived today largely as contradictory to one another – as a priority of the General Assembly for the immediate future, second only to the maintenance of international peace and security.[57]

Presenting a confidence in the breadth of issues that the United Nations is able to address, the Report suggests that the Organization constitutes the sole institution equipped to partake in the realization of the varying components of development, an objective that is recognized in the United Nations Charter. Consequently, the Department of Economic and Social Affairs, in addition to the Executive Committee on Economic and Social Affairs, were instituted as consolidating instruments of past efforts to form a new Secretariat of the Economic and Social Council (ECOSOC) of the United Nations. It is significant to note, however, that this initiative serves to coordinate the activities

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[55] Although the discussion of this study will include several of the UN bodies that are engaged in the adoption of a sustainability approach, it should be noted that several of the UN specialized agencies and other organs, such as the Food and Agriculture Organization and the World Health Organization, among many others, that will not be examined have an environmental tangent, making the need for greater coordination more evident. For a discussion of the intergovernmental organizations that include environment within their mandate see Pamela Chasek, ed. *Managing the Environment in the Twenty-First Century: Prospects for Intergovernmental Cooperation* (Tokyo: United Nations University Press, 2000).

[56] *Renewing the United Nations: A Programme for Reform, Part One*, Paragraphs 68 and 71.

[57] *Renewing the United Nations: Part II Measures and Proposals*, Paragraph 100. For an initial discussion of the paradox of the term sustainable growth see Herman Daly, "Sustainable Growth: An Impossibility Theorem" *Development* no. 3/4 (1990): 45-47.

mandated by both the General Assembly and ECOSOC.[58] These new institutions, which serve as the normative branch of the Organization, are supposed to contribute in the better representation of environmental protection as a key dimension of development.[59]

Furthermore, the Secretary-General recommended the creation of the United Nations Development Group (UNDG) in order to facilitate the communication among different bodies of the UN whose mandate is relevant to development, including such dimensions as the respect of human rights and the promotion of gender equality, among others that have been, viewed mostly through the completion of the numerous conference at the earlier part of the decade, as complementary to the traditional understanding of economic development. Since the focus of the UNDG lies with coordinating development initiatives within each country in which the United Nations operates, the UNDP was chosen to chair the new institution that was initially comprised of UNDP, UNICEF and UNFPA.[60] Today, however, it has grown to include a total of twenty-two United Nations programs and funds, specialized agencies and offices of the Organization, including the five regional commissions.

In spite of the fact that environmental considerations are viewed as complementary to development targets, only a marginal environmental mandate is given to the UNDG. Neither UNEP, which, after all, is the only organ of the United Nations with a direct environmental mandate, nor the Commission on Sustainable Development, whose mandate is to promote the principle of sustainable development, was or has been,

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[58] R. Carlos Sersale di Cerisano, "Global Governance for the Protection of the Environment in the Context of Sustainable Development: The UN Approach and its Institutional Reform Ten Years After the Brundtland Commission's Report" in eds. Guri Bang Søfting et al., *The Brundtland Commission's Report – 10 Years*, 132.
[59] *Renewing the United Nations: Part II Measures and Proposals*, Paragraph 139.
[60] *Renewing the United Nations: Part II: Measures and Proposals*. Development Cooperation, Paragraphs 146-157.

since 1997, included as members of the UNDG. UNEP's catalytic, rather than operational, role is further emphasized in the report which recommends that the funding of the implementation of environmental treaties, whose drafting and adoption UNEP has supported, be drawn from UNDP, among other, sources. The Rio Summit, in spite of the exhaustive provisions of Agenda 21, had not been influential enough to initiate necessary change for the operationalization of the principle of sustainable development across both national and international activities. Indeed, the 1997 Earth Summit+5 meeting to evaluate the impact of the Rio Earth Summit provided evidence that alarming trends, identified several years earlier, not only had not been reversed, but also had been further intensified.[61] The colossal organizational failure that characterizes the UNDG has resulted is the continuous sidelining of a reshaped definition of development that could be promoted by the participation of UNEP or the CSD in the deliberations of the discussions of those instruments that are largely responsible for the implementation of development projects. It is evident, therefore, that although international environmental protection had been accepted as a valid component of sustainable development, it had not been yet effectively mainstreamed within the core activities of the United Nations, which is to ensure human development.

Furthermore, UNEP, referred to as the "environmental voice of the United Nations", is asked to consult the CSD on the environmental aspect of sustainability. These recommendations ensured that the CSD would necessarily reflect environmental protection in its activities, which some have argued have largely concentrated on

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[61] Nitin Desai, "Implementing Agenda 21: A UN Perspective" in ed. Felix Dodds, *Earth Summit 2002: A New Deal* (London: Earthscan, 2000), 22-24. See also EARTH SUMMIT+5 Special Session of the General Assembly to Review and Appraise the Implementation of Agenda 21 held in New York on 23-27 June 1997. http://www.un.org/esa/earthsummit/.

promoting only a partially redefined meaning of economic development, rather than the comprehensive tri-pillar principle of sustainable development as included in its mandate. Realizing that several United Nations agencies had been duplicating their activities within the realm of sustainable development, which resulted in undermining the role of both UNEP and the CSD, the Secretary-General proposed the consolidation of the Committee on New and Renewable Sources of Energy and Energy for Development and the Committee on Natural Resources into one Committee under the auspices of the Commission on Sustainable Development.[62] At the same time, UNEP is requested to act as the "environmental agency of the world community", streamlining environmental activities within and beyond the United Nations System.[63] The recommendations regarding the United Nations Environment Programme are largely considered in linkage with the United Nations Center on Human Settlements rather than any other organ of the organization.[64]

The first set of reforms proposed by the Secretary-General in 1997, have had a largely positive impact on the efficiency with which the United Nations operates. Nevertheless, the unaccounted for impact of globalization soon rendered it clear that these changes were not sufficient in assisting States to meet the commitments they have

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[62] *Renewing the United Nations: Part II Measured and Proposals*, Paragraph 135. This proposal is further included in the Plan of Implementation of the World Summit on Sustainable Development, agreed upon in September 2002, paragraph, 126 (e).

[63] *Renewing the United Nations: Part II Measured and Proposals*, Paragraphs 175-177.

[64] In conformity with this recommendation, the United Nations Task Force on Environment and Human Settlements was formed which issued a series of recommendations that were adopted by the General Assembly in its 53rd session. (A/RRES/53/242 10 August 1999). Included in these recommendations is the strengthening of the United Nations Office in Nairobi, where the headquarters of both UNEP and UN-Habitat are located while also increasing the cooperation among the two institutions. It is significant to note that within this Resolution and set of recommendations, there is recognition of the need for linkages and coordination among environmental and environment-related conventions (Paragraph 7).

made in the series of Conferences organized during the 1990s.[65] As a result, and following the recommendation of the Secretary-General in 1997, the 55th session of the General Assembly in 2000 was perceived as an opportunity for the members of the Organization to agree on a new shared vision for the millennium that was beginning. In the midst of celebrations around the world that sparked hope for a better future, the Secretary-General encouraged member-States to consider a set of fundamental values and translate them to reachable goals that States would meet within the first fifteen years of the new century.[66] Out of this initiative, the United Nations Millennium Declaration was agreed during the commemorative Millennium Summit, which hosted 147 Heads of State and Government.[67] The Millennium Declaration contains not only the traditional priorities of the international Organization, namely the promotion of peace and security, but also a series of new topics that until then had been considered only marginally at such high political levels. By expressing a set of common values, such as equity, freedom, solidarity and shared responsibility, States agreed that issues of democracy, good governance as well as the protection of the vulnerable had to be considered through a perspective that was broader than the traditionally narrowly defined scope of national sovereignty. Indeed, the Millennium Declaration signifies, perhaps in the most elaborate way, that international relations have evolved into an era of "new diplomacy".[68] This era

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[65] During a workshop facilitated by Marc A. Levy on the occasion of the tenth anniversary of the publication of the Brundtland Commission, participants concluded that the main shortcoming of the decade, was that in spite of the series of declarations of intent, in the form of conference resolutions, there was an evident lack of commitment to action and of provision of financial resources. As a result, the pledges were unlikely to be realized. "Report from the Workshop on International Institutional Challenges," in eds. Guri Bang Søfting, et al., *The Brundtland Commission's Report – 10 Years*, 213-216.

[66] *We the Peoples. The Role of the UN in the 21st Century*. Report of the Secretary General, March 2002.

[67] *United Nations Millennium Declaration*. A/55/2 Adopted 18 September 2000.

[68] William R. Moomaw, *New Diplomacy* (Medford, MA: The Fletcher School of Law and Diplomacy, Tufts University, September 2001).

requires that international cooperation is needed in order to provide the resources necessary for human society to develop in a sustainable way.

Hence, it is not surprising that the Declaration contains provisions both for the elimination of poverty through economic and social development as well as for the protection of "our common environment", endorsing, therefore, the principle of sustainable development. The environmental areas that are recognized as key priorities in the Declaration include reversing climate change, desertification and the loss of biological diversity, strengthening cooperation on forests-related issues, reducing the impact of natural disasters, and assuring equal and free access to the human genome. The Millennium Declaration demonstrates that the focus of international cooperation should be the tangible improvement of the human condition rather than the promotion of economic development and global trade. The development priorities of the UN for the new century are further elaborated in the Millennium Development Goals, which serve as eight areas to which priority should be given in an effort to assuage the striking contrasts witnessed around the world. Most relevant to this study is the seventh goal on ensuring environmental sustainability. Because the Development Goals are considered as a comprehensive and integrated package, the adoption of an interdisciplinary, cross-sectoral, approach is required for their attainment.

The significance of the Millennium Declaration is that unlike previous efforts that drew a clear distinction between environment and development, the Millennium Declaration, by focusing on sustainable development, as well as environmental protection, provides the first substantial evidence of the crystallization of the principle, as a widely accepted norm of international relations, thirteen years after the Brundtland

Commission first coined the term in 1987. The fact that sustainability was addressed together with such established priorities as international peace and security and the respect for human rights, demonstrates that the principle has been elevated and is considered as a core priority of the United Nations. The success of the United Nations in achieving the shared vision expressed in the Millennium Declaration will be dependent on the fulfillment of all of its components through the coordination of existing activities and the cooperation with new initiatives.

Indeed, the Millennium Declaration has had a groundbreaking impact on the United Nations, which is now called, for the first time since its inception, to reconfigure its activities on the basis of a revised mandate – one that meets the priorities outlined in the Declaration. Within a year since the adoption of the Millennium Declaration, the Secretary-General published a new report as a follow-up on the outcomes of the Summit in which he proposed specific measures that could be taken in order to facilitate the implementation of the commitments that States agreed upon.[69] By outlining concrete targets and timelines, the Report prevents States from simply claiming observation of the requirements of the Declaration, as is often the case following the adoption of General Assembly resolutions, which form part of what is seen as norm- rather than obligation-creating soft law. In addition, the Report serves as a clarification and elaboration on the meaning of the Development Goals. In the Report, the Secretary-General designated the year 2003 as the period that the Organization should focus on financing for development and strategies for sustainable development, which will serve as an appropriate follow-up to the Monterey International Conference on Financing Development, completed in

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[69] *Road-map towards the implementation of the United Nations Millennium Declaration. Report of the Secretary-General*. A/56/326. 6 September 2001.

March 2002 and the Johannesburg World Summit on Sustainable Development completed in September 2002.[70] In addition, pinpointing the need for greater level of cooperation among the UN Programmes and funds and the specialized agencies, the World Trade Organization and the Bretton Woods Institutions, the Report emphasizes the role of the Economic and Social Council in this endeavor as well as the Administrative Committee on Coordination, which, however, was replaced by the Chief Executives Board (CEB) for Coordination, in late 2001.[71]

In spite of the resounding impact of the Millennium Declaration it was evident that States as well as the United Nations, as an organization, were in need of guidelines through which they could implement the required transformation of the structure of the United Nations in order to improve its responsiveness to the revised international agenda that had emerged following the completion of many international conferences, many of which, have already had follow-up meetings. In 2002, therefore, the Secretary-General published the first annual report on the Millennium Declaration, focusing on all aspects of the declaration, illustrating that the revised structure of the United Nations had been successful in abandoning its earlier piecemeal approach.[72] Areas as diverse as the prevention of armed conflict and the combat of diseases, such as malaria and tuberculosis, are conceived as interlinked in the shared effort to improve the human condition. Within this Report, the Secretary-General includes both an assessment of the steps that have already been completed in meeting the objectives agreed upon in the

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[70] Ibid., Paragraph 306.
[71] The CEB decided to terminate the subsidiary bodies of the ACC, including the Inter-Agency on Committee on Sustainable Development, replacing them with a number of flexible expert bodies. Most significantly the CEB has created two high level committees that focus on the management of the Organization and the policy and programme areas, respectively. United Nations System Chief Executive Board for Coordination. http://ceb.unsystem.org/overview.htm.

Millennium Summit as well as a set of recommendations for the future. However, in spite of little positive statistical evidence, the Report clearly illustrates that two years following the monumental Summit, the international community has to a large extent failed to meet the objectives it committed itself to. Although sparks of optimism can be found in the description of efforts to combat extreme poverty in East Asia, to a large extent the overall success in improving development is depressing. The case is similar for the environmental threats that plague the planet.

As a result, the sections on both development and the environment are marked by a sense of urgency for immediate action in meeting the millennium goals. Only a few months before the WSSD, the Report outlined five key areas that the Secretary-General considers as priorities in order to ensure "sustainable prosperity" – a term that is used rightfully or not as a synonym for sustainable development – both for present and future generations: water and sanitation, energy, health, agriculture, and biodiversity, commonly referred to as WEHAB priorities. Within these five areas, numerous types of commitments have been expressed in a plurality of international fora and gatherings, including the resolutions of international regimes established since the completion of the Rio Summit. Since the Johannesburg Summit focused on implementation of the principle of sustainable development, the priorities set by the Secretary-General could be considered as a challenge to States to act in conformity to pledges they have made in earlier meeting. Identifying these five areas as the most significant in the transition towards sustainability, the Secretary-General aimed at avoiding a continuation of the discussion on the inherent complexities of the principle. Indeed, if consistent action is

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[72] *Implementation of the United Nations Millennium Declaration. Report of the Secretary-General.* A/57/270. 31 July 2002.

taken in these five areas, many of the horrific contrasts that were presented in the introductory section of this study could be alleviated.

In the meantime, the Secretary-General was preparing a new report on the organizational structure of the United Nations, which focused in particular on revising the Secretariat, while encouraging the General Assembly and ECOSOC, as well as the Security Council, which has stalled consultations on reform, to undertake similar initiatives, in order to reformulate the Organization into a focused system that can deliver upon the requests of its Member States.[73] The recommendations included are consistent with the 1997 pronouncement, which maintained that the reform of the UN constitutes a process, rather than a single event. As a result, the UN, in spite of its protracted bureaucracy, has made a consistent effort to becoming leaner and more flexible as it tries to adjust to the new priorities recognized by its Member States. The guiding outline for the reconfiguration of the Secretariat continues to be based on the priorities defined in the Millennium Declaration. The Report encourages the organization to become more focused on these activities and to abandon outdated processes and antiquated mandates. Given the fact that the Millennium Declaration serves as a revised mandate to the Organization, the Report, which was issued a few days upon the closure of the Johannesburg Summit, calls on States to accept the Secretary-General's reforms in order to assist them to meet the objectives they set. The Report does not include specific revisions with regard to the institutional structure to promote sustainable development, since it endorsed those agreed upon in Johannesburg, which, although few, will be elaborated in the following sections.

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[73] *Strengthening of the United Nations: an agenda for further change. Report of the Secretary-General*. A/57/387. 9 September 2002.

iii.   The initiatives of the United Nations Environment Programme

While the United Nations under the initiative of the Secretary-General, acting as the Chief Administrative Officer, was considering the implementation of a set of reforms to better manage the new challenges that mark the 21st century, UNEP was also reviewing its role in the new era. Initial considerations were made during the 1997 Earth Summit +5 review; however, the series of recommendations that have been made were not enacted until a few years later and most significantly following the Millennium Summit.[74] Nevertheless, in 1997, the Governing Council of UNEP agreed upon the Nairobi Declaration, which asserts the role of UNEP as the "principal United Nations body in the field of the environment", a recommendation that the Secretary General endorsed in his first track reform in 1997.[75] The Declaration, seeks for UNEP to become the leading global environmental authority through a variety of means, including the collection, analysis and distribution of scientific information regarding the status of the global environment, the development of international environmental law, the establishment of coherent linkages among environmental conventions, assisting implementation of and compliance with environmental rules, and, finally, through the coordination of the environmental activities of the UN and the oversight of the implementation of the Global Environmental Facility projects.

These broad and general recommendations served to reassert the role of UNEP within the changing structure of the United Nations system. However, they did not

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[74] *Programme for the Further Implementation of Agenda 21*. A/RES/S-19/2. Adopted by the General Assembly during its Earth Summit+5 Special Summit, on 28 June 1997.
http://www.un.org/documents/ga/res/spec/aress19-2.htm.
[75] UNEP, *Nairobi Declaration* adopted during the nineteenth session of the Governing Council, held during January and February 1997.
http://www.unep.org/Documents/Default.asp?DocumentID=111&ArticleID=1728.

include any practical suggestions, based on which this reaffirmed central status of UNEP could become realized. Nevertheless, in view of the role of UNEP of coordinating environmental conventions, the proposition of developing clusters of agreements that focus on similar topic areas has gained popularity. These clusters can coordinate the activities of environmental conventions as well as establish direct contacts among Secretariats and other organs that have been created within each separate regime, in order to ensure that the ecological linkages between topics are adequately considered. The Division of Environmental Conventions by UNEP seeks among other matters to build synergies and observe incoherencies among decisions reached at the COPs of different agreements.[76] In spite of the value of this effort, many Secretariats have considered this approach as potentially threatening to their independence.

The first result of a move towards an improved contribution of UNEP through the adoption of specific steps that could be taken was triggered by the circulation of the Report of the Secretary-General on the Environment and Human Settlements. This was adopted by the General Assembly in 1999 as a follow-up to the recommended reforms included in the 1997 *Renewing the United Nations* report.[77] Building on the twenty-three specific recommendations included in the Report produced by the Task Force on Environment and Human Settlements, the General Assembly encouraged the Governing Council of UNEP to establish a high-level governmental policy forum within UNEP and a management group that would facilitate inter-agency coordination between these UN agencies whose mandates requires them to work on environmental and human

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[76] United Nations Environment Programme. *Division of Environmental Conventions*. http://www.unep.ch/conventions/.
[77] As discussed earlier, Action 12 of the Renewing the United Nations called for the Secretary-General to initiate a process of review of UN activities related to the environment and human settlements.

settlements issues. The two new institutions were designed in such a way as to promote the specific mandates of each UN body, while explicitly reinforcing that the Commission on Sustainable Development would constitute the forum of discussion on sustainability policy. In other words, the focus was on strengthening, through consolidation and greater cooperation, the environmental focus of the UN, rather than promoting the further integration of environmental concerns in the development agenda – a distinction that has been difficult to maintain as UNEP has tried to address the driving forces of environmental degradation. Given the loose and uncoordinated nature of international environmental law, these initiatives have the potential of generating the necessary internal coherence that would provide the basis for an effective environmental regime. However, given the eminent emphasis that has been granted to the principle of sustainable development within the United Nations, in particular following the Millennium Summit, it remains questionable whether this arrangement will be constructive in the efforts to ensure that environmental protection becomes a strong and necessary pillar of sustainability.

Nevertheless, UNEP has undertaken a series of institutional arrangements in order to strengthen its catalytic role. Implementing the recommendation of Resolution 53/242 of the General Assembly, the United Nations, established the Global Ministerial Environment Forum, which is to meet biennially constituting a special session of the Governing Council of UNEP.[78] Unlike participation in the Governing Council which is limited to 58 members, participation in the Ministerial Forum is universal allowing for a global dialogue on the emerging environmental concerns. At its first meeting, in May

2000, the Malmö Declaration was adopted, manifesting an agreement among State representatives on the need to revitalize the efforts to combat the major environmental threats of the 21st century.[79]

By advocating for the integration of environmental considerations in mainstream decision-making through cooperative engagement of Governments, the private sector and civil society, the Declaration reinforced the responsibility of Governments to provide the necessary conditions for the implementation of environmentally related instruments. Following the mandate of the Declaration, UNEP prepared advisory guidelines on compliance with and enforcement of multilateral environmental agreements in order to assist States that have become overwhelmed with the complex and numerous environmental requirements they have been bound to. Although broad and general, since they cover the whole range of environmental treaties they provide a comprehensive list of approaches available to States parties to these conventions.[80]

The language included in the Declaration emphasized the centrality of government actors in international politics. Such recognition is considered appropriate since governments continue to set the parameters within which other actors, including inter-governmental organizations, such as the United Nations, may act. Nonetheless, by granting the private sector and civil society a recognized status for the operationalization of commitments that Governments have made during the thirty years since the Stockholm

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[78] Resolution A/Rest/53/242 on Environment and Human Settlements provides the basis for the establishment of this institution to review emerging environmental policy considerations. (Paragraph 6). See also note 53 above.

[79] *Malmö Declaration* adopted by the Global Ministerial Environment Forum at the Sixth Special Session of the Governing Council of the United Nations Environment Programme during the Fifth plenary meeting on 31 May 2000.

[80] *Guidelines on Compliance with and Enforcement of Multilateral Environmental Agreements*. Approved by the Seventh Session of the Governing Council/Global Ministerial Environment Forum, Cartagena, Colombia, 15 February 2002. (Decision SS.VII.4).

Conference, the representatives implicitly acknowledge the limitations of Governments to act alone in mitigating environmental degradation. At the same time, they give the right to civil society actors to act as watchdogs, holding Governments accountable to the commitments, hard or soft, that State representatives have negotiated. In addition, the Declaration, by calling for a "corporate ethic guided by public interest", while conscious of the contributive role of business in the globalized economy of the 21st century, includes embedded conditions for the operation of international business, that are guided by moral, ethical and environmental concerns. In other words, the Ministerial Forum takes on the role of a trustee not only as it relates to questions of the protection of the environment but also as it pertains to reassuring participatory decision-making, access to justice, scientific research, conservation of cultural diversity and traditional knowledge, and gender equality. Illustratively, the concluding clause of the Declaration demonstrates that as government representatives, environmental Ministers retain their capacity to adopt a bird's eye view as they pledge for the reduction of poverty, the assurance of environmental security, the environmental soundness of the economy, the coordination of legal instruments, and the realization of a world without slums. In other words, Ministers did not reduce their roles by surrendering part of the sovereignty of the State. To the contrary, they retained the authority of identifying the framework based on which they can be held accountable.

Despite the fact that the Resolution that created the Forum, explicitly mentions that the Commission on Sustainable Development will remain the forum for high level discussions on sustainability, the Ministerial Forum, being true to its own commitment of adopting an integrated understanding of the causes and consequences of environmental

degradation, could not but take into consideration the plurality of factors that have led to the alarming degradation of the planet. By focusing their deliberation on sustainability, environmental ministers confirmed the widely accepted recognition that the CSD has been largely unable to promote the comprehensiveness of the components of the principle. Hence, the question of determining a structural organization and institutional coordination appears predominantly in the Declaration, in particular as the 2002 review conference of the Rio Summit, what was eventually referred to as the World Summit on Sustainable Development, was viewed at the time as the opportunity to create an improved system of environmental and sustainability governance.

Indeed, it was with this aspiration that during the 10th meeting of the Governing Council, in February 2001, the Open-Ended Inter-Governmental Group of Minister or Their Representatives on International Environmental Governance (IGM) was established.[81] The first meeting of the Group was held in New York, in April 2001, followed by meetings in Bonn, in July 2001, in Algiers in September 2001, in Montreal in November – December 2001 and in New York, January 2002. The dialogue was completed during the second meeting of Governing Council/Global Ministerial Environment Forum in Cartagena, in February 2002, during which final conclusions and recommendations derived from this one-year discourse were agreed upon.[82] A summary of the conclusions of the IGM was submitted to the Commission on Sustainable

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[81] *Decisions 21/21 of the Governing Council of the United Nations Environment Programme*, adopted on 9 February 2001.
[82] Seventh Special Session of the Governing Council/Global Ministerial Environment Forum held in Cartagena, Colombia on 13-15 February 2002.
http://www.unep.org/governingbodies/gc/specialsessions/gcss_vii/

Development during the preparatory phase for the World Summit on Sustainable Development.[83]

The discussions sponsored by the Secretariat of UNEP focused the attention of participants, which included environmental ministers as well as heads of Secretariats of international environmental conventions, on two specific aspects of the broad field of international environmental governance: first, the international institutional structure within which environmental threats are to be addressed, in other words the system organization of the international community, in general, and the United Nations, in particular, in facilitating the goals of environmental protection and, second, the need for coordination among multilateral environmental treaties, which, as discussed earlier, form the basis of the international environmental regime within which all actors, including intergovernmental institutions, governments and other stakeholders are to operate. This delineation, though not strict, since, for example, the role of UNEP is included in both branches of environmental governance, allowed for an in depth examination of the present strengths and weaknesses of the existing system, while also allowed for the identification of specific areas for improvement. For the most part the one year long discussion of the IGM was concentrated on the coordination of environmental agreements rather than environmental governance as a whole. UNEP's secretariat and its Executive Director were instrumental in guiding the IGM, throughout the process, by creating, maintaining and updating, what were referred to as "living documents" which,

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[83] *Contribution of the Governing Council/Global Ministerial Environment Forum of the United Nations Environment Programme to the World Summit on Sustainable Development*. SS.VII/2 agreed upon on 15 February 2002 and circulated to the Preparatory committee in March 2002, in preparation for the Third meeting of the Preparatory Committee, held in New York on 25 March - 5 April 2002.

constituted revised and reformulated versions of the original drafts submitted by the Executive Director of UNEP.[84]

While reviewing the history and development of international environmental governance and recognizing the significance of the several initiatives taken by through United Nations system reform, the IGM report also included observations from a preparatory survey UNEP conducted. Based primarily on the responses to a questionnaire distributed by the Executive Director of UNEP to the Secretariats of the "core environmental conventions and related agreements of global significance", UNEP's study reviewed the status of Multilateral Environmental Agreements, examining their strengths and weaknesses.[85] Perhaps, not surprisingly, the comments included in the report that the IGM reviewed throughout the year of its proceedings, do not vary from the conclusions included in several academic studies on the question of governance – an observation that demonstrates the prevailing consensus surrounding this topic. Indeed, while strengths are

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[84] *International Environmental Governance. Report of the Executive Director.* UNEP/IGM/1/2 4 April 2001, in preparation for the first meeting of the Open-ended Intergovernmental Group on Ministers or Their Representatives on International Environmental Governance, held on 18 April 2001. In addition, to this document, the Secretariat of UNEP, compiled a *Summary of Selected Papers* (UNEP/IGM/1/INF/2 5 April 2001) which includes relevant materials derived from a variety of sources, including the United Nations, governmental working papers, as well as writings of eminent authors in the field of environmental governance. This initiative, together with the fact that the IMG concluded a series of discussions following its first meeting with representatives of civil society (Civil Society Consultation on International Environmental Governance, Nairobi 22-23 May 2001) and experts on the topic (Expert Consultations on International Environmental Governance, Cambridge, UK, 28-29 May 2001) illustrate the commitment made to a participatory process in order to identify the best available process for the future, drawing from the plurality of ideas available. It also illustrates the fact that organizing the open-ended forum, as an instrument to encourage dialogue and reflection on the present state of environmental affairs, was a necessity. The decisions of the first meeting of the IGM are included in the *Report of the Chair* (UNEP/IGM/1/3 21 May 2001)

[85] These core environmental conventions presented initially in the Executive Director's report, *International Environmental Governance: Multilateral Environmental Agreements (MEAs)* (UNEP/IGM/1/INF/3 April 2001) are the conventions whose negotiation, development or activities are associated with UNEP. In other words, while the number of international environmental conventions exceeds 500, of which 320 are regional, the focus of the report of the Executive Director is limited to 41 treaties that are clustered in five areas: atmosphere, biodiversity-related, chemicals and hazardous wastes, land, and regional seas conventions and related agreements. As a result, several important environmental regimes, such as the fisheries or other regional regimes were not included in the assessment process. This

identified within the existing system, the weaknesses are numerous and are in line with the four driving forces that were presented in the earlier discussion of the compartmentalization and ineffectiveness of the current legal system. More specifically, the report emphasizes the lack of coordination among multilateral environmental agreements, the inadequacy of a piecemeal approach and the need for further integration of environmental concerns across disciplines, and the resulting management burden that States are faced with. Such coherence of thought in a topic as complex and intertwined as the question of global governance, while admirable is rather worrisome, since it shows that individuals working within the system as well as outside observers concur that in spite of the monumental progress that has been made during the past three decades in the environmental field the results are only marginally effective. It also illustrates the momentum in the environmental intelligencia for grappling with the complexities surrounding environmental protection, as it permeates across disciplines and activities of institutions that, until recently, had been conceived as independent of one another. This opinion was further expressed during the consultations with the permanent representatives to UNEP, during which it was asserted that States are faced with similar coordination challenges at the domestic level. They resolved that the international community has so far failed to complete a conceptual approach that will enable decision-makers and institutions to address environmental problems, whether at the international or the domestic levels.[86] As a result, it became evident that the transition to an effective system of governance will require a rearrangement not only of the administrative

first draft was further revised and negotiated to form part of the later reports of the Executive Director. For a list of the Conventions examined see Table 1.

organization of international environmental law but also and, perhaps most significantly, a reorientation of policy thinking towards a more integrated understanding of the path towards sustainability.

With the participation of secretariats of forty-one environmental conventions, other intergovernmental organizations, specialized agencies as well as government representatives, in addition to representatives of civil society, it is not surprising that consensus regarding the process to be recommended was not easy to be reached. In spite of the fact that there is an agreement on the existing failures of the system, the identification of solutions has been proven an elusive endeavor. One of the first difficulties that the members of the IGM were faced with was determining the definition of international environmental governance. Adopting a broad understanding of the term, which involves both the decision-making process and the institutional structure within which such a process operates, the participants to this continuous dialogue agreed on a multi-layered approach to environmental governance, which includes: first, the need to coordinate the decision-making processes among multilateral environmental agreements; second, a coherent international structure within which these decisions can be implemented; third, the coordination at the international level of the means to realize and operationalize the policies agreed upon; and, fourth, the coordination of compliance with and enforcement of the decisions at the domestic level.[87] Indeed, it is for this reason, that is was recommended that in the following discussion on international environmental

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[86] *Report of the Chair of the Committee of Permanent Representatives to the United Nations Environment Programme on International Environmental Governance*. (UNEP/IGM/2/3 28 June 2001) in preparation for the second meeting of the IGM, held in Bonn, 17 July 2001. In particular, see, paragraph 17.
[87] These four layers of International Environmental Governance were agreed upon following the first meeting of the IGM and the completion of the consultations with several stakeholder groups. It is included in the *International Environmental Governance: Multilateral Environmental Agreements (MEAs)* (UNEP/IGM/2/INF/3 10 July 2001).

governance, participation should not be limited to Environment Ministers rather should include representatives of other ministries in order to achieve, parallel to the international developments, a national basis that would be responsible for translating international decisions into national actions. In addition, several representatives agreed that the current system overburdens developing countries, leading to a reaffirmation of the need to operationalize and realize the principle of common but differentiated responsibilities paying particular attention to the peculiarities of the needs of developing countries. Building capacity as well as questions of financing, therefore, became central items of consideration.

It is evident, therefore, that the participants of the IGM consider international environmental governance as a broader concept than the coordination of environmental treaties. Indeed, environmental governance is understood as a dynamic whole comprised of international institutions and multilateral agreements and the variety of actors that interact within through and because of these institutions. Although the drafts prepared by the UNEP secretariat retained the discussions focused on the question of coordination of environmental agreements, environmental ministers and other members of the IGM broadened the topic to include the dilemmas they face on a daily basis as they confront ministries that politically are regarded as more significant. They concluded that their efforts to promote sustainability are hindered by the institutional structure of both the international and the domestic political systems. This is consistent with the view that international environmental governance should be conceived as a regime, which although based on treaties includes a multiplicity of actors, whose integration into the process is necessary in order to generate effective outcomes and generate systemic change. This is

particularly true if one considers that the IGM proceedings viewed international environmental governance as an inherent part of discussions for the attainment of sustainable development. Indeed, one of the broad agreements that surfaced through this process was the need to reinforce the environmental pillar of sustainable development in order for its priorities to have weight equal to ones presented via the economic and social pillars of sustainable development. Hence, UNEP is regarded as instrumental in orchestrating the coordination among environmental conventions and, perhaps, most significantly the cooperation the environmental activities of the United Nations as a whole. In order for UNEP to achieve this revised role, it was agreed that its mandate should be reviewed in order to reflect the emerging issues prevalent in environmental law and policy.

Given these broad conclusions, it is understandable that the participants to this process called for incremental change in the institutional framework. The broad consensus on an evolutionary approach; however, does not means that the IGM constituted a conservative force, that is, one resisting change. On the contrary, the IGM called for a process that would be flexible and adaptive to the revised conventional wisdom of the era the new international system operates. Given the existence of scientific uncertainties, the revised structure should retain flexibility, adaptability, dynamic character and, most significantly, an openness to change and innovation. Such flexibility should be derived from the application of the precautionary principle, which calls for the adoption of preemptive measures when preliminary scientific findings suggest the potential of a more insightful understanding of current trends. Indeed, drawing from past lessons the revised system of environmental governance should choose to err on the side

of caution.[88] Such an inclusion of scientific understanding in the political decision-making process cannot be underestimated in the efforts to create an effective system of environmental governance. It is however, hopefully, that Ministerial Forum is recognized as a body through which emerging issues of environmental concern will be discussed. Therefore, it is conceivable that during its future deliberations this body will ensure that scientific findings that deem a cautious approach as necessary will be given adequate consideration.

Fearful of the creation of a stagnant institution, many representatives were hesitant to the proposition for the creation of a World Environmental Organization (WEO) as bureaucracies, once established, tend to constitute conservative forces that are resistant to change and adaptation. Illustrating further their sincerity in committing to create a system that would be reflective of contemporary trends, it was ensured that any system of international environmental governance needs to be characterized by four distinct elements: credibility, which includes such principles as transparency, openness, fairness and confidence, so that international organizations will be able to monitor government initiatives; authority, which requires that the mandate of organization is not challenged; financial resources, in order for the system exert the same level of leverage as the economic or trade regimes which it necessarily has to confront; and a participatory process, in order to reflect the interests of all stakeholders.[89] Hence, UNEP should

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[88] Several examples could be given to demonstrate that initial scientific evidence usually proves correct. Illustratively, initial doubts regarding the correlation between high concentrations of greenhouse gases derived from industrial emissions and higher global average temperatures have been disregarded as continuous studies have identified a variety of impacts the changing of the chemical composition of the atmosphere can have not only on global temperatures but on the climate of the planet as a whole.

[89] Global Ministerial Environment Forum. *International Environmental Governance: Report of the Executive Director* UNEP/GCSS.VII/2 27 December 2001. presented to the Seventh special session of the Governing Council of the United Nations Environment Programme, Cartagena, Colombia, 13-15 February 2002. (Paragraph 125).

become more active in bridging partnerships with all nine major groups, recognized by the United Nations system: women, youth, labor, private sector, non-governmental organizations, indigenous people, farmers, local authorities, and science and technology.[90] Such partnerships, if closely monitored, can provide the basis for a system of governance that is truly interdisciplinary cutting across diverse fields.

In spite of this consensus that emerged regarding the need for an adaptive and flexible system change, the IGM addressed only marginally the need to integrate environmental priorities with the principles endorsed in the numerous international declarations that were produced during the 1990s. Moreover, the second institution that was established following the recommendation of the Secretary General, in his Report on the Environment and Human Settlements, namely the Environment Management Group (EMG), confirms the prevalence of a fragmented approach to attaining sustainable development. Consisting of representatives of bodies of the UN, specialized agencies and environmental conventions secretariats the EMG is supposed to provide the forum for cross cutting coordination in environmental issues. The impact of the EMG, which held its first meeting on 15 June 2001, cannot be fully assessed since it has been functional for a little more than one year while its mandate has yet to be fully clarified. Given these difficulties in determining its role, the EMG has not fulfilled its potential of becoming a counterpart of the United Nations Development Group. The two groups operate in isolation, even though they share many of the same members. At the same time, however, these two bodies, if operating effectively can contributing in making the two branches of

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[90] Although the term "major groups" is used currently throughout the UN system it should be recognized that it was coined during the Rio Earth Summit deliberations. The fact that it was in an environmental conference that recognition for multi-stakeholder participation was granted illustrates further that environmental consideration permeate across social and economic interests. Carolyn M. Stephenson,

sustainability that are viewing as opposing once another internally coherent leaving a reformed Commission on Sustainable Development, to play the coordinating role among the three pillars of sustainability.

Another topic of critical significance that was included throughout the discussions regarded the sources of funding for both environmental conventions as well as UNEP's activities. Recognizing that funding has been limited the need for coordination and avoidance of duplication of efforts was greatly emphasized. Several proposals, mostly pertaining to the reduction of administrative costs were introduced. In addition, given the 1994 replenishment of the Global Environment Facility (GEF), several discussions focused on the options for enhancing the availability of funds for operational initiatives, especially as they pertain to capacity-building, technical and financial assistance to developing countries. Since then additional replenishments, with the most recent in 2002, have been undertaken, making GEF the most significant funding institution for environmental protection.

As UNDP, unlike UNEP, is the main UN organ for on the ground operations within the United Nations framework, its role in promoting the principles and action plans as well as the commitments made at international environmental for a cannot be underestimated.[91] Nevertheless, the role of the United Nations Development Programme was less clearly addressed during the proceedings of the IGM most probably because the framework of the discussions was perceived as environmental protection within the context of sustainable development, in juxtaposition to an explicit discussion of the

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"NGOs and the Principal Organs of the United Nations" in eds., Paul Taylor and A. J. R. Groom, *The United Nations at the Millennium: The Principal Organs* (London: Continuum, 2000), 272.

[91] For a discussion of the perspective of UNDP on governance and sustainability see United Nations Development Programme, *Reconceptualizing Governance Discussion Paper 2* (New York: January 1997).

creation of an international sustainability governance, which, supposedly, constitutes a topic exclusive addressed at a high level within the Commission on Sustainable Development. However, this is a myopic approach in particular as States are becoming increasingly aware of the interconnections between implementing commitments agree upon in international environmental agreements and their development path. During the 1997 UN Reform it was agreed that the UNDP will constitute the coordinating body of all UN development operations in any given country. Such a role gives privileged authority to UNDP in enforcing new approaches to development. As a result, its inclusion in discussion was rightly considered necessary. However, it is unfortunate that its role, in particular as one of the three original and central organs of the UNDG was not given greater attention especially since UNDP, following the Rio Summit, has undertaken the initiative in incorporating environmental concerns in its field operations, in the same way that in earlier decades it incorporated particular provisions for gender equality, protection of children among others.[92]

As the international community proceeds in realizing the Millennium Development Goals it will be faced with another systemic challenge of balancing the initiatives agreed upon in environmental forums and development opportunities generated by UNDP projects. In order for compliance with environmental provisions to be realized, it is paramount that UNDP identifies its role as an agent of sustainable development, paying equal attention to all three pillars of the principle. Indeed, sustainable development has become a cross cutting theme of the UN. However, the

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[92] UNDP has embarked the Capacity 21 Trust Fund to assist countries build national capacities for the implementation of the provisions included in Agenda 21. By supporting the development of sustainability programs and by working with government, civil society and the private sector, UNDP has contributed in

agencies that are institutionally allowed, due to their mandate, to become more active in the promotion of the principle are those that have traditionally perceived development through the lenses of economics rather than the environment. As UNEP remains sidelined and isolated, due to the structural arrangements within the UN, it can have only a minimal effect on ensuring that the environmental pillar of the sustainable development retains its centrality.

However, given the scientific analysis that UNEP orchestrates, it is paramount that UNEP forms an active part of the sustainability evaluation forums holding any and all proposals accountable to an environmental yardstick. In particular, if UNEP persists on building a system of international environmental governance that recognizes the inherent interlinkages among environmental threats, taking into consideration the full natural cycle that ecological process partake in, UNEP can become a central and instrumental institution as the UN acts in conformity with its recent resolution to coordinate its activities in accordance with the objectives set at the Millennium Summit. For UNEP to become the central global environmental authority that the members of the UN aspire requires that the structural adjustments within the UN do not reinforce the belittlement of the only agency that has the ability to adopt a bird's eye view approach to the protection of the vulnerable global ecosystem.

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promoting an integrated, participatory, decisions-making process that can have a long-term influence at the local as well as the national level. See *UNDP Capacity 21*, http://www.undp.org/capacity21/.

VI. Part VI.

    i.   The outcomes of the Johannesburg World Summit on Sustainable Development

Having examined the persistent shortcomings of the present system of environmental governance, it can be easily derived that the models presented so far, in spite of being necessary have not been proven sufficient in expediting the process of transitioning towards a sustainable society. As a result in August and September 2002 the international community congregated once more in Johannesburg in order to reassess the progress that had been made during the last decade, since the Rio Earth Summit and to delineate the path forward. According to the Secretary-General of the United Nations, the Summit constituted an opportunity of providing "a vision of a global system in which every country has a place and a share in the benefits, and it must give us all a clear sense of our share in the task."[93] Accordingly, the agenda of the World Summit on Sustainable Development was organized in such a way as to allow for emphasis to lie with the identification of specific means to implement the principle of sustainability rather than renegotiate the validity of the principle.

In anticipation of the Summit's focus on implementation, the Secretary-General prepared a report that reviewed the effect of Agenda 21, ten years following its adoption. Within this report a compelling call for action is made with the identification of ten cross-cutting issues in which the United Nations could further its contribution to a sustainable

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[93] Secretary General of the United Nations, Lecture at the London School of Economics and Political Science, "*From Doha to Johannesburg by Way of Monterey: How to Achieve, and Sustain, Development in the 21st Century*," London: 25 February 2002.

future.[94] In spite of these recommendations, that were supposed to guide the discussion throughout the preparatory process, fears were expressed that the Summit would not be successful in providing concrete steps towards the attainment of the sustainability vision that is required in order to reverse the alarming trends that plague the planet.[95] Indeed, it was this grave possibility that triggered the renewed involvement of the Secretary General and his outline of the WEHAB initiative, which includes the five key areas in which immediate action is deemed necessary, namely, water, energy, health, agricultural productivity and biodiversity and ecosystem management. Through this process areas such as water supply and access to sanitation were given priority by committing States to halve the people that have been deprived of these two services by 2015.[96] Additional goals that had been earlier agreed upon, such as the Millennium Declaration Goals were also reiterated and reinforced. However, for two of the most significant environmental concerns, energy and biodiversity the commitments agreed upon are of a general nature and include very vague commitments without a timetable or target that is sufficiently stringent in order to reverse the degradation of the both the climate system and the biotic system.

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[94] *Implementing Agenda 21: Report by the Secretary-General*. E.CN.17/2002/PC.2/7 19 December 2001. See in particular paragraphs: 173-177 and 217-241.

[95] The Secretary General noted a "loss of momentum" as countries are being faced with immediate challenges such as conflict, globalization and terrorism. However, he also noted the need to understand the linkages between these phenomena, which were to be fundamentally approached at the WSSD, as it was supposed to provide the means to defining sustainability in a tangible rather than abstract way. Secretary General of the United Nations, "*From Doha to Johannesburg by Way of Monterey*".

[96] Indeed, it is significant to note that water, and especially the management of freshwater has gained such attention that a separate venue, the "Water Dome", was dedicated to enhance the dialogue on the topic. However, it is interesting to note that during the Plenary Session on Water, on 28 August 2002, the discussion focused mostly on access to water and sanitation rather than the protection of the water sources, illustrating that the approach used even in this topic, that has been recognized finally as central, continues being characterized by fragmentation. The author visited both the Water Dome and attended the Plenary Session as a delegate of the Tufts Institute on Global Leadership to the World Summit on Sustainable Development.

The World Summit attracted the participation of an estimated 40,000 people demonstrating further that the imminence of the crisis the planet and humanity are faced with. There were calls for the adoption of a new vision; however, to a large extent these were not echoed in the closed-door negotiation process. In a rather typical fashion, negotiators were consumed in a bargaining process that lead to minimal addition of renewed responsibilities, in spite of the fact that the purpose of the conference was to agree on the type of action needed in order to finally realize the goals and objectives that have been expressed throughout the 1990s. Indeed, as several commentators have noted, the Summit was successful in so far as it did not reverse any of the trends that have mobilized society towards imploring for a revised system of governance. For example, a proposal that would allow the dispute settlement of the World Trade Organization to negate the mandate of international environmental agreements, if the promotion of an environmental concern has the potential of jeopardizing a trading practice, was overturned.

Perhaps, the most significant outcome of the World Summit was the recognition by governments that implementation of environmental as well as social change, will require the participation of every actor of the international system, including civil society, the private sector, individuals, as well as, governments. Although many critics consider this development a compromise in the role of governments, it seems that, to the contrary, governments were able to raise the bar, even if only slightly, by seeking the cooperation with other international and domestic actors to implement their decisions. In other words, having agreed on a broad range of goals, governments committed themselves to being only one of the many actors required for the transition to sustainability. This agreement is

evident in the numerous partnerships among this diverse range of international actors that were announced during the Summit.[97] At the same time, governments have retained their role – through a reaffirmation of the principle of national sovereignty – of holding ultimate responsibility for the implementation of the agreement. In addition to involving stakeholders in the decision making process, these partnerships serve as an additional funding mechanism to the ones that are orchestrated by the established international institutions, such as the World Bank and the International Monetary Fund, as well as, through official development assistance. In spite of the contribution of partnerships to the path towards sustainable development, it is worrisome that the focus of the conference was on these initiatives, which to a large extent lack a formal process of monitoring, since at present there are no standards to which they can be held accountable.

The Plan of Implementation, agreed upon at the World Summit, nonetheless includes a section on "Strengthening the institutional framework for sustainable development at the international level", which presents the latest recommendations based on which the United Nations can facilitate the transition towards the implementation of the objectives agreed upon at the Summit. The most significant outcome of the section on institutional change, which does not include any radical deviations from earlier recommendations, is that it re-emphasizes the need for the principle of sustainable development to be integrated across the activities of the United Nations through the

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[97] It should be noted that partnerships, most significantly Type II partnership between governments, intergovernmental agencies, non-governmental organization or the business sector, were not a new establishment of the WSSD. The distinction between the partnerships reached at Johannesburg and other such initiatives was the attention they generated, obscuring actual Type I agreements among governments, which had only a minimal impact. An additional innovative approach at the World Summit was the conclusion of partnerships between members of the civil society and the private sector. Although the numbers are conservative, the partnership between Greenpeace International and the World Business Council for Sustainable Development to combat climate change and to promote jointly the Kyoto Protocol,

political direction of the General Assembly.[98] In achieving this goal, the Plan calls for the equal focus on economic and social development and environmental protection through greater coordination within and between the United Nations System and other international institutions, including the newly founded Environmental Management Group. The role of the UN as the most suitable organization to promote sustainable development is also included in the Johannesburg Declaration.[99] Furthermore, the Commission on Sustainable Development retained its role as the central organ of the UN regarding sustainable development. Its mandate, however, was expanded, from being mostly responsible for the implementation of Agenda 21, to becoming a forum for the coordination of the three pillars of sustainable development. The most recent follow-up to the Johannesburg Summit was proposed by the Second Committee of the General Assembly, which calls for the reformation of the Commission on Sustainable Development in order to become more active in its revised mandate agreed upon at the Summit.[100] Accepting such a resolution, implies that States will reaffirm their commitment to the Summit's outcomes, which requires domestic implementation. In this context, it is understandable that UNEP is given the priority for the environmental protection, without, however, including the environmental body of the UN within a particular structural arrangement, besides calling for the organ to coordinate more actively with the specialized agencies, the Bretton Woods Institutions and the World

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announced on 30 August 2002, provides a glimpse of the potential of innovation in international fora when political action falls short of expectations.
[98] "Plan of Implementation of the World Summit on Sustainable Development," *Report of the World Summit on Sustainable Development*, Johannesburg, South Africa, 26 August-4 September, 2002. (A/CONF.199/20), Paragraph 143.
[99] "The Johannesburg Declaration on Sustainable Development," *Report of the World Summit on Sustainable Development*, Johannesburg, South Africa, 26 August-4 September, 2002. (A/CONF.199/20), Paragraph 32.

Trade Organization. Since their decisions and policies yield greater leverage due to the independence that these institutions enjoy it is dubious whether they will succumb to the sustainability imperative that the CSD will advance. Indeed, in spite of the rhetoric regarding a strengthening of the CSD, these minimal steps adopted do not constitute evidence of a political will to reshape the international institutional arrangement in a way that would facilitate the promotion of the sustainability principle.

Summarizing, therefore, the outcomes of the Johannesburg Summit it can be easily derived that the Summit was far from groundbreaking in terms of providing the basis for a renewed system of governance. For the more part, the Summit, though underlining the challenges that need to be addressed, reaffirmed earlier commitments moving only gradually towards elaborating on the means to achieve implementation. Demonstrating further the recognition of the ineffectiveness of international environmental law in reversing deteriorating environmental trends, the Summit concluded by urging the international community to implement the recommendations on environmental governance that UNEP has been considering during the last two years. The Summit, although mandated to provide the tools for the creation of system of sustainable governance, persisted in operating under a fragmented approach, through which environmental, social and economic priorities are perceived as separate topics and, therefore, are considered in isolation to one another. Since the main outcomes of the Summit are produced by government delegates, the WSSD process demonstrated that although the United Nations had been committed to changing its perspective, in conformity with the requests of its member-States, the States themselves continue being

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[100] Draft Resolution submitted by the Vice-Chairman of the Committee, Mr. Jan Kara (Czech Republic) on the basis of informal consultation held on draft resolution A/C.2/57/L.38 10 December 2002.

restrained by the compartmentalization of their own understanding of sustainable development. In his latest Report, the Secretary-General includes reference to "Summit fatigue" as States feel that their capacity is exceeded by the series of meetings and conferences they are called to participate and follow through.[101] It seems, therefore, that a decade since the Rio Conference, the international community has presently accepted as legitimate the targets and objectives of all past conferences. As the United Nations agencies work in cooperation with member-States to implement these initiatives, State practice will crystallize the obligations of States, which initially had been considered merely as soft recommendations of specialized meetings. The Secretary-General, cognizant of the fact that the UN can be as effective as its members allow it, challenges the States to use the restructured United Nations, as a mechanism through which they can comply with the obligations they have agreed upon during the last decade since the Rio Earth Summit – obligations that were summed into one, all-encompassing document, in the World Summit on Sustainable Development.

With the consolidation of UN activities along the objectives of the Millennium Declaration, States, which have endorsed these initiatives by accepting the series of recommendations expressed by the Secretary-General, should consider these changes as binding and therefore, adjust their activities accordingly. Indeed, these expressions of commitment, although not binding in the strict legal sense create a political obligation that make action in the particular subject area a necessary political choice. The significance of soft law was particularly evident in the proceedings in Johannesburg, where the focus of the negotiations was to reach an agreement, on implementing within

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[101] *Strengthening of the United Nations: an agenda for further change. Report of the Secretary-General.* A/57/387. 9 September 2002. Paragraph 24.

the domestic system of each State what are perceived as non-binding declarations, including the Millennium Declaration of the United Nations General Assembly as well as the action plans of the series of conferences that have been concluded during the 1990s. Indeed, the Plan of Implementation that constitutes the final outcome of the World Summit on Sustainable Development serves as a guiding framework for the development of policies in the domestic sphere. Though not binding in the strict legal sense, since it does not constitute an international treaty, in essence it generates a commitment for action to be fulfilled by States. The fact that there has been follow-up activity, not necessarily at sufficient levels, after each Conference, both within the United Nations, as well as at the national levels, demonstrates that, in effect, the majority of States consider them selves bound by these instruments. If States act on the basis of these international developments, the outcomes of conferences although in a strict sense non-binding create sufficient obligation that demonstrates the influence of soft rules. Most significantly, this continuous confirmation of State commitment serves as a yardstick based on which national and local developments may be monitored.

VII. Conclusions

Recognizing the value of the evolution of international environmental law since the completion of the Stockholm United Nations Conference on the Human Environment, thirty years ago, this study has identified a series of shortcomings of the predominant system of international environmental governance. While several hundred bilateral and multilateral environmental conventions have been negotiated since 1972, scientific research continues to provide evidence of an unrelenting environmental degradation. In response to this evidence, environmental law has developed into a peculiar sub-field of international law, generating normative institutions that allow for the interaction of numerous actors that participate in international affairs today, making the use of regime theory an appropriate tool for the evaluation of its effectiveness. This study identified four driving forces: a. compliance with international environmental law is weak; b. protocols to conventions fall short of the broad objectives of environmental regimes; c. provisions of regimes are duplicated or can contradict one another; and d. environmental regimes fail to reflect complex natural cycles in order to explain the prevalent paradox. In spite of its monumental contribution in raising ecological concerns within the international political agenda, environmental law has been, to a great extent, ineffective in improving the environmental health of the planet. At the same time, the goods and services provided by the economic machine, that is mostly responsible for the alarming environmental trends, have been inequitably distributed formulating striking socioeconomic contrasts.

Having established these weaknesses of the international environmental legal order, the need for greater cooperation among environmental instruments has been

illustrated. Hence, broadening the use of regime theory, in order to demonstrate that there is a need to view environmental law as a comprehensive whole, this study emphasizes the need for the creation of an integrated system of international environmental governance. The term governance implies the collaboration of various actors, through established institutions, some of which may be legally binding agreements or international organizations, in order to design mutually accepted rules that will guide social behavior. Given this recognized need, the study presented the initiatives undertaken by the United Nations Environment Programme in promoting the coordination of environmental instruments, which constitutes a necessary but not sufficient reform in order to overcome the threats that plague the future. Coordination of environmental instruments alone will not generate the desired results of mitigating ecological concerns since the international environmental protection cannot be perceived as isolated from the economic and social disparities that imperil the human potential.

The effect of an increasingly globalized economy will require greater international cooperation and integration of state activities. As the economy continues to grow, following the conventional approach of overexploitation and abuse of natural resources, the degradation of the environment, as well as the social implications of an unfair distribution of resources, will persist, rendering the need for further international cooperation on the protection of the fragile ecosystem even more imminent. Globalization of the economy and of communications constitutes an inexorable trend. However, its form and impacts are anything but inevitable requiring political will and capacity to formulate its character. Indeed, economic integration does not necessarily have to be equated with a growth of global degradation; rather, it can become a force

through which with the adoption of new paradigms and new dimensions can contribute to a positive change.

Further recognizing the interconnections between the balance of the ecosystem and the well-functioning of the global economy in such a way as to provide adequate goods and services to the present generations, international environmental law, as it evolved following the Rio de Janeiro Earth Summit, bridged the gap that has been created by insisting on the existence of divergent priorities between economic development and environmental protection, and promoted the principle of sustainable development. Coordination of environmental instruments, therefore, should not constitute the final objective; rather, it should be considered as an additional tool through which international and national actions can be orchestrated in order to achieve the ultimate end, which is the transition to a system of governance that is based on the three pillars of sustainable development, that is economic development, social cohesion and environmental protection. But, international institutions, though very influential as independent actors, are limited with respect to the level of influence they can exert on States. Although they can set the normative framework, through which a discourse can originate, they have no enforcement authority that will oblige States to implement the decisions reached at the international fora. Indeed, as discussed in this study, environmental law, although created based on the experience of a series of domestic instruments in North America and Europe, developed internationally following the completion of the Stockholm Conference – the first international forum to discuss the plight of the planet, which, as was noted, concluded with the adoption of non-binding recommendations. Nevertheless, in order to be conducive to promoting sustainability, these decisions require that the steps towards

an integrated approach that are made at the international level are reflected on the developments within the domestic framework of each State. It is for this reason that, again, following the 1972 Conference, a proliferation of environmental ministries was witnessed, demonstrating the translation of international norms into a domestic regulatory framework. States need to act responsibly and encourage integration of the three pillars of sustainable development at the national level.

Although several countries have developed national sustainability strategies in order to implement Agenda 21, as was agreed upon at the Earth Summit +5, in 1997, no standardization has emerged based on which these initiatives can be assessed, monitored, and further improved.[102] Therefore, there is no evidence to suggest that actual integration at the national level is taking place. States to a large extent have been unable to determine the elements of an integrated sustainability strategy. It is significant to note, also, that not all countries are able to deal with the required changes. Indeed, there are many countries that are plagued by immediate needs. It is to these countries that special assistance through capacity building and financial assistance, technology transfer needs to focus.[103] As a consequence, States, due to a variety of reasons, insist on requesting that international institutions respond on their behalf. Seeking the assistance of international organizations, in order to face the new challenges that have the potential of developing into an anarchical turbulence, States have no means of ensuring that these organizations have the capacity of addressing these challenges.[104] Established international

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[102] *Implementing Agenda 21. Report of the Secretary General.* E.CN.17/2002/PC.2/7. The report states that 85 countries have developed national agenda 21 strategies. However, each country has followed a different approach in drafting and implementing these strategies, making any comparisons very difficult. Paragraphs 149-157.

[103] Nitin Desai, "Implementing Agenda 21: A UN Perspective" in ed. Felix Dodds, *Earth Summit 200*2, 28.

[104] For a discussion of the daunting crises that may mark the 21st century see Robert Kaplan, "The Coming Anarchy," *The Atlantic Monthly* 273, no 2. (February 1994): 44-76.

organizations have taken on this new role, without necessarily knowing whether the expectations will be fulfilled. Moreover, as more actors become engaged in the political arena and new challenges surface, international organizations are called to assume an even more significant task. Therefore, they have gained a central position in the developing of environmental law as well as the implementation of the principle of sustainable development.[105]

Despite these efforts it has been recognized that international organizations acting autonomously, rather than in concert, do not suffice in promoting sustainable development. Nonetheless, coordination of international organizations, if it requires substantial cooperation and integration of efforts, can be a very thorny endeavor since each organization has developed its own niche of specialization, while also defending its own "sovereign" mandate. The difficulty of restructuring the capacity of international organizations has been demonstrated in the presentation of the long process of reform that the present Secretary-General initiated in 1997, and most significantly in the complications revolving around the reorientation of the UN in line with the targets and objectives outlined in the Millennium Declaration. Observing the numerosity of international organizations that have an environmental mandate it can be shown that while it allows for environmental protection to be disseminated across fields, at the same time it leads to a fragmentation of limited resources.[106] Hence, it is important that this necessary cooperation takes into consideration the advantages and expertise of each institution. In other words, by making use of the best practices of each institution and

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[105] Oran R. Young, *International Governance: Protecting the Environment in a Stateless Society* (Ithaca, NY: Cornell University Press, 1994), 170.

[106] M. J. Peterson, "International Organizations and the Implementation of Environmental Regimes," in ed., Oran R. Young, *Global Governance: Drawing Insights*, 149.

eliminating the wrongs, an integrated approach could surface. Such an approach could emerge if the newly established EMG, while encouraging each institution to determine the means through which it will integrate environmental protection in its mandate, coordinates effectively these autonomous initiatives. In other words, a strong EMG can undertake the role of an overseer and facilitator of the orchestration of the international protection of the environment as conducted by international organizations. Assuming this role, the EMG can complement the immediate catalytic role of UNEP, by ensuring a resounding environmental effect across UN activities. However, it will be successful in emphasizing the need for cross-sectoral integration of the environment dimensions only if it can counterbalance the UNDG and manage to influence the field projects undertaken by the UNDP. Promoting sustainability should constitute a core principle of the development agency, advanced as strongly as the need to eradicate poverty. In effect, sustainability, by advancing a tri-pillar approach to development, recognizes equal significance to social and economic priorities as to environmental ones. The EMG, therefore, should be in a position to partake in the designing of UN activities, rather than merely coordinate them.

Given the imminence of environmental threats, and the need for an accountable, responsive and irrefutable system of environmental governance, many have argued in favor of the establishment of a global environmental authority that would provide the institutional and organizational stability for the emergence of such a system of governance.[107] Since the ecological threats evinced today are of a global scale, an environmental authority that is able to hold a broad ecosystem perspective would be able

to identify policies that are reflective of the interconnections and linkages that are revealed by the continuous scientific observation and analysis. Such an organization could create policies that would be reflective of the ecological interdependence of countries, similar to the way that the World Trade Organization is based on the concept that countries have become interdependent through the expansion of trade and economic liberalization.[108]

Acknowledging the validity of these reasons, given the political realities expressed by States in several occasions, however, it is safe to assume that the generation of a radically new institutional system in the form of a World Environmental Organization is not a viable option. An international organization in order to be effective should have a clear mandate, as well as, guaranteed funding and indubitable authority, which are characteristics that States have been hesitant to provide to neither UNEP nor the CSD, rendering these environmental organs of the United Nations as ineffective. Creating a new organization is politically unrealistic especially following the World Summit on Sustainable Development, which did not consider this as an option of revised environmental governance, since it necessarily implies the centralization of environmental concerns under one body. Rather, the Johannesburg Plan of Implementation included provisions for the improvement of the existing system of governance through the reconsideration of the mandate and authority of existing institutions such as the CSD and UNEP. As a result, proposals to create a new World Environmental Organization, an Environmental Security Council or to re-launch the

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[107] The term global environmental authority serves a descriptive purpose rather than being aligned to any specific proposals of the numerous that have been identified by variety of authors regarding the establishment of an intergovernmental environmental organization.

Trusteeship Council with an environmental mandate, in spite of their potential to bring about change, are considered unlikely to be realized in the immediate future.[109] However, existing institutions should not be prevented from advancing environmental concerns and develop their environmental branches since the need to mainstream environmental concerns continues being a central one.

Nevertheless, it is possible, that these options will mature in particular as the environment becomes entrenched in the mainstream decision-making. In addition, the political dynamics that presently prevent the creation of an effective system could change. If the economic powers choose, or are forced, to change due to the domestic political pressure, environmental matters could come to the forefront, and, actually, could generate greater commitment to the principle of common but differentiated responsibilities, contributing to a renewed system of cooperation and mutual respect.[110] The options available to States, therefore, should continue to be explored, but should not be perceived to have the potential for immediate implementation and realization. It is for this reason that dismissing the option of a global environmental authority is not the

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[108] Daniel C. Esty "The Case for a Global Environmental Organization," in ed. Peter B. Kennen, *Managing the World Economy: Fifty Years After Bretton Woods* (Washington, DC: Institute for the International Economics, 1994), 287-309.

[109] For an overview of proposals that have been introduced in order to support environmental governance see Hillary F. French, *After the Earth Summit*, 53-56; Hillary F. French, *After the Earth Summit: The Future of Environmental Governance*, Paper 107, (Washington, DC: Worldwatch Institute, 1992), 31-38; Steve Charnovitz, "A World Environmental Organization," *Columbia Journal of Environmental Law* 27 (2002): 323-362 and Dena Marshall, "An Organization for the World Environment: Three Models and Analysis," *The Georgetown International Environmental Law Review* 15 (2002): 79-103.

[110] The principle of common but different responsibilities constitutes a guiding principle that allows for countries to contribute at different levels to the shared goal of promoting sustainable development. This principle, therefore, brings an equity dimension in the processes of environmental diplomacy by recognizing the economic, social, as well as, environmental differences that characterize countries. As a result, the wealthier countries and those that contribute more to the environmental problem at hand bear a greater cost than other States, which, however, share an interest in protecting the environment. Moreover, these countries are expected to contribute to the sustainable development of developing countries. However the nature of this contribution remains to a large extent unclear resulting often in confrontations and mistrust during environmental negotiations.

position of this paper. Rather, this study suggests that the creation of such an institution given the present thinking will equate to further subsiding of environmental issues that are in dire need of attention.

The analysis in this study provides evidence to suggest that the United Nations has recognized the need for a revised prototype of governance as it responds to the calls of States for a better structure. Indeed, to a great extent the United Nations, whether through its own reform or through the catalytic role of UNEP, has succeeded in initiating, even if not fully implementing, a process that is in line with the recommendations of the 1987 Report of the Brundtland Commission.[111] While the United Nations and, most significantly, the recent reports of the Secretary General tend to emphasize the pervasive nature of environmental threats, international negotiations continue to a great extent being held in isolation of one another, divided both by physical as well as conceptual barriers. Although the physical barriers and other administrative shortcoming could be addressed, through several adjustments that both practitioners and academics have proposed, the conceptual threshold will be more difficult to grapple with. For example, the coordination efforts embarked on by UNEP in order for the provisions of multilateral environmental conventions to be compatible with each another, cannot become enforced unless the Conference of the Parties of each convention approves the changes of procedure that are recommended. Consequently, the ultimate outcome of the process lies with the decision-making authorities of each State, rather than the international organization, to which States have conferred the responsibility of creating a holistic

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[111] R. Carlos Sersale di Cerisano, "Global Governance for the Protection of the Environment in the Context of Sustainable Development: The UN Approach to the Problem and its Institutional Reform Ten Years after the Brundtland Commission's Report, in eds. Guri Bang Søfting, et al., *The Brundtland Commission's Report – 10 Years*, 125-126.

system of governance. However, this necessary transition is the most necessary, given the threats that ponder.

The UN is called to respond to the requests of the different actors and most significantly of its member-states exploring the way to address the challenges we are faced with. But, it is the governments, because of their domestic accountability forces, that block the process, while continuously accusing the UN of being an ineffective bureaucracy. Indeed, the UN being an established organization cannot easily be transformed into an agile institution that is receptive to radical change of practice. It is for this reason, as demonstrated in the discussion of the recent UN reform that the international Organization is grappling with the creation of new bodies and coordinated meetings. However, even within the UN bodies, autonomous organs have been resistant to the changes, defending their sovereign mandates, since, as is often the case, established institutions develop into conservative forces that resist the possibility of losing some of their autonomy and developed expert orientation – their "sovereign" mandate. In other words, effective environmental governance requires more than coordination and institutional change.

While providing international organizations with the mandate to create a framework that will induce change of State behavior, States do not follow through to implement their decisions. Although international environmental governance is important it should not be seen as an end in itself rather it should be viewed as a means of attaining the actual end, which is the realization of the principle of sustainability. There is a need for national sustainability initiatives to be well coordinated and indeed integrated across sectors of the policy range. The most recent conference in Johannesburg demonstrates

that in spite of the prevalent recognition of the weaknesses of the international environmental system, a lack of willingness to act persists, while both environmental and human well-being perish. Especially having followed the negotiations in Johannesburg, it seems that countries have failed to provide an integrated understanding of the crisis that obscures the success of the future.

Given this discussion, the question that remains to be addressed is whether governmental attitude change could be achieved. Governments are responsive to the domestic demands of their constituencies, rendering compliance a tangent of domestic interests. Those politically and economically powerful tend to benefit from environmental degradation, which results in environmental ministers not carrying the same leverage as their counterparts in other ministries, which are effectively accountable to politically more significant, at least in the short term, constituencies. In addition, the forces in power tend to be inherently conservative, in the sense that they resent any type of change that would lead to potential change of the status quo and, therefore, jeopardize their position of authority. In order for the focus of attention of governments to be reverted to environmental matters, domestic public opinion needs to act. Most significantly, the action needs to be derived not only from those suffering the environmental degradation, which as noted earlier, tend to be the most marginalized of any political system carrying, therefore, limited leverage, but also from the general public. There is a need for greater public participation not only at the global level which is slowly becoming more susceptible to the idea of stakeholder contribution, in particular, since the Earth Summit, but also within the turf of each ministry and each government. Though governments claim to be representative of the people, it is evident by the protests

around the world, regarding the process of development, that have emerged that a feeling of discontent and misrepresentation of interests prevails. Economic and political constraints have prevented State authorities from acting as catalysts of sustainable action within the domestic arena. It is therefore, not surprising that alternative projects have emerged through tireless efforts of organized indigenous, local and regional groups.

During the previous section it was demonstrated that new initiatives by civil society and the private sector were undertaken during the Johannesburg Summit in the form of partnerships, indicating that the potential for change could lie in the formation of such transnational coalitions. Several of the most recognized successful initiatives have developed by the efforts of local authorities, as is reported by the International Council of Local Environmental Initiatives.[112] Such initiatives are significant and their contribution necessary in order to realize the transition to a society that is economically, socially and ecologically in balance. Although such implementation of Agenda 21 at the local level is profoundly significant, the sustainability blueprint agreed upon in 1992 has to a large extent not been complied with at the national level. The preponderance of evidence suggests that global system has been unable to administer the required change by translating it into national action. At the same time, it is important to understand that these initiatives would not have surfaced had the States not created the international legal and institutional framework through which subnational and transnational groups can operate. Because of the adoption of multilateral agreements as well as the expression of commitment through non-binding declarations and resolutions, non-State actors are granted evidence of emerging trends. International environmental law can provide the framework and actually provide a universally agreed upon structure that will orchestrate

national and local initiatives. Progress at the international level can be seen as catalytic for these initiatives to take place. Partnerships can implement the decision that have not been ratified and approved through the official national process, allowing for expedient trialing of options that are available for full implementation. It is for this reason, that it is necessary that the mechanism for proper monitoring mechanism and specific compliance mechanism to be instituted to assure accountability with the commitments made. When partnerships are successful, facilitative mechanisms need to be created in order to communicate the exemplary practice so that these models will be replicated and the lessons learned will be distributed both within and beyond national borders. In order for environmental law to be effective, therefore, States need to comply with its provisions, which means translating globally agreed upon principles into national law and local action. International environmental law can be declared meaningful only if it has been able to change the behavior of every citizen, that is, if it has been able to convey the importance of the protection of the environment to each discipline and activity.

International environmental regimes in order to be operational require state involvement. Most importantly, compliance with and implementation of environmental agreements need States to be strong in their role as authoritative architects of the normative and necessarily legal edifice within which social, political and economic actors can interact. As a result, States, although influenced both by international and domestic forces, have the ultimate authority and responsibility of shaping the level of conformity with international environmental norms.[113] Despite the fact that new and additional actors have become engaged in the formulation of the international sustainability agenda,

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[112] The International Council of Local Environmental Initiatives. http://www.iclei.org.

appeals are directed towards the State. Industry lobbyists seek to ensure that States will act in concert to their own interests, non-governmental organizations call for States to act based on the evidence of science, protesters challenge States to realize their promises, and partnerships are formed in order to bring about the operationalization of the agreements reached upon by States. Often these new actors respond first to the global changes occurring, urging a transformation of attitude and practice from the existing state authorities. Although international environmental politics has attracted the attention of numerous actors, the State remains the central institution through which actions can be taken. At the same time, the role of the State is significantly different from the one it has traditionally held since the agreement of the Peace of Westphalia in 1648. The State is required to adjust the application of the principle of national sovereignty in order for responses to be in line with the policies needed in order to attain environmental protection, a central component of sustainability.[114]

Nevertheless, it is recognized that States act on a multiple agenda. The question, therefore, that remains to be addressed, is whether States can include the protection of the environment as a main objective when other goals, such as security, and economic interests tend to be given priority. There needs to be reevaluation of a state's priorities within the security as well as the global economy setting. When evaluating a situation, one needs also to be aware of the ecological consequences and take preemptive measures, within the framework of the precautionary principle in order to protect the environment. Such a mindset will allow for the environmental pillar to be strengthened, and will

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[113] For a discussion of the changing nature of State power see Jessica T. Mathews, "Power Shift," *Foreign Affairs* 76, no 1 (January/February 1997): 50-66.

necessarily lead to a re-conceptualization of the economic and security concerns. It is paramount that the new round of negotiations, initiated in Doha in 2001 integrates environmental protection into the revised agenda of the WTO. Only if trade is perceived as the means to achieve sustainable development, within which the three pillars of the principle bear equal significance, will trade become instrumental in equitably improving the human well-being. The principle of sustainability, as it evolves within and beyond the strict framework of international environmental law, will strengthen this particular sub-field of international law, since its implementation will necessarily require the organizational structure of the decision-making process of any State.

Indeed, there is an increasing recognition that the established system cannot adequately respond to the complex and systemic problems with which States are faced. Incremental processes have been advocated for, but these responses are not in pace with the rate of developing threats both in the socioeconomic as well as in the environmental field. The reform of the United Nations, in particular within the context of reorganizing the Security Council, constitutes a clear example of slow process. As a result, consideration of radical options, which could be disruptive to the present system of governance, is deemed necessary. Innovation means changing the parameters in which the old system operates. Creating a revised framework may create some obstacles and difficulties but adjusting will be easier if it adequately reflects the new paradigm that has developed. Illustratively, the Security Council has been engaged in the determination of effective strategies to address threats that are beyond the conventional definition of international security, and include concerns of promoting human security. It is paramount

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[114] For a discussion of the role of the State in environmental politics and the need to redefine the defining parameters of the principle of national sovereignty see Karen T. Liftin, ed., *The Greening Sovereignty in*

that these discussions are broadened to include the entirety of threats to a sustainable and peaceful future. Drawing from its experience in socioeconomic questions, the Security Council can apply its leverage in the realization of the Millennium Declaration, which reshaped the agenda of the United Nations to reflect the needs of the 21st century. International organizations can set the framework within which business, NGOs, and ultimately the State will operate, in an accountable and responsible manner, protecting not only the invaluable global ecosystem but also providing the necessary resources to lift humanity from an image of contrasts and disparities. Indeed, the creation of shared norms, rules and obligation can only be achieved through multilateral processes. Although such recognition is gradually gaining popularity whether it will resound in the governmental levels is questionable.[115]

Such an approach is not necessarily attractive since it does not involve an easily available prescription, such as the creation of a new organization. Rather, what is needed is a change in the framework of thinking, a change of approach. It is unlikely that such an approach will be derived slowly following the attainment of a consensus. However, there needs to be change, which requires the international system to be innovative, challenging the status quo, which means going against established forces that are resistant to change. It seems that at this time both the opportunity and the capacity to change exist. Hopefully, with the demonstration of support from the public, political will for change will also be generated. If these three requirements are fulfilled, States together with international institutions will commit the necessary resources for the transition to an international

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World Politics (Cambridge, MA: The MIT Press, 1998).
[115] "Report from the Workshop on International Institutional Challenges," in eds. Guri Bang Søfting, et al., *The Brundtland Commission's Report – 10 Years*, 221.

system that is interested not only in discussing environmental protection, but actually promoting and operationalizing the principle of sustainability throughout its activities.

This study has been successful in presenting the series of weaknesses and failures of the current international environmental system. The complexities, although significant, do not constitute a Gordian knot that cannot be untied. To the contrary with a long-term commitment and a bottom-up approach, the transition to a sustainable society that has been agreed upon by the environmental legal order, has the potential of unfolding, strengthening not only environmental protection, but also, and equally importantly, economic development both at the international and at the national level. The renewed attention and focus on sustainable development, perceived as a cross-cutting theme, that emerged following the Johannesburg Summit necessarily entails the orchestrated action in the three pillars of the principle.

Although there are many questions that remain to be answered in order to achieve and attain a sustainable society, this paper argues that there is an immediate need for States to create the necessary conditions that will allow for the realization of the institutional and regulatory framework that has been agreed upon at the international level. In order for the horrific contrasts that plague the world today to be alleviated, it is essential that States accept the naissance of a new paradigm and provide the necessary institutions for its promotion. Applying the principle of sustainable development, which as has been shown requires integration of vision and action, States have the potential of reversing the pending and imminent ecological crisis that is clouding the future of the planet.

VIII. List of Abbreviations

CFCs	Chlorofluorocarbons
CO_2	Carbon Dioxide
COP	Conference of the Parties
CSD	Commission on Sustainable Development
ECOSOC	Economic and Social Council
EMG	Environment Management Group
GEF	Global Environment Facility
HCFCs	Hydro-chlorofluorocarbons
IGM	Open-Ended Inter-Governmental Group of Minister or Their Representatives on International Environmental Governance
MEA	Multilateral Environmental Agreements
NGOs	Non-governmental organizations
UN	United Nations
UNDG	United Nations Development Group
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
WEHAB	Water, Energy, Health, Agriculture and Biodiversity
WEO	World Environmental Organization
WSSD	World Summit on Sustainable Development
WTO	World Trade Organization

IX. Table 1: List of Conventions reviewed by UNEP

Environmental Conventions and Related Agreements of Global Significance included in the UNEP survey in preparation of the deliberations of the Open-Ended Inter-Governmental Group of Ministers or Their Representatives on International Environmental Governance		
Conventions	Date adopted	Secretariat
Atmosphere Conventions:		
1. United Nations Framework Convention on Climate Change (UNFCCC)	1992	UN
2. Kyoto Protocol to the United Nations Framework Convention on Climate Change	1997	UN
3. Vienna Convention for the Protection of the Ozone Layer	1985	UNEP
4. Montreal Protocol on Substances that Deplete the Ozone Layer	1987	UNEP
Biodiversity-related Conventions:		
5. Convention on Biological Diversity	1992	UNEP
6. Cartagena Protocol on Biosafety to the Convention on Biological Diversity	2001	UNEP
7. Convention on International Trade in Endangered Species (CITES)	1973	UNEP
8. Convention on Migratory Species (CMS)	1979	UNEP
9. Agreement on the Conservation of African-Eurasian Migratory Waterbirds (AEWA)	1995	UNEP
10. Agreement on the Conservation of Bats in Europe (EUROBATS)	1991	UNEP
11. Agreement on the Conservation of Cetaceans of the Black Sea, the Mediterranean Sea and Contiguous Atlantic Area (ACCOBAMS)		ACCOBA MS Sec.
12. Agreement on the Conservation of Seals in the Wadden Sea	1990	Ind. Sec.
13. Agreement on the Conservation of Small Cetaceans of the Baltic and North Seas (ASCOBANS)	1991	UNEP
14. Ramsar Convention on Wetlands	1971	IUCN
15. World Heritage Convention	1972	UNESCO
16. International Coral Reef Initiative (ICRI)	1995	ICRI Sec
17. Lusaka Agreement on Cooperative Enforcement Operations Directed at Illegal Trade in Wild Fauna and Flora	1994	KWS
Chemicals and Hazardous Wastes Conventions:		
18. Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal	1989	UNEP
19. Basel Ban Amendment	1995	UNEP

20. Basel Protocol on Liability and Compensation	1999	UNEP
21. Rotterdam Convention on the Prior Informed Consent Principle for Certain Hazardous Chemicals and Pesticides in International Trade	1998	UNEP/ FAO
22. Future Stockholm Convention on Persistent Organic Pollutants	2001	UNEP
Land Conventions:		
23. United Nations Convention to Combat Desertification	1992	UN
Regional seas conventions and related agreements		
24. Global Programme of Action for the Protection of the Marine Environment from Land-based Activities	1995	UNEP
25. Convention for the Protection of the Mediterranean Sea against Pollution (Barcelona)	1976	UNEP
26. Kuwait Regional Convention for Cooperation on the Protection of the Marine Environment from Pollution	1978	ROPME
27. Convention for Cooperation in the Protection and Development of the Marine and Coastal Environment of the West and Central African Region (Abidjan)	1981	UNEP
28. Convention for the Protection of the Marine Environment and Coastal Area of the South-East Pacific (Lima)	1981	CPPS
29. Regional Convention for the Conservation of the Red Sea and Gulf of Aden Environment (Jeddah)	1982	PERSGA
30. Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region (Cartagena)	1983	UNEP
31. Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Eastern African Region (Nairobi)	1985	UNEP
32. Convention for the Protection of the Natural Resources and Environment of the South Pacific Region (Noumea)	1986	SPREP
33. Convention for the Protection of the Marine Environment of the Baltic Sea Area (Helsinki)	1992	HELCOM
34. Convention on the Protection of the Black Sea from Pollution (Bucharest)	1992	BSEP
35. Convention for the Protection of the Marine Environment of the North-East Atlantic	1992	OSPAR
36. Draft Convention for the Protection and Sustainable Development of the Marine and Coastal Environment of the Northeast Pacific		UNEP
37. Draft Convention for the Protection of the [Marine] [Environment] of the Caspian Sea		
38. The East Asian Seas Action Plan	1981	UNEP

39. Protection of the Arctic Marine Environment	1991	PAME
40. The Northwest Pacific Acton Plan (NOWPAP)	1994	UNEP
41. South Asian Seas Action Plan	1995	SACEP

Reproduced from UNEP's Executive Director's report, *International Environmental Governance: Multilateral Environmental Agreements (MEAs)* (UNEP/IGM/1/INF/3 6 April 2001).

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