Chapter 2: International Legal Approaches: Treaties and Non-Binding Agreements

Because of the global dimensions of climate change, policymakers have attempted to address this problem at an international level through treaty law. The United Nations Framework Convention on Climate Change (UNFCCC) and the agreements under it form the core international legal response to climate change. The UNFCCC, which opened for signature in 1992, has 195 Parties (194 Nation-States and 1 regional economic integration organization, the European Union).

However, the Parties to the UNFCCC have failed to reach an agreement that would achieve the reductions that scientists say are needed, both because of lack of political will in key countries and because of political differences among countries. In the face of these difficulties, other simultaneously-pursued international approaches serve as an important complement to negotiations under the UNFCCC.

This chapter provides an overview of these efforts to use international law to solve climate change. It begins with a brief introduction to international law, and then explores both the core climate change treaty framework and other important international legal developments.

A. The Complexities of International Law

The problem of climate change cannot be solved in any single country. As Chapter One explores in depth, its physical and human dynamics involve action by governments, corporations, nongovernmental organizations, and individuals in many places around the world. These global and transnational dynamics of climate change require international-level agreements to play a role in legal efforts to address this problem.

However, international law functions differently than domestic law because no overarching government exists to enforce the law. Instead, agreements among nation-states—which are presumed to be sovereign and equal—comprise international law. Countries participating in these agreements enforce the law collectively and through international institutions that they create. This structure has led to long-standing debates over the extent to which international law is really law, which at times become quite politicized. This section does not attempt to enter such debates, but rather presents the primary forms of international law and the way in which these forms are being used to address climate change.

The Statute of the International Court of Justice, the principal judicial organ of the United Nations, provides a list of the primary sources of international law that has been accepted by most commentators as definitive:

> a. international conventions, whether general or particular, establishing rules expressly recognized by the contesting states;
> b. international custom, as evidence of a general practice accepted as law [customary international law];
> c. the general principles of law recognized by civilized nations;
> d. subject to the provisions of Article 59, judicial decisions and the teachings of the most highly qualified publicists of the various nations, as subsidiary means for the determination of rules of law.
> Statute of the International Court of Justice, art. 38, June 26, 1945, 59 Stat. 1055, *available at* http://www.icj-cij.org/documents/index.php?p1=4&p2=2&p3=0 (last visited Dec. 24, 2011).

This chapter focuses primarily on the first category on that list, "international conventions," which are also referred to as treaties. The Vienna Convention on the Law of Treaties defines a treaty as "an international agreement concluded between States in written form and governed by international law, whether embodied in a single instrument or in two or more related instruments and whatever its particular designation." Vienna Convention on the Law of Treaties, art. 2, May 23, 1969, 1155 UN Treaty Ser. 331, 333, *available at* http://untreaty.un.org/ilc/texts/instruments/english/conventions/1_1_1969.pdf (last visited Dec. 24, 2011). Although the United States is not party to the Vienna Convention on the Law of Treaties, it considers many provisions of it to be customary international law. United States Department of State, Vienna Convention on the Law of Treaties, http://www.state.gov/s/l/treaty/faqs/70139.htm. The UNFCCC and the Kyoto Protocol, as well as a number of the agreements discussed in Section C, are all treaties so defined. The countries that agree to a treaty are referred to as "parties" to it.

The other three sources bear some mention, though, because they at times have relevance to international legal dialogues regarding climate change and an understanding of international law would be incomplete without including them. First, "international custom," also referred to as "customary international law" and, in older documents, as "the law of nations," has two primary dimensions: many nations agree to it and believe that they are bound by it. Disputes occur about how broad that agreement must be and what can be used as evidence of binding consent. Second, "general principles of law" are the gap filling mechanisms of international law. They are not themselves international law, but rather widely accepted principles in the legal systems of nations that are used to fill the gaps in treaty and customary international law. Finally, the "judicial decisions" and "teachings" are referred to in order to resolve disagreements about treaties or customary international law. Commentators disagree over what should fall into this category and how they should be used, particularly because international legal scholarship has evolved over time from treatises summarizing existing law. For further exploration of these sources and an overview of public international law, see IAN BROWNIE, PRINCIPLES OF PUBLIC INTERNATIONAL LAW (6th ed. 2003).

This brief overview of international law is useful for understanding the nation-state-led efforts to address climate change occurring primarily under the auspices of the UNFCCC and

other treaties like the Montreal Protocol. But the cross-cutting nature of climate change introduced in Chapter One also highlights the limitations of addressing this problem solely through such a top down regime. Numerous international legal theorists have long grappled with how to capture dynamics outside of agreements among nation-states. For example, New Haven School scholars describe law as "a process of authoritative decision by which the members of a community clarify and secure their common interests," and include a wide range of interactions in different arenas as relevant to international lawmaking. 1 HAROLD D. LASSWELL & MYRES S. MCDOUGAL, JURISPRUDENCE FOR A FREE SOCIETY: STUDIES IN LAW, SCIENCE AND POLICY xxi (1992). Global legal pluralists and those arguing for polycentric approaches to climate change similarly argue for an analysis that treats international law among nation-states as only one component of addressing climate change. In addition, critical international legal scholars, such as those from the Third World Approaches to International Law (TWAIL) school, question the presumption of legitimacy at the core of the international legal system and explore the roles that colonialism, post-colonial legacy, and inequality play in the international order. This chapter's exploration of international legal efforts to address climate change approaches these issues by including both the treaties among countries and other international-level interactions that help to shape multi-level governance of climate change and by highlighting issues of inequality. Chapter Seven provides a deeper engagement of the injustice associated with major climate change.

NOTES AND QUESTIONS

1. Although the Vienna Convention on the Law of Treaties provides a widely accepted definition of a treaty, distinguishing between a binding international treaty and non-binding international agreement is often hard. Many treaties, including the ones discussed below, include broad and/or ambiguous language in order to allow for the agreement of more countries. The UNFCCC has quite a bit of such wording, especially since its goal was to establish a framework to which as many of the countries of the world as possible, especially the major emitters, could agree. As you examine the language of the treaties in the sections that follow, consider: What are the advantages and disadvantages of broad and ambiguous treaties with many parties versus narrower and clearer treaties with only a few participants? When treaties contain such broad or vague provisions, how different are they from nonbinding declarations?

2. How might your view of climate change treaty negotiations vary based on your view of the international legal system? For example, if the UNFCCC structure is viewed as the primary way to address climate change rather than as one piece of a complex puzzle, how might an assessment of COP outcomes differ? If you reject the legitimacy of the international legal system on the basis that many governments do not democratically represent their people and that countries have unequal places at the negotiating table, how would you view current efforts to address climate change and how would you like to structure future ones?

   For those wanting to explore international legal theory further, many resources exist. This brief note cannot do justice to them, but suggests a few possibilities for further inquiry. Oona Hathaway and Harold Koh produced a helpful compilation of different perspectives at the law-political science intersection. OONA ANNE HATHAWAY & HAROLD HONGJU KOH,

FOUNDATIONS OF INTERNATIONAL LAW AND POLITICS (2005). Paul Berman's *Global Legal Pluralism*, 80 S. CAL. L. REV. 1155 (2007), provides an introduction and framing of how pluralism might assist with understanding and approaching the global legal environment. James Gathii created a history of TWAIL and extensive bibliography of its scholarship. James Thuo Gathii, *TWAIL: A Brief History of its Origins, its Decentralized Network, and a Tentative Bibliography* 3(1) TRADE L. & DEV. 26 (2011). For those wanting to delve further into the controversies over customary international law and its status in the U.S. legal system, Carlos Vázquez summarizes the various positions and advocates his own in Carlos M. Vázquez, *Customary International Law as U.S. Law: A Critique of the Revisionist and Intermediate Positions and a Defense of the Modern Position*, 86 NOTRE DAME L. REV. 1495 (2011).

B. The Climate Change Treaty Regime

The primary treaty regime on climate change follows a "framework-protocol" model. The UNFCCC establishes a broad framework for making international progress on climate change, with an understanding that subsequent protocols negotiated under its auspices will provide more specific commitments. Under the auspices of this treaty, all of the parties agree to the broad principles of the framework and to developed country major emitters having more significant obligations than developing countries in accordance with the international law principle of common but differentiated responsibility; this principle recognizes that climate change and its impacts are a common concern of humankind, but that obligations should be differentiated based on notions of equity.

Parties to the UNFCCC gather each year at a Conference of the Parties (COP) to negotiate their additional commitments. However, negotiations on the protocols and the long-term approach to climate change (often under the auspices of the Long-term Cooperative Action (LCA) track) have been stymied by disagreement over what form detailed mitigation commitments should take. Most importantly, some major developed country emitters have been willing to make commitments that do not include developing country major emitters, and others—most prominently, the United States—have insisted on a universal agreement. As a result, negotiations regarding mitigation have involved efforts along two different tracks that reflect these divergent visions.

The Kyoto Protocol, which was adopted in 1997 and came into force in 2005, reflects the first vision of developed country emitters making specific commitments that do not include developing countries. Since 2005, parties to the Kyoto Protocol have met at an annual Meeting of the Parties of the Kyoto Protocol (MOP) in conjunction with the COP. The Kyoto Protocol contains the most significant specific commitments by developed countries to reduce emissions to date. Its first commitment period expires in 2012, and, at the 2011 Durban COP, many of its parties committed to a period that begins in 2013. However, the Kyoto Protocol's impact has been limited by the fact that the United States is not a party to it, many parties are struggling to make their first-period commitments, and some key developed country emitters like Canada, Japan, and Russia—all of which played a crucial role in the treaty being able to come into force without U.S. participation—have not agreed to specific commitments for the second period.

In parallel with some major emitters making ongoing Kyoto Protocol commitments, UNFCCC parties have worked toward developing the second vision's approach of a universal agreement. The 2011 Durban COP made some progress with an agreement to reach a universal

binding agreement by 2015, and the establishment of an ad hoc working group on the Durban Platform to develop a new protocol or other legal approach. However, until parties reach such an agreement rather than just agreeing to a procedure for trying to get there, only the Kyoto Protocol parties have specific, binding commitments to mitigate climate change. The other UNFCCC parties track and report their emissions (a requirement for developed countries) and make voluntary commitments and actions.

At the same time as these disagreements over mitigation commitments have persisted, UNFCCC parties have reached agreement on initiatives to help developing countries obtain needed technology and to support adaptation efforts, especially in poor countries which will be particularly impacted with limited capacity to adapt. The last several COP meetings have resulted in additional progress on both fronts.

The following sections provide an overview of these issues. They analyze the framework-protocol approach of the climate change treaty regime, core provisions of the UNFCCC and the Kyoto Protocol, and the current state of negotiations.

1. The Framework-Protocol Approach to Climate Change Treaties

Before looking at the specifics of the UNFCCC, Kyoto Protocol, and ongoing negotiations, it is important to understand the overall structure of the climate change treaty regime and why negotiators decided to follow this approach. The framework-protocol approach that the international community chose to take with respect to climate change has had a significant impact on how the regime has developed since. It has ensured a broad commitment to principles and a structure for negotiations, but has meant that the difficult details continue to be negotiated over time.

The following excerpt, written by Professor Bodansky soon after the UNFCCC was negotiated, introduces the climate change treaty regime and describes the decision to take a framework-protocol approach.

Daniel Bodansky, *The United Nations Framework Convention on Climate Change: A Commentary*, 18 YALE J. INT'L L. 451, 453–54, 493–96 (1993).

In response to this threat [of climate change], the U.N. General Assembly established the Intergovernmental Negotiating Committee for a Framework Convention on Climate Change (INC) in December 1990, with the mandate to negotiate a convention containing "appropriate commitments" in time for signature at the U.N. Conference on Environment and Development (UNCED) in June 1992. The INC met six times between February 1991 and May 1992, and adopted the U.N. Framework Convention on Climate Change (Climate Change Convention, or Convention) on May 9, 1992. The Convention was opened for signature at UNCED, where it was signed by 154 states and the European Community. It requires fifty ratifications for entry into force.

To many, the Convention was a disappointment. Despite early hopes that it would seek to stabilize or even reduce emissions of greenhouse gases by developed countries, the Convention contains only the vaguest of commitments regarding stabilization and no commitment at all on reductions. It fails to include innovative proposals to establish a financial and technology clearinghouse or an insurance fund, or to use market mechanisms such as tradeable emissions

rights. Furthermore, it not only contains significant qualifications on the obligations of developing countries, but gives special consideration to the situation of fossil-fuel producing states.

Nevertheless, given the complexity both of the negotiations, which involved more than 140 states with very different interests and ideologies, and of the causes, effects, and policy implications of global warming, reaching agreement at all in such a limited period of time was a considerable achievement. In fact, the final text is significantly more substantive than either the bare-bones convention advocated by some delegations or previous framework conventions dealing with transboundary air pollution and depletion of the ozone layer. While the Convention does not commit states to specific limitations on greenhouse gas emissions, it recognizes climate change as a serious threat and establishes a basis for future action. First, it defines as a common long-term objective the stabilization of atmospheric concentrations of greenhouse gases "at a level that would prevent dangerous anthropogenic interference with the climate system." Second, to guide future work, it sets forth principles relating to inter- and intra-generational equity, the needs of developing countries, precaution, cost-effectiveness, sustainable development, and the international economy. More importantly, it establishes a process designed to improve our information base and reduce uncertainties, to encourage national planning, and to produce more substantive international standards should scientific evidence continue to mount that human activities are changing the Earth's climate.

….

A. Framework vs. Substantive Approach

In establishing the INC, the U.N. General Assembly charged it with drafting "an effective framework convention on climate change, containing appropriate commitments." This mandate left open a fundamental question that ran throughout the negotiations: was the INC's task to draft a framework convention -- that is, a largely procedural convention, establishing a basis for future action -- or a substantive convention committing states to specific measures and policies?

Early proposals for the climate change negotiations focused on the framework convention/protocol approach, which had been used with considerable success to deal with the problems of acid rain and depletion of the ozone layer. Under this model, states first negotiate a framework convention, establishing general obligations concerning such matters as scientific research and exchange of information, as well as a skeletal legal and institutional framework for future action. States later develop specific pollution control measures (including emissions limitations targets) and more detailed implementation mechanisms in protocols.

The framework convention/protocol model serves two basic functions. First, it allows work to proceed in an incremental manner. States can begin to address a problem without waiting for a consensus to emerge on appropriate response measures, or even before there is agreement that a problem exists. Lawmaking can thus proceed "amidst great uncertainty." For example, when both the ECE Long-Range Transboundary Air Pollution Convention (LRTAP) and the Vienna Convention for the Protection of the Ozone Layer (Vienna Ozone Convention) were adopted, some states remained unconvinced of the need for action. Nevertheless, even skeptical states acquiesced in the adoption of these conventions, since the conventions did not commit them to any specific measures. Later, when the scientific evidence became stronger, protocols could be adopted more quickly, since the framework conventions had cleared away many of the preliminary procedural and institutional issues.

Second, the framework convention approach can produce positive feedback loops, making the adoption of specific substantive commitments more likely. Scientific research and assessments carried out under the convention help reduce uncertainties and lay a basis for action. The institutions established by the framework convention play a catalytic role by collecting data, providing technical assistance, and issuing reports. The meetings held under the convention provide a forum for discussions among the technical elites in different countries, and serve to focus international public scrutiny on countries that lag behind an emerging international consensus. In effect, once a framework convention is adopted, the international lawmaking process takes on a momentum of its own. States that were initially reluctant to undertake substantive commitments, but that acquiesce in the seemingly innocuous process set in motion by the framework convention, feel increasing pressure not to fall out of step as that process gains momentum.

Despite the advantages and historical successes of the framework convention/protocol model, many countries wanted the INC to produce more than a framework convention. Given the perceived urgency of the problem as well as the extensive preparatory work of the IPCC, they viewed the two-step, framework convention/protocol process as unnecessarily slow….

States did not necessarily fall on the same side of the framework/substantive convention split for commitments and for mechanisms. At one extreme, some oil-exporting states favored at most a barebones convention that set general principles rather than specific commitments and that did not establish subsidiary bodies to the COP or binding dispute settlement procedures. In contrast, the United States supported what it characterized as a "process-oriented convention," which, although limited on the commitments side, established quite ambitious implementation mechanisms, including advisory committees on science and implementation; detailed provisions on scientific research, information exchange, and education; and flexible noncompliance procedures. Many developing countries expressed support for specific commitments, as long as those commitments were differentiated so as to apply primarily to developed countries. However, they questioned many of the more detailed procedural proposals, including those for the creation of subsidiary institutions to the COP. Finally, the European Community, generally joined by Austria, Sweden, Switzerland, AOSIS, and the CANZ group (Canada, Australia, and New Zealand), supported detailed provisions on both substantive commitments and procedural mechanisms, including a specific commitment by developed countries to stabilize emissions of carbon dioxide at 1990 levels by the year 2000, a scientific advisory committee, an implementation and/or executive committee, and binding dispute-settlement procedures.

The debate between the framework and substantive approaches persisted right up to the end of the INC, when the INC considered whether the title of the Convention should be, the "U.N. Convention on Climate Change," or, as was ultimately agreed, the "U.N. *Framework* Convention on Climate Change." In the end, the Convention lies somewhere between a framework and a substantive convention. It establishes more extensive commitments than those contained in LRTAP or the Vienna Ozone Convention, but falls short of the type of specific emissions control measures contained in the Sulfur Dioxide or Montreal Protocols. While there are few procedural or institutional innovations in the Convention, it does establish scientific and implementation committees and provides for scientific assessment, reporting and review of greenhouse gas levels, financial and technical support to aid implementation, and a financial mechanism.

NOTES AND QUESTIONS

1. Professor Jutta Brunnée analyzes the ways in which the predominant framework-protocol approach to multilateral environmental agreement design may have contributed to the United States's diminished leadership on international environmental law treaties. She explains:

> The primary approach to global [multilateral environmental agreement] MEA design today is the 'framework-protocol' model, first employed at the global level by the 1985 Vienna Convention for the Protection of the Ozone Layer and its 1987 Montreal Protocol. Typically, the initial framework treaty contains only general commitments and establishes information-gathering and decision-making structures. Subsequent protocols to the framework treaty provide binding emission reduction or other environmental protection commitments.
>
> The framework-protocol approach is designed to promote consensus building around the need for and parameters of collective action, to focus binding commitments on priority concerns, and to adapt or expand the regime over time. This regime development is accomplished through regular meetings of the treaty's Conference of the Parties (COP) and its various scientific and political subsidiary bodies. With an institutional core and ongoing regulatory agenda, modern MEAs therefore resemble international organizations in many respects. Treaty parties become participants in rolling information gathering, negotiation and consensus-building processes, and COPs have emerged as forums for much of the international environmental law-making activity. In these ongoing multilateral processes, it is more difficult for individual parties to determine agendas, to resist regime development, and to extricate themselves from regime dynamics. In addition, a range of techniques have evolved that facilitate treaty development by COP decision, reducing reliance on formal amendments and softening consent requirements in various ways.
>
> Even this brief overview of MEA growth suggests a number of reasons why the early pattern of US leadership on treaty development and quick ratification may have abated. First, and most importantly, the ongoing interactions and negotiations among parties to an MEA tend to generate patterns of expectations and normative understandings that guide and constrain subsequent policy choices and legal development within the regime. In addition, these multilateral negotiations provide opportunities for coalition building that enhance the ability of smaller states to influence outcomes and help dilute the influence of more powerful states. Second, the sheer number and the growing complexity of MEAs make multilateral engagement increasingly resource-intensive. Significant human and financial resources are required in the development of MEAs, as well as in the various ongoing multilateral engagements once agreements are adopted. Increasingly, agreements are also tackling complex global issues in which environmental concerns are intertwined with development issues. The environment-development dimension to most global MEAs not only entails protracted negotiation processes. Typically, global environmental governance also requires significant financial and technological transfers from North to South. Finally, the easier agreements have likely been reached already, so that the remaining treaties tend to impose more onerous obligations. Thus, rather than

> target relatively discrete issues of international concern, MEAs now tackle matters that implicate the domestic spheres of parties to a growing extent, and often require significant adjustments of domestic regulatory standards or approaches.
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> Jutta Brunnée, *The United States and International Environmental Law: Living with an Elephant*, 15 EUR. J. INT'L L. 617, 636-38 (2004).

Based on the analysis of Bodansky and Brunnée, what are the advantages and disadvantages of beginning with a broad framework that many countries can agree to and that establishes the framework for binding negotiations? In the context of climate change in particular, what are arguments for and against establishing a broad agreement among many nations with limited direct obligations that could serve as the basis for future commitments?

2. How does climate change compare to other problems, like transboundary air pollution and ozone depletion, for which a framework-protocol approach has been used? In which context does such an approach seem most likely to succeed?

3. If you were to design an alternative to the framework-protocol approach to address climate change, what would it be? Are there other approaches that seem more likely to be successful, or do all approaches seem likely to encounter similar political obstacles?

2. Core Provisions of the United Nations Framework Convention on Climate Change

The UNFCCC sets general goals for reducing climate change and divides countries into three groups based on their level of development, which are listed through annexes to the convention. The Annex I list includes both developed countries that were members of the Organization for Economic Cooperation and Development (OECD) in 1992 and counties with economies in transition, which includes the Russian Federation and a number of other former Soviet republics. The Annex II list is a subset of the Annex I list, including only the OECD members from that first group; the Annex II parties have the greatest obligations to limit emissions and assist developing countries with technology and adaptation. All other parties are part of a third group, referred to as "Non-Annex I." These countries are mostly poorer, developing nations. A sub-group of forty-nine of the Non-Annex I parties have been classified by the United Nations as least developed countries (LDCs), and the UNFCCC and negotiations under it focus on their particular technology and adaptation needs.

The following excerpt from the UNFCCC delineates the treaty's core goals and principles, as well as some of the key commitments of parties.

United Nations Framework Convention on Climate Change, May 9, 1992, S. TREATY DOC. NO. 102-38, 1771 U.N.T.S. 164, 166, 170, *available at* http://unfccc.int/resource/docs/convkp/conveng.pdf

Article 2
OBJECTIVE

The ultimate objective of this Convention and any related legal instruments that the Conference of the Parties may adopt is to achieve, in accordance with the relevant provisions of the Convention, stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. Such a level should be achieved within a time frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner.

Article 3
PRINCIPLES

In their actions to achieve the objective of the Convention and to implement its provisions, the Parties shall be guided, inter alia, by the following:

1. The Parties should protect the climate system for the benefit of present and future generations of humankind, on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities. Accordingly, the developed country Parties should take the lead in combating climate change and the adverse effects thereof.
2. The specific needs and special circumstances of developing country Parties, especially those that are particularly vulnerable to the adverse effects of climate change, and of those Parties, especially developing country Parties, that would have to bear a disproportionate or abnormal burden under the Convention, should be given full consideration.
3. The Parties should take precautionary measures to anticipate, prevent or minimize the causes of climate change and mitigate its adverse effects. Where there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing such measures, taking into account that policies and measures to deal with climate change should be cost-effective so as to ensure global benefits at the lowest possible cost. To achieve this, such policies and measures should take into account different socio-economic contexts, be comprehensive, cover all relevant sources, sinks and reservoirs of greenhouse gases and adaptation, and comprise all economic sectors. Efforts to address climate change may be carried out cooperatively by interested Parties.
4. The Parties have a right to, and should, promote sustainable development. Policies and measures to protect the climate system against human-induced change should be appropriate for the specific conditions of each Party and should be integrated with national development programmes, taking into account that economic development is essential for adopting measures to address climate change.
5. The Parties should cooperate to promote a supportive and open international economic system that would lead to sustainable economic growth and development in all Parties, particularly developing country Parties, thus enabling them better to address the problems of climate change. Measures taken to combat climate change, including unilateral ones, should not constitute a means of arbitrary or unjustifiable discrimination or a disguised restriction on international trade.

Article 4
COMMITMENTS

1. All Parties, taking into account their common but differentiated responsibilities and their specific national and regional development priorities, objectives and circumstances, shall:
(a) Develop, periodically update, publish and make available to the Conference of the Parties, in accordance with Article 12, national inventories of anthropogenic emissions by sources and

removals by sinks of all greenhouse gases not controlled by the Montreal Protocol, using comparable methodologies to be agreed upon by the Conference of the Parties;
(b) Formulate, implement, publish and regularly update national and, where appropriate, regional programmes containing measures to mitigate climate change by addressing anthropogenic emissions by sources and removals by sinks of all greenhouse gases not controlled by the Montreal Protocol, and measures to facilitate adequate adaptation to climate change;
(c) Promote and cooperate in the development, application and diffusion, including transfer, of technologies, practices and processes that control, reduce or prevent anthropogenic emissions of greenhouse gases not controlled by the Montreal Protocol in all relevant sectors, including the energy, transport, industry, agriculture, forestry and waste management sectors;
(d) Promote sustainable management, and promote and cooperate in the conservation and enhancement, as appropriate, of sinks and reservoirs of all greenhouse gases not controlled by the Montreal Protocol, including biomass, forests and oceans as well as other terrestrial, coastal and marine ecosystems;
(e) Cooperate in preparing for adaptation to the impacts of climate change; develop and elaborate appropriate and integrated plans for coastal zone management, water resources and agriculture, and for the protection and rehabilitation of areas, particularly in Africa, affected by drought and desertification, as well as floods;
(f) Take climate change considerations into account, to the extent feasible, in their relevant social, economic and environmental policies and actions, and employ appropriate methods, for example impact assessments, formulated and determined nationally, with a view to minimizing adverse effects on the economy, on public health and on the quality of the environment, of projects or measures undertaken by them to mitigate or adapt to climate change;
(g) Promote and cooperate in scientific, technological, technical, socio-economic and other research, systematic observation and development of data archives related to the climate system and intended to further the understanding and to reduce or eliminate the remaining uncertainties regarding the causes, effects, magnitude and timing of climate change and the economic and social consequences of various response strategies;
(h) Promote and cooperate in the full, open and prompt exchange of relevant scientific, technological, technical, socio-economic and legal information related to the climate system and climate change, and to the economic and social consequences of various response strategies;
(i) Promote and cooperate in education, training and public awareness related to climate change and encourage the widest participation in this process, including that of non-governmental organizations; and
(j) Communicate to the Conference of the Parties information related to implementation, in accordance with Article 12.

2. The developed country Parties and other Parties included in Annex I commit themselves specifically as provided for in the following:
(a) Each of these Parties shall adopt national policies and take corresponding measures on the mitigation of climate change, by limiting its anthropogenic emissions of greenhouse gases and protecting and enhancing its greenhouse gas sinks and reservoirs. These policies and measures will demonstrate that developed countries are taking the lead in modifying longer-term trends in anthropogenic emissions consistent with the objective of the Convention, recognizing that the return by the end of the present decade to earlier levels of anthropogenic emissions of carbon dioxide and other greenhouse gases not controlled by the Montreal Protocol would contribute to

such modification, and taking into account the differences in these Parties' starting points and approaches, economic structures and resource bases, the need to maintain strong and sustainable economic growth, available technologies and other individual circumstances, as well as the need for equitable and appropriate contributions by each of these Parties to the global effort regarding that objective. These Parties may implement such policies and measures jointly with other Parties and may assist other Parties in contributing to the achievement of the objective of the Convention and, in particular, that of this subparagraph;

(b) In order to promote progress to this end, each of these Parties shall communicate, within six months of the entry into force of the Convention for it and periodically thereafter, and in accordance with Article 12, detailed information on its policies and measures referred to in subparagraph (a) above, as well as on its resulting projected anthropogenic emissions by sources and removals by sinks of greenhouse gases not controlled by the Montreal Protocol for the period referred to in subparagraph (a), with the aim of returning individually or jointly to their 1990 levels these anthropogenic emissions of carbon dioxide and other greenhouse gases not controlled by the Montreal Protocol. This information will be reviewed by the Conference of the Parties, at its first session and periodically thereafter, in accordance with Article 7;

(c) Calculations of emissions by sources and removals by sinks of greenhouse gases for the purposes of subparagraph (b) above should take into account the best available scientific knowledge, including of the effective capacity of sinks and the respective contributions of such gases to climate change. The Conference of the Parties shall consider and agree on methodologies for these calculations at its first session and review them regularly thereafter;

(d) The Conference of the Parties shall, at its first session, review the adequacy of subparagraphs (a) and (b) above. Such review shall be carried out in the light of the best available scientific information and assessment on climate change and its impacts, as well as relevant technical, social and economic information. Based on this review, the Conference of the Parties shall take appropriate action, which may include the adoption of amendments to the commitments in subparagraphs (a) and (b) above. The Conference of the Parties, at its first session, shall also take decisions regarding criteria for joint implementation as indicated in subparagraph (a) above. A second review of subparagraphs (a) and (b) shall take place not later than 31 December 1998, and thereafter at regular intervals determined by the Conference of the Parties, until the objective of the Convention is met;

(e) Each of these Parties shall:

(i) coordinate as appropriate with other such Parties, relevant economic and administrative instruments developed to achieve the objective of the Convention; and

(ii) identify and periodically review its own policies and practices which encourage activities that lead to greater levels of anthropogenic emissions of greenhouse gases not controlled by the Montreal Protocol than would otherwise occur;

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

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

3. The developed country Parties and other developed Parties included in Annex II shall provide new and additional financial resources to meet the agreed full costs incurred by developing country Parties in complying with their obligations under Article 12, paragraph 1. They shall also provide such financial resources, including for the transfer of technology, needed by the developing country Parties to meet the agreed full incremental costs of implementing measures that are covered by paragraph 1 of this Article and that are agreed between a developing country Party and the international entity or entities referred to in Article 11 [which defines and describes the Financial Mechanism by which developed countries assist developing countries], in accordance with that Article. The implementation of these commitments shall take into account the need for adequacy and predictability in the flow of funds and the importance of appropriate burden sharing among the developed country Parties.

4. The developed country Parties and other developed Parties included in Annex II shall also assist the developing country Parties that are particularly vulnerable to the adverse effects of climate change in meeting costs of adaptation to those adverse effects.

5. The developed country Parties and other developed Parties included in Annex II shall take all practicable steps to promote, facilitate and finance, as appropriate, the transfer of, or access to, environmentally sound technologies and know-how to other Parties, particularly developing country Parties, to enable them to implement the provisions of the Convention. In this process, the developed country Parties shall support the development and enhancement of endogenous capacities and technologies of developing country Parties. Other Parties and organizations in a position to do so may also assist in facilitating the transfer of such technologies.

6. In the implementation of their commitments under paragraph 2 above, a certain degree of flexibility shall be allowed by the Conference of the Parties to the Parties included in Annex I undergoing the process of transition to a market economy, in order to enhance the ability of these Parties to address climate change, including with regard to the historical level of anthropogenic emissions of greenhouse gases not controlled by the Montreal Protocol chosen as a reference.

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

8. In the implementation of the commitments in this Article, the Parties shall give full consideration to what actions are necessary under the Convention, including actions related to funding, insurance and the transfer of technology, to meet the specific needs and concerns of developing country Parties arising from the adverse effects of climate change and/or the impact of the implementation of response measures, especially on:
(a) Small island countries;
(b) Countries with low-lying coastal areas;
(c) Countries with arid and semi-arid areas, forested areas and areas liable to forest decay;
(d) Countries with areas prone to natural disasters;
(e) Countries with areas liable to drought and desertification;

(f) Countries with areas of high urban atmospheric pollution;
(g) Countries with areas with fragile ecosystems, including mountainous ecosystems;
(h) Countries whose economies are highly dependent on income generated from the production, processing and export, and/or on consumption of fossil fuels and associated energy-intensive products; and
(i) Landlocked and transit countries.
Further, the Conference of the Parties may take actions, as appropriate, with respect to this paragraph.

9. The Parties shall take full account of the specific needs and special situations of the least developed countries in their actions with regard to funding and transfer of technology.

10. The Parties shall, in accordance with Article 10, take into consideration in the implementation of the commitments of the Convention the situation of Parties, particularly developing country Parties, with economies that are vulnerable to the adverse effects of the implementation of measures to respond to climate change. This applies notably to Parties with economies that are highly dependent on income generated from the production, processing and export, and/or consumption of fossil fuels and associated energy-intensive products and/or the use of fossil fuels for which such Parties have serious difficulties in switching to alternatives.
….

ARTICLE 12:
COMMUNICATION OF INFORMATION RELATED TO IMPLEMENTATION

1. In accordance with Article 4, paragraph 1, each Party shall communicate to the Conference of the Parties, through the secretariat, the following elements of information:

(a) A national inventory of anthropogenic emissions by sources and removals by sinks of all greenhouse gases not controlled by the Montreal Protocol, to the extent its capacities permit, using comparable methodologies to be promoted and agreed upon by the Conference of the Parties;

(b) A general description of steps taken or envisaged by the Party to implement the Convention; and

(c) Any other information that the Party considers relevant to the achievement of the objective of the Convention and suitable for inclusion in its communication, including, if feasible, material relevant for calculations of global emission trends.

2. Each developed country Party and each other Party included in Annex I shall incorporate in its communication the following elements of information:

(a) A detailed description of the policies and measures that it has adopted to implement its commitment under Article 4, paragraphs 2(a) and 2(b); and

(b) A specific estimate of the effects that the policies and measures referred to in subparagraph (a) immediately above will have on anthropogenic emissions by its sources and removals by its sinks of greenhouse gases during the period referred to in Article 4, paragraph 2(a).

3. In addition, each developed country Party and each other developed Party included in Annex II shall incorporate details of measures taken in accordance with Article 4, paragraphs 3, 4 and 5.

4. Developing country Parties may, on a voluntary basis, propose projects for financing, including specific technologies, materials, equipment, techniques or practices that would be needed to implement such projects, along with, if possible, an estimate of all incremental costs, of the reductions of emissions and increments of removals of greenhouse gases, as well as an estimate of the consequent benefits.

5. Each developed country Party and each other Party included in Annex I shall make its initial communication within six months of the entry into force of the Convention for that Party. Each Party not so listed shall make its initial communication within three years of the entry into force of the Convention for that Party, or of the availability of financial resources in accordance with Article 4, paragraph 3. Parties that are least developed countries may make their initial communication at their discretion. The frequency of subsequent communications by all Parties shall be determined by the Conference of the Parties, taking into account the differentiated timetable set by this paragraph.

6. Information communicated by Parties under this Article shall be transmitted by the secretariat as soon as possible to the Conference of the Parties and to any subsidiary bodies concerned. If necessary, the procedures for the communication of information may be further considered by the Conference of the Parties.

7. From its first session, the Conference of the Parties shall arrange for the provision to developing country Parties of technical and financial support, on request, in compiling and communicating information under this Article, as well as in identifying the technical and financial needs associated with proposed projects and response measures under Article 4. Such support may be provided by other Parties, by competent international organizations and by the secretariat, as appropriate.

8. Any group of Parties may, subject to guidelines adopted by the Conference of the Parties, and to prior notification to the Conference of the Parties, make a joint communication in fulfilment of their obligations under this Article, provided that such a communication includes information on the fulfilment by each of these Parties of its individual obligations under the Convention.

9. Information received by the secretariat that is designated by a Party as confidential, in accordance with criteria to be established by the Conference of the Parties, shall be aggregated by the secretariat to protect its confidentiality before being made available to any of the bodies involved in the communication and review of information.

10. Subject to paragraph 9 above, and without prejudice to the ability of any Party to make public its communication at any time, the secretariat shall make communications by Parties

under this Article publicly available at the time they are submitted to the Conference of the Parties.

NOTES AND QUESTIONS

1. What have the parties actually committed to in the provisions of Articles 3, 4, and 12? To what extent would acting in accordance with these commitments be adequate to address the problem of climate change?

2. Notions of equity, grounded in the principle of common but differentiated responsibility, are expressed throughout these core provisions. Does the way in which obligations have been divided in the UNFCCC seem appropriate? As discussed in more depth in Chapter 4, total emissions of leading developing country emitters have increased greatly since these UNFCCC provisions were crafted in the early 1990s, but their per capita emissions are still well below that of major developed countries. How if at all should the application of common but differentiated responsibility evolve to address their growing emissions?

3. Article 26 of the Vienna Convention on the Law of Treaties states: "Every treaty in force is binding upon the parties to it and must be performed by them in good faith." Vienna Convention on the Law of Treaties art. 26, May 23, 1969, S. Exec. Doc. L, 92-1, 1155 U.N.T.S. 331. If parties to the UNFCCC have an obligation to act in "good faith" with the treaty, which actions should be viewed as required and which actions should be viewed as prohibited?

4. The UNFCCC puts a strong emphasis on emissions cataloging and reporting, as detailed in Article 12. What are the benefits and limitations of countries' tracking their emissions and sharing them?

3. Kyoto Protocol

The Kyoto Protocol was adopted in 1997 and entered into force in 2005. As the only agreement on climate change to set binding targets and timetables for its Parties, it represents the most significant, specific commitments that major emitters have taken on climate change.

The Kyoto Protocol ultimately included the European Union and all of the major developed countries except the United States during the first commitment period of 2008-2012. Australia did not ratify the Kyoto Protocol by the time it came into force in 2005, but did so by 2007, with the treaty entering into force there in 2008. The United States participated actively in the negotiations, but President Clinton did not even bring the treaty to the Senate for ratification because key Senators had made it clear that ratification would fail; President Bush then indicated in 2001 that the United States would no longer participate further in the treaty.

As discussed in more depth in Chapter Four, the Kyoto Protocol parties vary significantly in how well they are meeting their commitments. For example, the European Union is on target to meet its goals, whereas Canada will clearly fail to do so. Moreover, as considered in Chapter Four with respect to Canada, the Protocol's limited enforcement mechanisms mean that it is difficult to force noncompliant countries to change their behavior.

The 2011 Durban COP resulted in a second commitment period beginning in 2013 of a length not fully determined, but many of the key developed country emitters seem unlikely to commit to further targets and timetables under it. The European Union Annex I countries have made commitments and Australia and New Zealand have indicated their potential willingness to do so. But Canada, Japan, and Russia—three key developed countries whose ratification helped bring the Kyoto Protocol into force—have indicated that they will not make specific commitments during the second period.

Article 3 of the Kyoto Protocol, excerpted below, describes the agreement's core obligations for the first commitment period. The Durban COP resulted in proposed amendments providing commitments and a timetable for the second period, which the Ad Hoc Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol will continue to work on at its seventeenth session.

Kyoto Protocol to the United Nations Framework Convention on Climate Change, Art. 3, Dec. 10, 1997, 37 I.L.M. 22, 33, *available at* http://unfccc.int/resource/docs/convkp/kpeng.pdf.

Article 3

1. The Parties included in Annex I shall, individually or jointly, ensure that their aggregate anthropogenic carbon dioxide equivalent emissions of the greenhouse gases listed in Annex A do not exceed their assigned amounts, calculated pursuant to their quantified emission limitation and reduction commitments inscribed in Annex B and in accordance with the provisions of this Article, with a view to reducing their overall emissions of such gases by at least 5 percent below 1990 levels in the commitment period 2008 to 2012.
2. Each Party included in Annex I shall, by 2005, have made demonstrable progress in achieving its commitments under this Protocol.
3. The net changes in greenhouse gas emissions by sources and removals by sinks resulting from direct human-induced land-use change and forestry activities, limited to afforestation, reforestation and deforestation since 1990, measured as verifiable changes in carbon stocks in each commitment period, shall be used to meet the commitments under this Article of each Party included in Annex I. The greenhouse gas emissions by sources and removals by sinks associated with those activities shall be reported in a transparent and verifiable manner and reviewed in accordance with Articles 7 and 8.
4. Prior to the first session of the Conference of the Parties serving as the meeting of the Parties to this Protocol, each Party included in Annex I shall provide, for consideration by the Subsidiary Body for Scientific and Technological Advice, data to establish its level of carbon stocks in 1990 and to enable an estimate to be made of its changes in carbon stocks in subsequent years. The Conference of the Parties serving as the meeting of the Parties to this Protocol shall, at its first session or as soon as practicable thereafter, decide upon modalities, rules and guidelines as to how, and which, additional human-induced activities related to changes in greenhouse gas emissions by sources and removals by sinks in the agricultural soils and the land-use change and forestry categories shall be added to, or subtracted from, the assigned amounts for Parties included in Annex I, taking into account uncertainties, transparency in reporting, verifiability, the methodological work of the Intergovernmental Panel on Climate Change, the advice provided by the Subsidiary Body for Scientific and Technological Advice in accordance with Article 5 and the decisions of the Conference of the Parties. Such a decision shall apply in

the second and subsequent commitment periods. A Party may choose to apply such a decision on these additional human-induced activities for its first commitment period, provided that these activities have taken place since 1990.

5. The Parties included in Annex I undergoing the process of transition to a market economy whose base year or period was established pursuant to decision 9/CP.2 of the Conference of the Parties at its second session shall use that base year or period for the implementation of their commitments under this Article. Any other Party included in Annex I undergoing the process of transition to a market economy which has not yet submitted its first national communication under Article 12 of the Convention may also notify the Conference of the Parties serving as the meeting of the Parties to this Protocol that it intends to use an historical base year or period other than 1990 for the implementation of its commitments under this Article. The Conference of the Parties serving as the meeting of the Parties to this Protocol shall decide on the acceptance of such notification.

6. Taking into account Article 4, paragraph 6, of the Convention, in the implementation of their commitments under this Protocol other than those under this Article, a certain degree of flexibility shall be allowed by the Conference of the Parties serving as the meeting of the Parties to this Protocol to the Parties included in Annex I undergoing the process of transition to a market economy.

7. In the first quantified emission limitation and reduction commitment period, from 2008 to 2012, the assigned amount for each Party included in Annex I shall be equal to the percentage inscribed for it in Annex B of its aggregate anthropogenic carbon dioxide equivalent emissions of the greenhouse gases listed in Annex A in 1990, or the base year or period determined in accordance with paragraph 5 above, multiplied by five. Those Parties included in Annex I for whom land-use change and forestry constituted a net source of greenhouse gas emissions in 1990 shall include in their 1990 emissions base year or period the aggregate anthropogenic carbon dioxide equivalent emissions by sources minus removals by sinks in 1990 from land-use change for the purposes of calculating their assigned amount.

8. Any Party included in Annex I may use 1995 as its base year for hydrofluorocarbons, perfluorocarbons and sulphur hexafluoride, for the purposes of the calculation referred to in paragraph 7 above.

9. Commitments for subsequent periods for Parties included in Annex I shall be established in amendments to Annex B to this Protocol, which shall be adopted in accordance with the provisions of Article 21, paragraph 7. The Conference of the Parties serving as the meeting of the Parties to this Protocol shall initiate the consideration of such commitments at least seven years before the end of the first commitment period referred to in paragraph 1 above.

10. Any emission reduction units, or any part of an assigned amount, which a Party acquires from another Party in accordance with the provisions of Article 6 or of Article 17 shall be added to the assigned amount for the acquiring Party.

11. Any emission reduction units, or any part of an assigned amount, which a Party transfers to another Party in accordance with the provisions of Article 6 or of Article 17 shall be subtracted from the assigned amount for the transferring Party.

12. Any certified emission reductions which a Party acquires from another Party in accordance with the provisions of Article 12 shall be added to the assigned amount for the acquiring Party.

13. If the emissions of a Party included in Annex I in a commitment period are less than its assigned amount under this Article, this difference shall, on request of that Party, be added to the assigned amount for that Party for subsequent commitment periods.

14. Each Party included in Annex I shall strive to implement the commitments mentioned in paragraph 1 above in such a way as to minimize adverse social, environmental and economic impacts on developing country Parties, particularly those identified in Article 4, paragraphs 8 and 9, of the Convention. In line with relevant decisions of the Conference of the Parties on the implementation of those paragraphs, the Conference of the Parties serving as the meeting of the Parties to this Protocol shall, at its first session, consider what actions are necessary to minimize the adverse effects of climate change and/or the impacts of response measures on Parties referred to in those paragraphs. Among the issues to be considered shall be the establishment of funding, insurance and transfer of technology.

The Kyoto Protocol emphasizes flexibility and equity in the way in which it structures its commitments. Obligations are established differentially based on countries' levels of development. Parties are allowed to trade emissions, so that a country that does not need its full allotment can sell that excess to Parties struggling to meet their commitments. Joint implementation (JI) allows countries to count reductions that they make in territories of other Kyoto Protocol countries which have emissions reduction obligations. Finally, the Clean Development Mechanism (CDM) allows countries with Kyoto Protocol emissions reduction obligations to get reduction credit for projects in developing countries.

This approach has been controversial. While some commentators praise flexibility mechanism as allowing for economically efficient and politically feasible emissions reductions, others view them as limiting developed country obligations and perpetuating inequality. The following excerpt by Harro van Asselt and Professor Joyeeta Gupta provides an overview of the three flexibility mechanisms and some of the concerns that have been raised about them.

Harro van Asselt & Joyeeta Gupta, *Stretching Too Far? Developing Countries and the Role of Flexibility Mechanisms Beyond Kyoto*, 28 STAN. ENVTL. L.J. 311 (2009).

II. Developing Countries and Flexibility Mechanisms in the Climate Regime

A. Flexibility Mechanisms in the Climate Regime: Background and History

[T]he Kyoto Protocol introduced three new market-based flexibility instruments: International emissions trading, JI, and the CDM. The main rationale behind these flexibility mechanisms is cost effectiveness-- ensuring that greenhouse gas emission reductions take place where they are cheapest.

International emissions trading can be classified as a "cap-and-trade" system, where a certain emission cap is set, and a fixed number of emission allowances are distributed. Article 17 of the Kyoto Protocol, in conjunction with Annex B--indicating the list of countries with binding targets--provides developed countries with an opportunity to realize the necessary emission reductions under the cap through emissions trading. If a country has low marginal abatement costs, it can sell its surplus allowances on the international market. Likewise, those countries with high marginal abatement costs can buy allowances at the market price. By putting a price on emissions, emissions trading can provide economic incentives for technological innovation, since new technologies can lead to greater reductions.

In implementing emissions trading, two broad methods for the initial allocation of allowances are commonly distinguished: allowances can be sold to the highest bidder

("auctioning"), or they can be allocated for free on the basis of historical or current emissions ("grandfathering"). Allocation of emission allowances could also take place based on other factors (e.g. on a per capita basis or based on geographical circumstances) or through hybrid methods, whereby allowances are partly granted and partly sold. If allowances were allocated per capita, a large majority of allowances would flow to the developing world (mainly China and India). The Kyoto Protocol adopted the grandfathering approach: allowances are distributed on the basis of past emissions, with arbitrary adjustments for national conditions, such as wealth, growth projections, and domestic emission reduction potential. However, there was no standard formula underlying the division of allowances--rather, they were allocated mainly through "horse-trading" between the industrialized countries at the negotiating table.

In contrast with international emissions trading, both the CDM and JI can be classified as "baseline-and-credit" systems, through which credits can be earned by reducing greenhouse gas emissions against a constructed baseline. It is important to note that the mechanisms do not reduce greenhouse gas emissions; instead, they allow developed country investors to increase their emissions when they purchase credits.

Under the CDM, developed (Annex B) countries may form voluntary partnerships with non-Annex B countries to undertake greenhouse gas emission reduction projects. The dual purpose of the CDM as outlined in the Kyoto Protocol is to assist non-Annex B countries in achieving sustainable development through new technologies and efficiency techniques, while allowing Annex B countries to achieve their Kyoto targets at lower cost through certified emissions reductions (CERs), which may be counted against their national emission reduction targets. Whereas the CDM establishes the possibility for developed countries to cooperate with developing countries on greenhouse gas emission reduction projects, JI enables cooperation between two Parties to the Kyoto Protocol that both have binding quantitative commitments. Given that JI does not involve developing countries, the instrument will not be examined in depth in this Article.

….

Although the Kyoto Protocol was unique in that it introduced partial emissions trading at the global level, some countries had previously used the policy instrument for domestic pollution reduction programs. The United States, for example, launched a domestic trading scheme for sulfur dioxide in 1990. Hence, it is logical that the United States pushed for the inclusion of emissions trading in the Kyoto Protocol. With the rejection of the Kyoto Protocol by the Bush Administration in 2001, it is rather ironic that the European Union--initially opposed to the idea of emissions trading --has now ended up as the main proponent of the instrument. Possibly a key consideration for putting so much effort in developing emissions trading was the hope that the United States would ultimately ratify the Protocol, but self interest probably also played a role, as emissions trading reduced the costs of emission reductions within the European Union. The European Union started the first regional scheme for trading carbon dioxide emission allowances in January 2005.

B. Flexibility Mechanisms and Developing Countries: Structural Concerns

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In this Part, we discuss some of the main concerns that have been voiced about the use of these mechanisms.

1. Diffusing Western structures and values.

The first general objection to flexibility mechanisms is an ideological one that opposes imposition of one policy instrument on all countries. Through international emissions trading, Richman argues, Western structures and values are being diffused to developing countries. Some have deemed this to be a form of "carbon colonialism." The concept of emissions trading, and other market-based mechanisms to control environmental pollution, is compatible with Western, neo-liberal conceptions of achieving cost effectiveness through markets and the establishment of property rights.…

2. Historical responsibility and shunning leadership.

For the second concern, the basic contention is that because developed countries have emitted greenhouse gases without regulatory constraints since preindustrial times, they are responsible for the observed and projected climate change impacts. Through emissions trading, however, developed countries can, to some extent, buy themselves out of their commitment to reduce emissions domestically, and receive credit for carbon reductions that result from their assistance to other countries. Even though the Kyoto Protocol demands that the use of flexibility mechanisms should be supplemental to domestic emission reductions, this "supplementarity" is not defined. Thus, it is possible for developed countries to evade their responsibility and leadership obligation, as there would be "'virtual' compliance without physical compliance." By permitting credits from emissions trading, the incentives for domestic action are reduced, which could result in less--rather than more--technological innovation in the countries buying the credits.

Moreover, acceptance of the idea of grandfathering brings with it a rejection of the idea of allocations based on other rights. Under grandfathering, the polluter gets paid as countries are allocated emission rights more or less in accordance with their current emission levels, and the largest polluters can get compensated for reducing their emissions beyond their commitment levels. If this principle is accepted as legitimate, then allocating on the basis of other principles, such as the per capita principle, inevitably gets labeled as "hot air." "Hot air" in this context refers to providing allocations to countries in excess of their current pollution levels. The issue of hot air has also provoked other responses, not only in developing countries. It has been defined as the "degree to which a country's assigned amount exceeds what its emissions would be in the absence of any abatement measures." Effectively, it allows developed countries to increase their emissions by purchasing emission allowances from countries with economies in transition--mainly the countries that were part of the Former Soviet Union and its satellite states. Many of these latter countries are emitting far below their allocated levels as their economies have undergone extensive restructuring in the transition phase, and it will take some time before their economies recover. These countries could thus benefit from selling their surplus emissions. Buying emission allowances from these countries through international emissions trading would endanger the environmental integrity of the Kyoto Protocol, as the countries with economies in transition do not have to take any particular steps, at least in the short term, to reduce emissions. Although hot air would not technically lead Annex I countries to exceed their emission targets, the practical and ethical argument against it is that it can lead to higher emissions than would occur without emissions trading.

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3. Differences in negotiating power.

After the adoption of the Kyoto Protocol, an extensive rulebook has developed on international emissions trading and the CDM. It is a daunting task for anyone to understand the

detailed, and often complicated, rules and procedures. However, whereas developed countries often send large delegations to climate change negotiations, developing countries' delegations usually consist of one to four persons. For any delegate, it is a formidable challenge to master all the ins and outs of, for example, requirements related to monitoring, reporting and verifying emissions, modalities and procedures of the CDM, technology transfer, adaptation funding, and so on. Developed countries, however, have at least some domestic experience with emissions trading schemes (for example, the member states of the European Union have established a supranational cap-and-trade system for greenhouse gases, and the United States gained experience through its sulfur dioxide trading scheme), with either staff devoted to flexibility mechanism negotiation, or easy access to independent experts. As a result, it is likely that the details of emissions trading at the global level will be based on experiences and proposals stemming from developed countries. The establishment of a Trust Fund for Participation in the UNFCCC Process, which is aimed at facilitating developing countries' participation in climate change negotiations, has mitigated this concern to some extent. However, any contributions to this fund are made on a voluntary basis, and the fund only sponsors a limited number of delegates per country. While nongovernmental organizations provide negotiator training, capacity building exercises, and ad hoc legal assistance for some small developing countries, these efforts are more focused on medium-term issues than short-term negotiations. Furthermore, where they are focused on short-term negotiation, they are generally only available for, and utilized by, small developing island states, rather than all developing countries.

4. High administrative burdens.

The design and implementation of emissions trading schemes pose new challenges to developed nations, as is illustrated by the European Union's struggle with the European emissions trading scheme. For developing countries, where institutional structures take different forms, this undertaking would be even more challenging. For any emissions trading scheme to function properly, countries need to fulfill certain basic conditions, which could imply high administrative costs. This includes establishing a reliable emissions monitoring, reporting and verification system, as well as putting in place a national registry for emission allowances. As Baumert et al. point out, “developing countries will need to weigh the potential benefits of financial inflows through international emissions trading against the costs of adhering to their eligibility requirements. It is net benefits that matter.” Without sufficient resources, developing countries would thus not be able to participate on equal footing in an international emissions trading scheme or reap the benefits from the CDM. Developing countries could be further at a disadvantage, because they lack the “infrastructure and managerial capabilities necessary to evaluate and negotiate potential bargains.” Although the Kyoto Protocol does not yet extend international emissions trading to developing countries, it is important to keep this concern in mind in the light of calls to create a global carbon market.

NOTES AND QUESTIONS

1. Article 3 of the Kyoto Protocol differentiates between Annex I countries with developed economies and those in transition. However, the inclusion of transitional economies in Annex I raises fairness questions about the distinction between transitional and developing countries as countries like China, India, Brazil, and Mexico have continued to develop since

the establishment of the annexes in the UNFCCC. Those countries, however, are opposed to a recategorization of the annexes, especially given their comparatively low per capita emissions. Is the climate change treaty regime dealing with difference among countries appropriately?

2. Although the flexibility mechanisms play an important role in making it possible for parties to meet their commitments, commentators have raised difficult questions about whether they allow parties to avoid meaningful reductions, as the Asselt and Gupta excerpt indicates. The Clean Development Mechanism, in particular, through which Kyoto Protocol parties meet commitments through creating emissions reductions in developing countries, has come under scrutiny on both equity and effectiveness grounds. For example, a study by Professor Michael Wara found that a significant percentage of CDM projects did not focus on core areas of sustainable energy technology development. Michael Wara, *Measuring the Clean Development Mechanism's Performance and Potential*, 55 UCLA L. REV. 1759 (2008). What is the appropriate role of flexibility mechanisms, particularly ones that allow developed countries to meet their obligations through actions in developing countries?

3. What is the significance of the Kyoto Protocol moving forward without the United States for the future of international climate change treaty-making? Does it signal a more powerful role for other major emitters, or the limits of forward motion without United States inclusion?

4. The Kyoto Protocol targets for the first commitment period fall well below the level of reductions scientists say are needed to avoid the most serious impacts of climate change. However, many parties are having trouble meeting even those obligations, which is part of why several key countries are unwilling to commit to a second period. How should the difficulties of meeting even these limited obligations impact future international efforts on climate change?

5. Which vision, the Kyoto Protocol approach or a universal agreement, seems more likely to be effective in addressing climate change? Professor John Dernbach argues that "The Kyoto Protocol essentially provides for only one type of commitment—absolute nation-wide emission reduction targets. A multi-track framework—a framework that provides for several different types of commitments or agreements—would provide a legal structure more capable of delivering substantial early emission reductions than a one-track framework." John C. Dernbach, *Achieving Early and Substantial Greenhouse Gas Reductions Under a Post-Kyoto Agreement*, 20 GEO. INT'L ENVTL. L. REV. 573, 599–600 (2008). What are the benefits and limitations of the two approaches, and how would each need to be structured to reduce emissions fast enough?

4. Ongoing Negotiations

The end of the Kyoto Protocol's first reporting period in 2012 has dominated negotiations under the UNFCCC in recent years. As noted in the introduction to this section, although many important issues are being discussed, the most crucial one has been what form commitments will take after 2012. Deep divisions exist over whether to continue the two-track system of the Kyoto Protocol, in which major developed country emitters have specific, binding obligations and

developing countries lack such obligations, or to move to a one-track system in which developed and developing country major emitters have obligations.

The Durban negotiations made progress (experts dispute how much) in resolving this dispute by providing procedural mechanisms and some level of agreement on both tracks. However, in order to understand these steps, it is helpful to consider the context in which the Durban COP took place.

The following excerpt by Professor Bodansky describes the history of COP negotiations and the results of the 2009 Copenhagen COP. The Copenhagen negotiations were particularly significant because many major heads of states participated, including President Obama, and many hoped that major progress would result. Instead, the very limited Copenhagen Accord, which the Parties could not reach a full consensus to adopt and so merely took note of, represented the challenges facing efforts to craft a coherent regime to replace the Kyoto Protocol.

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

I. THE EVOLUTION OF THE INTERNATIONAL CLIMATE CHANGE REGIME

Since the international climate change negotiations began in 1991, the climate change regime has developed in three phases. The first phase involved the establishment of the basic framework of governance, set forth in the Framework Convention, which was adopted in 1992 and entered into force two years later. The second phase, running from 1995 to 2001, involved the negotiation and elaboration of the Kyoto Protocol, which sets forth quantitative emission reduction targets for developed (Annex I) countries through 2012, and establishes market-based mechanisms (including emissions trading) for achieving those targets. The current phase--which the Copenhagen conference had been intended to conclude--addresses the post-2012 period, after the conclusion of the first commitment period of the Kyoto Protocol.

….

The focus on developing country emissions in the Copenhagen process--and, in particular, the emissions of China and the other major developing country economies--represents a significant reorientation of the climate change negotiations. During the first decade of the regime, from the initiation of negotiations in 1991 through the adoption of the Marrakesh Accords in 2001, the negotiating process focused almost exclusively on emissions reductions by developed countries. Although the United States fitfully pushed the parties to address the issue of "developing country participation," the 1995 Berlin Mandate, which launched the negotiations of the Kyoto Protocol, effectively took this issue off the table by excluding any new commitments for non--Annex I countries. Even after the Protocol was adopted in 1997, the same pattern continued for an additional four years, through 2001, when the Marrakesh conference adopted a detailed rule book for implementing the Kyoto targets. Although developing countries participated actively, the primary axis of the negotiations was the split of the developed countries between the European Union and the United States--the EU member states pushing for strong emission reduction targets, implemented primarily through domestic measures, and the United States (together with "Umbrella Group" allies such as Australia and Japan) pushing for the unrestricted use of market-based mechanisms, including emissions trading.

The more recent phase in the climate negotiations, which began after Marrakesh, shifted the primary axis of the negotiations from EU-U.S. to developed-developing (and, in particular, U.S.-

China). The new negotiating dynamic was initially obscured by the rejection of the Kyoto Protocol by the Bush administration and its unwillingness to discuss any alternative architecture, which put the negotiations in a holding pattern for several years. But when the negotiating process began to emerge from its deep freeze, the shift in dynamics became apparent, and the developed-developing country divide moved to center stage at the Bali conference in 2007. Although the U.S.-EU negotiations were always difficult--even during the Clinton administration when one might have thought the policy differences would be less significant--the split between the United States and the European Union pales in comparison to the gulf between developed and developing countries. On one side, developed countries insist that the post-2012 regime address the emissions of all of the major economies, developing as well as developed. On the other side, developing countries continue to argue, as they have done since the negotiations began back in 1991, that they are not historically responsible for the climate change problem, have less capacity to respond to it, and should therefore not be expected to undertake specific international commitments to reduce emissions.

....

II. THE COPENHAGEN ACCORD

The Copenhagen Accord is a political rather than a legal document. It is very brief--only about two-and-a-half pages long--and leaves many details to be filled in later.

Elements of the Accord

Shared vision. The Framework Convention defines the climate regime's objective as the prevention of "dangerous anthropogenic interference with the climate system" but does not further identify what level of emissions or concentrations such interference entails.

….

In Copenhagen, developing countries strongly objected to setting a date for the peaking of their emissions, and also resisted adopting a global emissions goal or a greenhouse gas concentration target because of the implications these would have for their own emissions. (Although developed countries have pledged to reduce their emissions by 80 percent by 2050, the 50-by-50 goal would still require developing country emissions to peak and begin to decline prior to 2050.) In the end, states could agree only that "deep cuts" in emissions are necessary, with a view to keeping the increase in global temperature below 2°C. In deference to the Maldives and other small island states, which had pushed for a 1.5° limit on global temperature change, the Copenhagen Accord provides for consideration of a stronger long-term goal as part of the assessment of the Accord's implementation that will be completed by 2015.

Developed country mitigation.

….

The Copenhagen Accord establishes a bottom-up process that allows each Annex I party to define its own target level, base year, and accounting rules, and to submit its target in a defined format, for compilation by the UNFCCC Secretariat. Under the terms of the Accord, Annex I countries "commit to implement" their targets, individually or jointly, subject to international MRV [monitoring, reporting, and verification].

Developing country mitigation. There has been widespread agreement that developing country NAMAs (nationally appropriate mitigation actions) that receive international support should be subject to some type of international review, and that a "matching mechanism" should be established to link developing countries' proposals with financing by developed countries. This consensus is reflected in the Copenhagen Accord, which establishes a registry for listing NAMAs for which support is sought, and provides that supported NAMAs "will be subject to international measurement, reporting and verification in accordance with guidelines adopted by the Conference of the Parties."

The principal issues relating to developing country mitigation have concerned "autonomous" mitigation actions--that is, emission reduction measures that do not receive any financial support from developed countries. Should these be purely a matter of national discretion, subject only to national reporting and verification? Or should they be internationalized in some fashion--for example, through inclusion in a schedule that is subject to international review? And, more generally, should developing country mitigation actions (both supported and autonomous) be expected to add up to a particular quantitative reduction below business as usual?

In Copenhagen, these issues became the principal bone of contention between the United States and China, as the United States and many other developed countries insisted on measurement, reporting, and some form of international review, while China rejected any international review. The Copenhagen Accord represents a tortuous compromise in its paragraph 5:

-- As with developed country emissions targets, it establishes a bottom-up process by which developing countries will submit their mitigation actions in a defined format, for compilation by the UNFCCC Secretariat (including both autonomous and supported mitigation actions).

-- It provides that non--Annex I parties "will implement" these actions.

-- It provides that developing country mitigation actions will be subject to domestic MRV and that developing countries will report on the results of this MRV in biennial national communications, "with provisions for international consultations and analysis under clearly defined guidelines that will ensure that national sovereignty is respected."

Financial assistance. Although states generally agree on the need for substantial new funding to help developing countries mitigate and adapt to climate change, they conceptualize this funding differently. The United States and other developed countries see financial assistance, in essence, as part of an implicit quid pro quo linked to developing country mitigation commitments. Developing countries, in contrast, see it as payment of the "carbon debt" that they believe developed countries owe for their historical emissions.

In Copenhagen, the discussions about financial support revolved around the typical issues: how much money, from what sources, and with what governance arrangements? The Copenhagen Accord addresses only the first of these issues, leaving the other two for future resolution. It creates a "collective commitment" for developed countries to provide "new and additional resources ... approaching USD 30 billion" in so-called fast start money for the 2010-2012 period, balanced between adaptation and mitigation, and sets a longer-term collective "goal" of mobilizing $100 billion per year by 2020 from all sources (public and private, bilateral and multilateral), but links this money to "meaningful mitigation actions and transparency on implementation." It calls for governance of adaptation funding through equal representation by developing and developed country parties, but does not establish a governance arrangement for finance more generally. Finally, it calls for the establishment of a Copenhagen Green Climate Fund as an operating entity of the Convention's financial mechanism, as well as a high-level

panel to consider potential sources of revenue to meet the $100 billion per year goal, and provides that a "significant portion" of international funding should flow through the Green Climate Fund.

Forestry. In the run-up to the Copenhagen conference, the potential to reduce emissions from deforestation and forest degradation (known as "REDD-plus") received considerable attention. The principal question has been whether to finance REDD-plus from public funds or by providing carbon credits. The Copenhagen Accord calls for the "immediate establishment" of a mechanism to help mobilize resources for REDD-plus from developed countries and acknowledges the "need to provide positive incentives," but does not resolve the issue of public versus private support.

Adaptation. The Copenhagen Accord recognizes the "urgent" need for "enhanced action and international cooperation on adaptation," and agrees that "developed countries shall provide adequate, predictable and sustainable financial resources, technology and capacity-building" to help implement adaptation actions in developing countries.

Monitoring, reporting, and verification. As with the mitigation issue, the discussions on MRV have concerned its level, as well as the parallelism/differentiation between developed and developing country MRV. The Copenhagen Accord calls for "rigorous, robust and transparent" MRV of Annex I emissions reductions and financing, "in accordance with existing and any further guidelines adopted by the Conference of the Parties." As noted above, supported NAMAs by developing countries will be subject to international MRV under guidelines adopted by the COP, while autonomous mitigation actions will be verified nationally and reported in national communications every two years, and will be subject to "international consultations and analysis" under international guidelines that ensure that national sovereignty is respected.

Legal form. The Copenhagen Accord sidesteps the issues about the legal form of the post-2012 climate regime. Although the penultimate draft of the COP decision accompanying the Copenhagen Accord called for the completion of negotiations on a new "legally binding instrument" at next year's conference in Cancún, Mexico, this reference was deleted from the final version. As a result, the questions of one versus two outcomes and legal versus nonlegal form remain unresolved.

The Future of the Copenhagen Accord

Following agreement on the Copenhagen Accord by heads of state and government, the remaining question on the final night was how the Accord would be reflected in the official decisions of the conference. The Danes proposed that the Copenhagen Accord be adopted as a COP decision, which requires consensus (usually defined as the absence of formal objection). But a small group of countries that had played a spoiler role throughout the conference (led by Bolivia, Sudan, and Venezuela) objected, arguing that the negotiation of the Accord represented a "coup d'état" against the United Nations because it bypassed the formal meetings. After an all-night session, the impasse was ultimately broken by a decision to "take note of" the Copenhagen Accord, which gives it some status in the UNFCCC process but not as much as endorsement by the COP. Those countries that wish to "associate" themselves with the Copenhagen Accord are to notify the UNFCCC Secretariat, for inclusion in the list of countries in the chapeau.

As of March 30, 2010, the UNFCCC Secretariat had received submissions from more than one hundred countries regarding their plans to reduce their GHG emissions and/or their wish to be associated with the Copenhagen Accord. In many cases, countries providing information on their mitigation actions have explicitly "associated" themselves with the Copenhagen Accord

(including Brazil, China, the European Union and its member states, India, Japan, South Africa, and the United States), but, as of this writing, a few countries--most notably Russia-- have not done so expressly.

After the difficult negotiations at Copenhagen, parties set more modest goals for the 2010 Cancún meetings. As described by this excerpt from a report by the Pew Center on Climate Change, the Cancún negotiations made progress, but still left major questions open for the post-2012 landscape and future negotiations.

Pew Center on Climate Change, Report, Sixteenth Session of the Conference of the Parties to the United Nations Framework Convention on Climate Change and Sixth Session of the Meeting of the Parties to the Kyoto Protocol, November 29-December 10, 2010 Cancún, Mexico (2010).

Agreeing to put aside for now issues that have stalemated international climate talks for years, governments meeting at the U.N. Climate Change Conference in Cancún, Mexico, approved a set of decisions anchoring national mitigation pledges and taking initial steps to strengthen finance, transparency and other elements of the multilateral climate framework.

In large measure, the Cancún Agreements import the essential elements of the Copenhagen Accord into the U.N. Framework Convention on Climate Change (UNFCCC). They include the mitigation targets and actions pledged under the Accord – marking the first time all major economies have pledged explicit actions under the UNFCCC since its launch nearly two decades ago. The Agreements also take initial steps to implement the operational elements of the Accord, including a new Green Climate Fund for developing countries and a system of "international consultations and analysis" to help verify countries' actions.

Agreement in Cancún hinged on finding a way to finesse for now the more difficult questions of if, when, and in what form countries will take binding commitments. In particular, the deal had to strike a balance between developing country demands for a new round of developed country targets under the Kyoto Protocol and the refusal of Japan and others to be boxed in. The final outcome leaves all options on the table and sets no clear path toward a binding agreement.

The meeting – known formally as the Sixteenth Session of the Conference of the Parties to the UNFCCC (COP 16) and the Sixth Session of the Meeting of the Parties to the Kyoto Protocol (CMP 6) – was a stark contrast to the drama, chaos and bitter disappointment of a year earlier in Copenhagen.

With the Mexican government working hard to keep the negotiating process open and inclusive, there were no pitched procedural battles or dramatic walkouts. The United States and China avoided any open sparring, and India emerged as a key broker between the two. Parties generally, fearing that another "failure" could cripple the U.N. process, were quicker to accept incremental outcomes falling well short of their initial demands. In the final hours, only Bolivia fought to keep the package from being adopted, while country after country heaped praise on the Mexican presidency for delivering success.

Apart from its specific substantive outcomes [described above], the major accomplishment of Cancún was demonstrating that the U.N. negotiations can still produce tangible results – the most tangible since the Marrakesh Accords nearly a decade ago.

The 2011 Durban COP took place in the shadow of the limited progress in 2009 and 2010 on the key question of form, and of the looming expiration of the Kyoto Protocol's first commitment period. The conference, to the surprise of many, made progress on both of these issues; the Durban Platform for Enhanced Action committed the parties to reaching a universal agreement by 2015 and provided a procedure for working towards that agreement while the Kyoto Protocol parties negotiated a second commitment period. The Durban negotiations also built on the often less controversial steps made at the previous two COPs regarding technology transfer, adaptation, financing, transparency, and REDD.

The following excerpt from a World Resources Institute Insight, written just after the negotiations ended two days late, discusses the implications of the steps made at the Durban COP and the complexities of evaluating them.

Jennifer Morgan, Edward Cameron, et al., WRI Insight: Reflections on COP 17 in Durban, Dec. 16, 2011, http://insights.wri.org/news/2011/12/reflections-cop-17-durban (last visited Dec. 24, 2011).

As weary negotiators return home from the marathon United Nations Framework Convention on Climate Change (UNFCCC) talks in Durban, South Africa, opinion is divided on the deal that was struck.

Some believe the package – consisting of a new "Durban Platform" to negotiate the long-term future of the regime, a second commitment period for the Kyoto Protocol, and an array of decisions designed to implement the Cancun agreements – represents a significant step forward and cause for hope. Others are more cautious, viewing these outputs as insufficient in ambition, content, and timing to tackle the far-reaching threat of climate change.

Are the outcomes from Durban sufficient to solve the climate crisis? No. Tackling climate change will be a multi-generational effort requiring sustained political engagement and a complete transition to a low-carbon economy. It is clear that our collective action remains inadequate and requires an urgent injection of ambition.

Perhaps a more suitable question to assess the Durban deal would be: Are the outcomes a step in the right direction? In principle yes, but in practice we will have to wait and see. The Durban Platform holds promise, signifying a departure on many important levels from past COP agreements. It reinforces some key building blocks for a sustained and comprehensive attempt to tackle the climate crisis. It further removes a series of contentious issues that have previously been used to block progress. Meanwhile, the Kyoto Protocol will continue into a second commitment period and thus retains the important political value of rules-based emissions reductions from a group of industrialized countries, while preserving important mechanisms such as emissions trading, the Clean Development Mechanism (CDM), and Joint Implementation. However, in the more detailed discussions concerning the Long-term Cooperative Action (LCA) track, many observers were disappointed with the lack of progress in some areas.

….

I. Assessing the Durban Platform

While opinion is divided on the Durban Platform for Enhanced Action, overall it holds a great deal of merit. The Platform seeks to establish the future direction of the climate regime by initiating a new round of negotiations to be concluded by 2015 and operationalized by 2020. We have a text that ultimately brings all Parties—from both the developed and developing world—onto one track, recognizes the emissions gap, and tries to resolve the difficult conflict between equity and environmental integrity.

When assessing the merits of the Durban Platform it is important to note the alternatives going into the final weekend. At the last moments of the negotiations the situation looked bleak. The first proposal under consideration by Parties seemed devoid of ambition, doing little to break the fundamental political problems in this process. A second option would have brought postponement of a decision or even collapse. In that context, the Durban Platform emerged as a significantly more ambitious alternative.

The Platform also has value in its own right:

- The text calls for "the widest possible cooperation by all countries and their participation in an effective and appropriate international response". This begins to break down the traditional divide between developed and developing countries and points to an inclusive collective action approach.
- It also provides for reintegration under the same agreement of the developed countries that have remained outside Kyoto or withdrawn.
- The text recognizes the need to strengthen the multilateral, rules-based regime and anticipates this through development of a "protocol, another legal instrument or an agreed outcome with legal force under the Convention applicable to all Parties" by 2015.
- Importantly, the text notes and expresses concern at the significant emissions gap and reconfirms the long-term global goal of limiting warming to 2°C. It further provides an option for strengthening the goal to 1.5°C, which is both an important concession to the most vulnerable countries, and a vital link to forthcoming scientific assessments.
- The tacit criticism of existing pledges, coupled with the commitment to an inclusive rules-based approach, seems to suggest that the voluntary "pledge and review" system in vogue since Copenhagen is now time-bound. This is a significant concession by many major emitters.…

II. The Second Commitment Period of the Kyoto Protocol

The agreement in Durban extended the Kyoto Protocol, providing a transition period for the European Union and other countries to maintain a common legal framework as they head toward a new future agreement.

Parties who sign up to the Second Commitment Period are committing to reduce emissions by at least 25%-40% below 1990 levels by 2020. It is still unclear which additional countries will join the EU in this effort. The second commitment period under the Kyoto Protocol is set to begin on January 1, 2013 and end either on December 31, 2017 or December 31, 2020.

Looking at it from a high level, with this decision the EU gained a major diplomatic victory and the developing countries ensured that the cherished instruments and rules-based principles of the Kyoto Protocol survived in the short-term. WRI will look further into the details of the Kyoto Protocol decision and publish a separate blog in the coming weeks.

III. Evaluating Progress on Implementation of the LCA Track

While the Durban Platform and the Kyoto Protocol have received most of the COP-related press coverage, it is important to recognize that negotiators tackled more than fifty related issues as part of the Durban Package.

Many of these sought to operationalize decisions taken in Cancun in December 2010 and covered vital interests including work on climate finance, transparency and reporting (MRV), the Periodic Review, adaptation, technology, ambition, and REDD.

NOTES AND QUESTIONS

1. Although the vast majority of the UNFCCC parties supported the Copenhagen Accord, the consensus rules meant that a small group of nation-states could block it from being adopted. What are the advantages and disadvantages of this consensus approach?

2. How much progress did the Durban COP make in resolving the two competing visions? To what extent did it address underlying concerns about each approach, such as: Is a single track approach capable of addressing developing country concerns about maintaining the Kyoto Protocol's focus on targets and timetables and distinction between Annex I and other countries? Is a dual approach capable of satisfying the developed countries who think the U.S. commitments need to be integrated with those of the Kyoto Protocol parties?

3. Given the outcomes of the recent COPs, how optimistic are you that the UNFCCC negotiations will result in the binding treaty needed to avoid risking the worst impacts of climate change? If you think this outcome is unlikely, how should the international legal community proceed?

   Professor William Boyd argues, in a piece written just after the Copenhagen COP, that these failures suggest the need for a more pluralist approach to conceptualizing climate change law and policy:

   > [T]he difficulties facing international climate policy stem from an unrealistic embrace of top-down, global approaches to the problem and a corresponding lack of attention to the realities of a plural, fragmented international legal and political order. This posture of "globalism," which derives in part from a distinctive set of knowledge practices that has sought to make the Earth system into a unitary, governable domain, has pushed international climate policy into what appears to be an intractable political impasse regarding the

> prospects of fashioning a binding legal instrument capable of coordinating an effective global response to the problem.
>
> To be sure, an alternative approach to climate governance that is more sensitive to the facts of globalization, pluralism, and fragmentation at multiple levels of authority cannot simply devolve into a naïve celebration of localism or, even worse, a fatalism that acknowledges the enormous complexity of it all, recognizes that the clock has run in terms of any possibility of achieving prudent stabilization targets, and urges that all remaining resources and attention be shifted to adaptation or, in more extreme cases, geoengineering. The "solutions" to climate change, if they can even [be] called that, will be as varied and complicated as the problem itself, assembled through many new connections across and within levels of governance, implicating a vast array of actors, institutions, laws, and values. Understanding how these varied and partial solutions are emerging thus becomes a critical component of the larger effort to learn from experience and expand the conditions of possibility for effective forms of climate governance.
>
> Viewed from this perspective, post-Copenhagen climate governance looks much more like the messy, multi-layered forms of governance emerging in response to other global threats such as terrorism, financial crisis, or infectious disease--forms of governance marked not by a single, overarching regulatory system but a complex, nested set of institutions and actors. Wrapped up in all of this is a recognition that conventional regulatory structures associated with traditional notions of government cannot combat these problems effectively without tapping into a much broader and more fluid set of practices that spans multiple geographies and publics. Confronted by a set of problems arising out of the exceedingly complex interplay of social, economic, and ecological systems and faced with an increasingly tenuous sphere of competence, the contemporary state appears as only one element (albeit a critical one) in a broader emerging assemblage of actors, institutions, and knowledge practices. By taking these emerging assemblages on their own terms, by viewing them as partial, contingent forms of governance, and by seeking to understand how they hold together (or not) we can gain insight into the possibilities and the challenges of building enabling environments that can harness ongoing efforts and direct them toward realistic forms of climate governance.
>
> William Boyd, *Climate Change, Fragmentation, and the Challenges of Global Environmental Law: Elements of a Post-Copenhagen Assemblage*, 32 U. PA. J. INT'L L. 457, 548-49 (2010).

Do you agree with Professor Boyd? What would be the advantages and disadvantages of the approach to climate change governance that he suggests? How does it compare to the ones presented by Osofsky and Ostrom in the final section of Chapter One?

C. Other International Legal Action with Relevance to Climate Change

The slow pace of UNFCCC negotiations described in the prior section has led many policymakers and scholars to consider alternative, parallel approaches. This section explores four of those approaches: other environmental treaties, agreements among sub-groups of UNFCCC parties, voluntary public-private partnerships, and petitions regarding impacts upon human rights and world heritage.

In addition, as discussed further in Chapter 5, subnational governments, despite their limited status under international law as subunits of the nation-states making decisions, have established transnational agreements on climate change. Cities, states, and provinces around the world are meeting, making commitments to each other that cross national borders, and pushing for national action. These activities raise important questions about models of international lawmaking and strategies for multi-level climate change governance which that chapter addresses.

1. The Montreal Protocol

The Montreal Protocol on Substances That Deplete the Ozone Layer does not have climate change as its focus. Rather, this treaty, which entered into force in 1989 and has been ratified by 196 Parties (including all U.N. member states and the European Union), was created to phase out substances leading to ozone depletion. The Montreal Protocol has accomplished its goals very effectively, in part because there was an easy technological fix. The companies producing the substances impacting the ozone layer were able to find economical substitutes for them.

However, some of the substances that deplete ozone are also greenhouse gases. The Montreal Protocol's elimination of chlorofluorocarbons (CFCs), which are potent greenhouse gases, has resulted in more effective binding climate change mitigation thus far than the UNFCCC process. A further agreement in 2007 to accelerate phase out of the hydrochlorofluorocarbons (HCFCs), the transitional substitute for CFCs that also have a significant climate impact, will make the treaty have an even more significant tool in climate change mitigation.

The following excerpt describes the way in which the 2007 amendments to the Montreal Protocol and the original agreement are impacting greenhouse gas emissions.

Donald Kaniaru, Rajendra Shende & Durwood Zaelke, *Landmark Agreement to Strengthen Montreal Protocol Provides Powerful Climate Mitigation*, 8 SUSTAINABLE DEV. L. & POL'Y 46 (2008).

INTRODUCTION

September [2007]'s historic agreement under the Montreal Protocol to accelerate the phase-out of hydrochlorofluorocarbons ("HCFCs") marked the first time both developed and developing countries explicitly agreed to accept binding and enforceable commitments to address climate change. This is particularly significant because the decision was taken by consensus by the 191 Parties to the Protocol--all but five countries recognized by the United Nations. Accelerating the HCFC phase-out could reduce emissions by sixteen billion tons of carbon dioxide-equivalent ("CO_2e") through 2040. In terms of radiative forcing, this will delay climate change by up to 1.5 years. This is because, in addition to depleting the ozone layer,

HCFCs also are potent greenhouse gases ("GHGs")--with some thousands of times more powerful than carbon dioxide ("CO_2") at warming the planet. Thus, from September 2007 both Montreal and Kyoto can be considered climate protection treaties.

The HCFC agreement and its climate benefits were possible largely because of the Montreal Protocol's unique history of continuous adjustment to keep pace with scientific understanding and technological capability. The Parties to the Protocol generally regard the treaty as fair, due to its objective technical assessment bodies and its effective financial mechanism, the Multilateral Fund. These features and others have made the Protocol the world's most successful multilateral environmental agreement, phasing out ninety-five percent of global production of ozone-depleting substances in just twenty years and placing the ozone layer on a path to recovery.
….

RAPID INCREASE IN HCFC USE THREATENS CLIMATE AS WELL AS OZONE

At their nineteenth meeting on September 22, 2007, the Parties agreed to adjust the Montreal Protocol to accelerate the phase-out of HCFCs. Fittingly, the meeting celebrated the twentieth anniversary of the Montreal Protocol.

HCFCs are ozone-depleting substances regulated under the Montreal Protocol as "transitional" substitutes for the more damaging CFCs. Like CFCs, they were used in a variety of applications, including refrigerators and air conditioners, as foam blowing agents, and as chemical solvents. By 2006, it was clear that the use of HCFCs in developing countries was growing rapidly and threatening the recovery of the ozone layer and potentially undermining efforts to mitigate climate change.

Estimates reported by the Montreal Protocol's Technology and Economic Assessment Panel ("TEAP") showed that HCFC use could exceed 700,000 tonnes by 2015--roughly five times more than the TEAP's 1998 projection of just 163,000 tonnes. The Protocol's Scientific Assessment Panel reported in 2006 that the recovery of the ozone layer to pre-1980 levels would likely be delayed by fifteen years over Antarctica, to 2065, and by five years at mid-latitudes, to 2049, with the delay at midlatitudes partly due to the high estimates of future production of HCFCs. In addition, the Environmental Investigation Agency reported in 2006 that HCFC emissions by 2015 could cancel out the reductions achieved by the Kyoto Protocol during its first commitment period of 2008-2012.

The increased HCFC use was driven partly by economic growth in developing countries and by a "perverse incentive" under the Kyoto Protocol's Clean Development Mechanism ("CDM"). The most commonly used HCFC is HCFC-22, which produces by-product emissions of HFC-23 when it is manufactured. Under the CDM, eligible HCFC-22 producers in developing countries could generate Certified Emissions Reductions ("CERs") by capturing and destroying HFC-23 by-product emissions. HFC-23 is a super-GHG with a global warming potential ("GWP") of 11,700. HFC-23 CERs could earn up to ten times the cost of capturing and destroying HFC-23 emissions and are exceeding the sales revenue of HCFC-22, effectively subsidizing the cost of producing HCFC-22 and driving its expanded use, including in applications where it has not been widely used or had already been replaced.

The original HCFC control measures were not negotiated with these higher than expected levels in mind. Originally, the Montreal Protocol required developing countries to freeze HCFC consumption by 2016 at 2015 levels and phase-out one hundred percent of HCFC production by 2040. It required developed countries to phase out 99.5 percent of HCFCs by 2020, with 0.5

percent allowed for servicing existing equipment until 2030. By early 2007, there was concern that without urgent action, developing countries would have difficulty in complying with the 2016 freeze and the 2040 phase-out.

MONTREAL PROTOCOL'S SUCCESS MADE IT THE WORLD'S BEST CLIMATE TREATY

As it approached its twentieth anniversary, the Montreal Protocol already was widely considered the world's most successful multilateral environmental agreement. But what many did not know is that its success in phasing out ozone-depleting substances also made it the world's best climate treaty--so far.

The publication of a groundbreaking paper in the Proceedings of the National Academy of Sciences ("PNAS") calculated the climate benefits of the Montreal Protocol, and the results helped spur the international community to action. Because CFCs are such potent GHGs, the Montreal Protocol is reducing emissions by 135 $GtCO_2e$ between 1990 and 2010 and delaying climate forcing by seven to twelve years. When pre-Montreal Protocol efforts to protect the ozone layer are included, such as voluntary reductions in CFCs and domestic regulations in the 1970s, the delay in climate forcing is thirty-five to forty-one years.

The PNAS article drew greater attention to both the ozone and the climate impacts of the increased HCFC use. It became the foundation for key Parties and non-governmental organizations to make the case for strengthening the Montreal Protocol by accelerating the HCFC phase-out to maximize its climate benefits-- as well as to ensure the continued success of the treaty in protecting the ozone layer. In particular, the article received considerable attention at meetings of the Stockholm Group, an informal gathering of ozone and climate experts that played a critical role in reviewing the technical and economic data supporting an accelerated HCFC phase-out and building consensus among developed and developing country governments.

....

HCFC AGREEMENT PROVIDES FOR CLIMATE-FRIENDLY SUBSTITUTES AND FINANCING

After a week of intense negotiations in Montreal, the Parties reached an agreement to accelerate the HCFC phase-out. For developing countries, the new control measures shift the base year from 2015 to an average of 2009 and 2010 and the freeze date from 2016 to 2013. Developing countries must then phase-out ten percent of production by 2015, thirty-five percent by 2020, 67.5 percent by 2025, and 97.5 percent by 2030, with 2.5 percent allowed for servicing existing equipment until 2040. Developed countries, many of which have already completed a transition out of HCFCs, must now phase-out seventy-five percent of production by 2010, instead of sixty-five percent, with a 99.5 percent phase-out by 2020, and 0.5 percent allowed for servicing existing equipment until 2030.

Accelerating the HCFC phase-out will reduce emissions an estimated sixteen $GtCO_2e$ or more through 2040, with the actual climate benefits depending on the success replacing HCFCs with zero and low GWP substitutes, and/or preventing future emissions of these substitutes by providing for a robust system to recover and recycle or destroy used chemicals at equipment end-of-life.

In an effort to maximize these potential climate benefits, the adjustment decision calls on the Parties to "promote the selection of alternatives to HCFCs that minimize environmental impacts, in particular impacts on climate" and to give priority to "substitutes and alternatives that minimize other impacts on the environment, including on the climate, taking into account global-warming potential, energy use, and other relevant factors."

By explicitly referencing the climate impacts of HCFC substitutes and alternatives, the adjustment marks the first time that both developed and developing countries have agreed to accept binding commitments to mitigate climate change.

The adjustment decision also includes provisions to ensure that developing countries receive financial assistance through the Multilateral Fund to make the transition out of HCFCs, although the details of implementation will continue to be negotiated at the Fund's Executive Committee meetings.

The agreement was hailed worldwide. Achim Steiner, the Executive Director of the United Nations Environment Programme, called it "the most important breakthrough in an environmental negotiation process for at least five or six years because it sets a very specific target with an ambitious timetable." Romina Picolotti, Argentina's Minister of Environment and an early and vocal proponent of the accelerated HCFC phase-out, described it as "important for the ozone layer, and even more important for the climate. It shows us what we can do when we have the spirit to cooperate."

NOTES AND QUESTIONS

1. The diminishing ozone layer has been an easier problem to address than climate change because of the relative simplicity and cost-effectiveness of addressing the ozone problem. Companies quickly found substitutes for ozone depleting substances, and supported the international treaty. Greenhouse gas emissions stem from economy-wide activities that have no simple substitute. Does this difference help to address why climate change has been easier to address through the Montreal Protocol's elimination a specific substances than through the more comprehensive process of the UNFCCC?

2. Scholars and policymakers have debated the reasons for the Montreal Protocol achieving greater policy success than the Kyoto Protocol. Professor Cass Sunstein, for example, has argued that "both the success of the Montreal Protocol and the mixed picture for the Kyoto Protocol were largely driven by the decisions of the United States, and those decisions were driven in turn by a form of purely domestic cost-benefit analysis." Cass R. Sunstein, *Of Montreal and Kyoto: A Tale of Two Protocols*, 31 HARV. ENVTL. L. REV. 1, 5 (2008). He concludes that "The position of the United States will not shift unless the domestic benefits of emissions reductions are perceived to increase or unless the perceived domestic costs drop, perhaps as a result of technological innovation. It follows that for the future, the task remains to devise an international agreement that resembles the Montreal Protocol in one critical respect: its signatories, including the United States, have reason to believe that they will gain more than they will lose." *Id.* at 65. Do you agree with his conclusion? If so, what should its implications be for international climate change negotiations?

3. If a wide range of treaty regimes have climate change impacts, how should the UNFCCC deal with those regimes? Can the UNFCCC craft comprehensive solutions in such a scenario?

2. Agreements Among Major Economies

Given the difficulties of reaching agreement among all the UNFCCC parties, the most significant greenhouse gas emitters have attempted to make progress in smaller, alternative fora. In 2009, in conjunction with the G8 meetings—in which the heads of France, Germany, Italy, the United Kingdom, Japan, the United States, Canada, and Russia convene to discuss economic and political matters—leaders from sixteen countries and the European Union formed a new group to work on climate change. The participants in the Major Economies Forum on Energy and Climate, all of which emit significant quantities of greenhouse gases, are members of the UNFCCC and their efforts in this forum take place in parallel to their efforts at the UNFCCC conferences of the parties.

The following joint declaration, which includes a commitment to keeping temperature rise due to climate change at under two degrees Celsius, describes this undertaking:

Declaration of the Leaders: The Major Economies Forum on Energy and Climate, July 9, 2009, *available at* http://www.g8italia2009.it/static/G8_Allegato/MEF_Declarationl.pdf.

We, the leaders of Australia, Brazil, Canada, China, the European Union, France, Germany, India, Indonesia, Italy, Japan, the Republic of Korea, Mexico, Russia, South Africa, the United Kingdom, and the United States met as the Major Economies Forum on Energy and Climate in L'Aquila, Italy, on July 9, 2009, and declare as follows:

Climate change is one of the greatest challenges of our time. As leaders of the world's major economies, both developed and developing, we intend to respond vigorously to this challenge, being convinced that climate change poses a clear danger requiring an extraordinary global response, that the response should respect the priority of economic and social development of developing countries, that moving to a low-carbon economy is an opportunity to promote continued economic growth and sustainable development, that the need for and deployment of transformational clean energy technologies at lowest possible cost are urgent, and that the response must involve balanced attention to mitigation and adaptation.

We reaffirm the objective, provisions and principles of the UN Framework Convention on Climate Change. Recalling the Major Economies Declaration adopted in Toyako, Japan, in July 2008, and taking full account of decisions taken in Bali, Indonesia, in December 2007, we resolve to spare no effort to reach agreement in Copenhagen, with each other and with the other Parties, to further implementation of the Convention.

Our vision for future cooperation on climate change, consistent with equity and our common but differentiated responsibilities and respective capabilities, includes the following:

1. Consistent with the Convention's objective and science:

Our countries will undertake transparent nationally appropriate mitigation actions, subject to applicable measurement, reporting, and verification, and prepare low-carbon growth plans. Developed countries among us will take the lead by promptly undertaking robust aggregate and individual reductions in the midterm consistent with our respective ambitious long-term objectives and will work together before Copenhagen to achieve a strong result in this regard. Developing countries among us will promptly undertake actions whose projected effects on emissions represent a meaningful deviation from business as usual in the midterm, in the context of sustainable development, supported by financing, technology, and capacity-building. The peaking of global and national emissions should take place as soon as possible, recognizing that the timeframe for peaking will be longer in developing countries, bearing in mind that social and economic development and poverty eradication are the first and overriding priorities in developing countries and that low-carbon development is indispensible to sustainable development. We recognize the scientific view that the increase in global average temperature above pre-industrial levels ought not to exceed 2 degrees C. In this regard and in the context of the ultimate objective of the Convention and the Bali Action Plan, we will work between now and Copenhagen, with each other and under the Convention, to identify a global goal for substantially reducing global emissions by 2050. Progress toward the global goal would be regularly reviewed, noting the importance of frequent, comprehensive, and accurate inventories.

We will take steps nationally and internationally, including under the Convention, to reduce emissions from deforestation and forest degradation and to enhance removals of greenhouse gas emissions by forests, including providing enhanced support to developing countries for such purposes.

2. Adaptation to the adverse effects of climate change is essential. Such effects are already taking place. Further, while increased mitigation efforts will reduce climate impacts, even the most aggressive mitigation efforts will not eliminate the need for substantial adaptation, particularly in developing countries which will be disproportionately affected. There is a particular and immediate need to assist the poorest and most vulnerable to adapt to such effects. Not only are they most affected but they have contributed the least to the build up of greenhouse gases in the atmosphere. Further support will need to be mobilized, should be based on need, and will include resources additional to existing financial assistance. We will work together to develop, disseminate, and transfer, as appropriate, technologies that advance adaptation efforts.

3. We are establishing a Global Partnership to drive transformational low-carbon, climate-friendly technologies. We will dramatically increase and coordinate public sector investments in research, development, and demonstration of these technologies, with a view to doubling such investments by 2015, while recognizing the importance of private investment, public-private partnerships and international cooperation, including regional innovation centers. Drawing on global best practice policies, we undertake to remove barriers, establish incentives, enhance capacity-building, and implement appropriate measures to aggressively accelerate deployment and transfer of key existing and new low-carbon technologies, in accordance with national circumstances. We welcome the leadership of individual countries to spearhead efforts among interested countries to advance actions on technologies such as energy efficiency; solar energy;

smart grids; carbon capture, use, and storage; advanced vehicles; high-efficiency and lower-emissions coal technologies; bio-energy; and other clean technologies. Lead countries will report by November 15, 2009, on action plans and roadmaps, and make recommendations for further progress. We will consider ideas for appropriate approaches and arrangements to promote technology development, deployment, and transfer.

4. Financial resources for mitigation and adaptation will need to be scaled up urgently and substantially and should involve mobilizing resources to support developing countries. Financing to address climate change will derive from multiple sources, including both public and private funds and carbon markets. Additional investment in developing countries should be mobilized, including by creating incentives for and removing barriers to funding flows. Greater predictability of international support should be promoted. Financing of supported actions should be measurable, reportable, and verifiable. The expertise of existing institutions should be drawn upon, and such institutions should work in an inclusive way and should be made more responsive to developing country needs. Climate financing should complement efforts to promote development in accordance with national priorities and may include both program-based and project-based approaches. The governance of mechanisms disbursing funds should be transparent, fair, effective, efficient, and reflect balanced representation. Accountability in the use of resources should be ensured. An arrangement to match diverse funding needs and resources should be created, and utilize where appropriate, public and private expertise. We agreed to further consider proposals for the establishment of international funding arrangements, including the proposal by Mexico for a Green Fund.

5. Our countries will continue to work together constructively to strengthen the world's ability to combat climate change, including through the Major Economies Forum on Energy and Climate. In particular, our countries will continue meeting throughout the balance of this year in order to facilitate agreement in Copenhagen.

At the 2010 G8 summit, the meeting's declaration reiterated those countries' commitments on climate change, with several paragraphs on climate change and energy issues:

> **G8 Muscoka Declaration: Recovery and New Beginnings, Muskoka, Canada, 25-26 June 2010,** ***available at*** **http://www.whitehouse.gov/sites/default/files/g8_muskoka_declaration.pdf .**

Environmental Sustainability and Green Recovery

21. Among environmental issues, **climate change** remains top of mind. As we agreed in L'Aquila, we recognize the scientific view that the increase in global temperature should not exceed 2 degrees Celsius compared to pre-industrial levels. Achieving this goal requires deep cuts in global emissions. Because this global challenge can only be met by a global response, we reiterate our willingness to share with all countries the goal of achieving at least a 50% reduction of global emissions by 2050, recognizing that this implies that global emissions need to peak as soon as possible and decline thereafter. We will cooperate to that end. As part of this effort, we also support a goal of developed countries reducing emissions of greenhouse gases in aggregate

by 80% or more by 2050, compared to 1990 or more recent years. Consistent with this ambitious long-term objective, we will undertake robust aggregate and individual mid-term reductions, taking into account that baselines may vary and that efforts need to be comparable. Similarly, major emerging economies need to undertake quantifiable actions to reduce emissions significantly below business-as-usual by a specified year.

22. We strongly support the negotiations underway within the UN Framework Convention on Climate Change (UNFCCC). We reiterate our support for the Copenhagen Accord and the important contribution it makes to the UNFCCC negotiations. We urge those countries that have not already done so to associate themselves with the Accord and list their mitigation commitments and actions. Recognizing the scientific view that the increase in global temperature should not exceed 2 degrees Celsius, we also call for the full and effective implementation of all the provisions of the Accord, including those related to measurement, reporting and verification thereby promoting transparency and trust. In this context, we are putting in place our respective fast-start finance contributions to help address the most urgent and immediate needs of the most vulnerable developing countries and to help developing countries lay the ground work for long-term, low-emission development. We express our commitment to cooperate actively and constructively with Mexico as the President of the sixteenth meeting of the UNFCCC Conference of the Parties on November 29 – December 10, 2010. We support related initiatives, including the UN Secretary-General's High-Level Advisory Group on identifying long-term public and private financing, and the Paris-Oslo Process on REDD+. We want a comprehensive, ambitious, fair, effective, binding, post-2012 agreement involving all countries, and including the respective responsibilities of all major economies to reduce greenhouse gas emissions.

23. While remaining committed to fighting climate change, we discussed the importance of ensuring that economies are climate resilient. We agreed that more research was needed to identify impacts at the global, regional, national and sub-national levels, and the options for adaptation, including through infrastructural and technological innovation. We particularly recognize the situation of the poorest and most vulnerable countries. We will share our national experiences and plans for adaptation, including through a conference on climate change adaptation in Russia in 2011.

24. To address climate change and increase energy security, we are committed to building low carbon and climate resilient economies, characterized by green growth and improved resource efficiency. We recognize the opportunities provided by a transition to low carbon and renewable energies, in particular for job creation. We encourage the IEA [International Energy Agency] to develop work on an International Platform for low-carbon technologies, in order to accelerate their development and deployment. The elimination or reduction of tariff and non-tariff barriers to trade in environmental goods and services is essential to promote the dissemination of cleaner low-carbon energy technologies and associated services worldwide. Carbon capture and storage (CCS) can play an important role in transitioning to a low-carbon emitting economy. We welcome the progress already made on our Toyako commitments to launch the 20 large-scale CCS demonstration projects globally by 2010 and to achieve the broad deployment of CCS by 2020, in cooperation with developing countries. Several of us commit to accelerate the CCS demonstration projects and set a goal to achieve their full implementation by 2015. We also

recognize the role nuclear energy can play in addressing climate change and energy security concerns, acknowledging the international commitment to safety, security and safeguards for non-proliferation as prerequisites for its peaceful use. We also recognise the potential of bioenergy for sustainable development, climate change mitigation and energy security. We welcome the work of the Global Bioenergy Partnership (GBEP) and commit to facilitating swift adoption of voluntary sustainability criteria and indicators, as well as on capacity building activities.

NOTES AND QUESTIONS

1. How meaningful are these commitments, especially in light of the Copenhagen and Cancún UNFCCC meetings? To what extent does a non-binding commitment among this set of countries to keep temperatures rise below two degrees Celsius advance efforts to address global climate change?

2. What are the advantages and disadvantages of major emitters making commitments outside of the UNFCCC process? How should such agreements interact with the UNFCCC process? How do such agreements impact the inequities of emissions, impacts, and the UNFCCC negotiation process?

   Jacob Werksman and Kirk Herbertson have argued that statements by the Major Economies Forum on Climate Change and Energy in the lead up to the Copenhagen negotiations played a role in reducing expectations for what could be accomplished there:

   > The [Major Economies Forum] MEF Declaration raised expectations that a Copenhagen agreement could demonstrate how all major economies will take actions to reduce global emissions by more than fifty percent by 2020 and by more than eighty percent by 2050. If so, for the first time, both developed and developing countries would need to design, declare, and be held accountable for either [Nationally Appropriate Mitigation Actions] NAMAs or commitments that put humanity on track towards a low-carbon future. However, as Copenhagen approached, the MEF statements also began to reveal emerging views on legal form and review procedures that would represent a significant retreat from a UNFCCC process that had been premised on the importance of a legally binding instrument. By the time they met in London in October 2009, MEF leaders had begun to describe their goal as merely to "internationalize" domestic climate policies in the form of "listings" subject only to a party-led peer-review process. As COP-15 approached, both the UN Secretary General and the Danish government, which would play host for and preside over the Copenhagen COP, picked up on the MEF signals and began to lower expectations as to the legal character of any COP-15 outcome.
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   > Jacob Werksman & Kirk Herbertson, *The Aftermath of Copenhagen: Does International Law Have a Role to Play in the Global Response to Climate Change?*, 25 Md. J. Int'l L. 109, 114 (2010)

What does this assessment by Werksman and Herbertson suggest about the potential for parallel forums to make climate change agreements more or less effective, depending on their approach?

3. Are these the most critical countries for mitigating climate change? How might you add to or subtract from the Major Economies and G8 lists? How might such changes impact the ability of the group to reach such an agreement, or one that goes further?

3. Asia-Pacific Partnership on Clean Development and Climate

After President Bush announced in 2001 that the United States would not ratify the Kyoto Protocol, his administration pursued alternative approaches to addressing climate change. The Asia-Pacific Partnership on Clean Development and Climate represents the most significant of these alternative approaches. This Partnership, which concluded in April 2011, included Australia, Canada, China, India, Japan, Korea, the United States, and a number of private sector partners. Its work on climate change, energy security, and reduction of air pollution aimed to augment clean energy investment and trade. The partners formed eight public-private task forces focusing on aluminum, buildings and appliances, cement, cleaner fossil fuel energy, coal mining, power generation and transmission, renewable energy and distributed generation, and steel.

The following excerpt, from an article written towards the end of the Bush Administration, describes this partnership and the ways in which it embodies the Bush Administration's focus on voluntarism and greenhouse gas intensity targets.

Jeffrey McGee & Ros Taplin, *The Asia-Pacific Partnership and the United States' International Climate Policy,* 19 COLO. J. INT'L ENVTL. L. & POL'Y 179, 207 (2008).

Japan, China, South Korea, India, Australia and the United States announced the Asia Pacific Partnership on Clean Development and Climate (AP6) in July 2005. The AP6 is an international agreement on technology cooperation and information exchange broadly focused on energy, environment and development issues. The AP6 specifically focuses on air pollution, poverty eradication, climate change, development, and energy security. Its Charter explicitly states that it is voluntary and non-binding. The Charter is clearly not in treaty form or intended to be binding, so it is best characterized as a soft-law memorandum of understanding between the six partner nations. The AP6 therefore continues the voluntarist policy direction of the Bush Administration climate change partnerships and multilateral technology development partnerships discussed above. The AP6 emphasizes the continued U.S. retreat from hard law international commitments on climate change during the Bush Administration.

Under the AP6 Charter, the partner nations form a Policy and Implementation Committee ("PIC") to "govern the overall framework, policies, and procedures of the Partnership, periodically review progress of collaboration, and provide direction to the Administrative Support Group." The PIC will implement AP6 activities by engaging the private sector, development banks, research institutions, and other governmental, intergovernmental, and nongovernmental organizations. The United States is the first chair of the PIC of the AP6. The Administrative Support Group ("ASG") will organize meetings and serve as an information

clearinghouse. The United States has also taken on the ASG role for at least the first two years of the AP6.

During the January 2006 AP6 meeting in Sydney, Australia, the members devised a Work Plan that created eight sector-based "Task Forces" to address cleaner fossil energy, renewable energy and distributed generation, power generation and transmission, steel, aluminum, cement, coal mining, and buildings and appliances. Representatives of the partner nations will act as a chair and co-chair of each task force, although non-state actors may also be invited to join. After the Sydney meeting the new PIC met with private sector and research institutions in Berkeley, California to devise Action Plans for each of the eight task forces. The PIC again formally convened in Jeju, South Korea six months later and agreed on an initial set of projects and activities for each Action Plan.

Business leaders participated in both the Sydney and Berkeley meetings. However, representatives from environmental non-governmental organizations, academics, and members of the public were not offered similar access. While the AP6 Charter indicates that only representatives of member governments may sit on the PIC, it is clear that non-state actors, particularly business interests, have a formal leading role in the Task Forces. Indeed, the AP6 Action Plans show that non-state actors have a leading management and participatory role in a number of projects. There is a widespread delegation to non-state actors in the Action Plans, particularly to business and public research bodies. The AP6 is pluralist in that non-state interests are key in formulating and implementing the activities of the Task Forces.

The AP6 internationalizes the United States' climate change policy of using greenhouse gas intensity targets rather than absolute reduction targets. The Vision Statement of the AP6, released at its launch in July 2005, clearly raises nationally-determined greenhouse gas intensity targets as the preferred approach to international climate change policy:

The partnership will share experiences in developing and implementing our national sustainable development and energy strategies, and explore opportunities to reduce the greenhouse gas intensities of our economies.

The Charter of the AP6 also references reducing greenhouse gas intensity. The AP6 therefore internationalizes the goal of greenhouse intensity reduction contained in the Bush Administration GCCPB.

This partnership among a number of critical developed and developing countries in collaboration with industry did not end with the Bush administration, but the tone of U.S. participation changed under President Obama in the period prior to Partnership's dissolution. The Obama administration from the start framed its participation in the Asia-Pacific Partnership as a complement to its efforts at the UNFCCC and in the Major Economies Forum, rather than as an alternative approach. Consider, for example, this excerpt from the U.S. Statement at the Third Ministerial Meeting, which took place in the lead up to the Copenhagen negotiations.

U.S. Country Statement, Asia-Pacific Partnership Ministerial Meeting, October 26-27, 2009, *available at* http://www.asiapacificpartnership.org/pdf/shanghai/statements/US-cs.pdf.

 I am very pleased to join you in this partnership, which we see as one vehicle to help us realize this transformation more quickly and more effectively. As has been said often, this is an

important group of countries - our leaders oversee fully half of the world's economic activity and we have a unique capacity, individually and collectively, to shape our children's future.
….

 This is the first ministerial we have held in 2 years, and much has changed since we last met in Delhi.

 Overall, we have achieved solid results. The Partnership has approved more than 150 projects in its time. The United States has committed some $65 million to promote the objectives of the APP, and we have funded over 40 projects across all eight task forces.

 These projects have achieved measurable results - not only through direct benefits such as reduced greenhouse gas emissions, increased capacity to reduce energy use, improved access to renewable energy technologies, and improved access to financing for clean energy - but also through the extensive leveraging of market forces to engage the private sector in promoting clean energy technology transfer.
….

 Looking forward - we are all now deeply involved in an effort to establish a framework that substantially ramps up our cooperative efforts to promote technology development, dissemination and transfer. This effort is occurring through many channels - global, regional and bilateral.

 We expect Copenhagen to be a signal meeting in our efforts to define measurable, reportable and verifiable national actions, as well as the international framework to support such efforts through finance, technology transfer and capacity building.

 We expect a significant outcome in technology to emerge from Copenhagen, where we have advocated for the creation of a new "hub and spokes" technology assistance vehicle to assist countries [to] identify and secure the technologies they need to develop more cleanly.

 All of us are also working to establish a Global Partnership through the Major Economies Forum process, and we have been deeply involved in the development of action plans that will soon be provided to our leaders.

 These action plans will help us deepen cooperation among the countries at this table, and broaden our cooperation to include partners from other regions of the world.

 It is also clear that in the future, the carbon market will play a substantially larger role in the effort to mobilize private capital, and that efforts to assist in carbon market readiness will be a key part of our effort going forward.

 And we see a trend toward low carbon growth plans that will inform our decisions to transform our economies.

 All of us are planning new and more ambitious actions at the domestic level to address climate change and develop more cleanly - from India's recently announced clean energy missions, the efforts underway … in China to meet a carbon intensity goal, and the efforts in several of our countries, including my own, to establish broad-based cap-and-trade legislation.

 We will have a continuing need to evaluate the APP's niche as our approaches and the broader framework for technology cooperation develops, both over the coming year and beyond.

 We appreciate the Australian initiative to review our flagship projects, which will inform our view of how the work of the public and private members of the task forces should go forward.

 It notes the importance of linking technology with capacity building for finance, and suggests that the international system can do more to match finance with needs.

 We would like to reaffirm that we see this Partnership as playing a useful, and we hope, important role in our future efforts, and we look forward to continuing the dialogue over coming months about the concrete and tangible ways that APP can contribute.

 I'd like to thank Japan for offering to host the next meeting of the Policy and Implementation Committee, and I'd like to suggest that it would be useful for the PIC to explicitly consider how the APP can best contribute to implementation of the outcomes we achieve in Copenhagen and through the Global Partnership, building on the collaborative, practical model that has worked for us thus far.

NOTES AND QUESTIONS

1. How does viewing the Asia-Pacific partnership as a UNFCCC alternative versus a UNFCCC complement impact its potential role in transnational climate change governance?

2. What are the comparative strengths and weaknesses of the approaches to international climate change agreements under the UNFCCC, Major Economies Declaration, and Asia-Pacific Partnership?

3. The regional governance structures in the Asia-Pacific region are relatively weak compared to those in other regions with major greenhouse gas emitters, such as Europe and North-America. Professor Mercurio, for example, has argued that these agreements have played a limited role in the expansion of trade in Asia:

> As a result of the focus on trade in goods and corresponding low level of ambition, the business community in Asia has essentially ignored the intra-regional RTAs [Regional Trade Agreements]. The utilization rates of intra-Asian RTAs, that is, the percentage of businesses which actually make use of the RTAs, are appallingly low when compared to other regions. Thus, while it is true that intra-Asian trade has increased throughout the last three decades, and particularly in the last decade, the low utilization rates

demonstrate that the increased regional trade has not directly occurred as a result of the trade agreements.

Brian Mercurio, *Trade Liberalisation in Asia: Why Intra-Asian Free Trade Agreements are Not Utilised by the Business Community*, 6 ASIAN J. WTO & INT'L HEALTH L. & POL'Y 109 (2011).

How might the less well-developed regional governance in this region have impacted the role that the Asia-Pacific partnership was able to play?

4. Human Rights and World Heritage Petitions

Climate change's impacts and the complexities of adapting to them raise international legal issues with a far broader scope than just international environmental law. The petitions to the Inter-American Commission on Human Rights and the World Heritage Commission reflect that breadth. In both sets of actions, the petitioners claim that the climate change harms implicate areas of international law that would not traditionally be associated with climate change. The Inuit's petition to the Inter-American Commission claimed that U.S. failure to adopt effective climate change policies violated their rights. The World Heritage Commission petitions argued that protected world heritage sites were being harmed by climate change and should be placed on the list of world heritage in danger as a result.

The following excerpt from an article written by Professor Carlarne describes these petitions in the broader context of efforts to affect U.S. climate change policy.

Cinnamon Carlarne, Commentary, *Notes from a Climate Change Pressure-Cooker: Sub-Federal Attempts at Transformation Meet National Resistance in the USA*, 40 CONN. L. REV. 1351, 1400–04 (2008).

Measures to influence the course of U.S. climate change policy extend beyond internal players and institutions. Domestic and foreign citizens alike look to international institutions, such as the Inter-American Commission on Human Rights and the World Heritage Convention, as mechanisms for holding the U.S. government accountable for alleged international responsibilities and liabilities for climate change.

In the first instance, on December 7, 2005, the Center for International Environmental Law (CIEL) filed petitions with the Inter-American Commission on Human Rights (IACHR) against the United States on behalf of sixty-three Inuit petitioners, representing both American and Canadian citizens. The petitions concerned the "impact of global warming on the Inuit and other vulnerable communities in the Americas and the implication of these impacts for human rights."

The Inuit petitions were based on the United States' alleged contribution to and its failure to address global warming. The petitions emphasized that the U.S., with only five percent of the world's population, is responsible for twenty-five percent of the world's emissions, and that the U.S. government is not only refusing to participate in the international climate change regime but is "actively impeding the ability of the global community to take collective action."

The IACHR rejected CIEL's petition on November 16, 2006, without prejudice. Although the petition was dismissed, in February 2007, the IACHR invited the petitioners to return to the

Commission to provide testimony on the links between climate change and human rights. On March 5, 2007, Sheila Watt-Cloutier, an Inuit petitioner and Former Chair of the Inuit Circumpolar Conference (as well as Nobel Prize nominee), CIEL Senior Attorney Donald Goldberg, and Earthjustice Managing Attorney Martin Wagner gave testimony before the Commission. Together, the three witnesses used their testimony to create a full picture of the physical, cultural and legal links between climate change and human rights in the hopes of creating enforceable links between international human rights law and global climate change.

While the IACHR is one of the first international institutions to confront the links between climate change and international law, it will not be the last. The Inuit petitions signal a trend whereby sovereign states and members of civil society seek redress for the harms posed by climate change through international mechanisms. This trend is evidenced by statements made by the government of the island nation of Tuvalu that it plans to lodge similar complaints against either the United States and/or Australia to the International Court of Justice (ICJ).

The Inuit petitions to the IACHR and Tuvalu's threat to bring a dispute before the ICJ have attracted considerable public attention. However, the Inuit petitions were dismissed and the Tuvalu case has yet to materialize. Nevertheless, the IACHR request for testimony from CIEL and from Sheila Watt-Cloutier and the decision by affected groups to challenge the United States' climate change strategy in international tribunals suggests that, both within the United States and extra-jurisdictionally, states, citizens, and international institutions are increasingly willing and able to contest the United States' current legal and political stance on climate change. ….

Another international venue that is confronting the connections between climate change and international law is the UNESCO Convention Concerning the Protection of the World Cultural and Natural Heritage (World Heritage Convention).

The underlying goal of the World Heritage Convention is to highlight that certain sites of "cultural or natural heritage are of outstanding interest and therefore need to be preserved as part of the world heritage of mankind as a whole." The World Heritage Convention reflects increasing acceptance of the concept of "cultural internationalism," which "views cultural property as belonging to the world's peoples and not limited to the citizens of the state where the property is located."

On February 16, 2006-the first anniversary of the Kyoto Protocol coming into force-twelve conservation groups from the U.S. and Canada lodged a petition with the World Heritage Committee to list Waterton-Glacier International Peace Park, located across the U.S. and Canadian borders, on the List of World Heritage Sites in Danger as a consequence of the threats that climate change pose to the natural environment at the site. The petition alleged that "less than one fifth of the park's glaciers still exist-and those precious few that remain are melting rapidly due to human-induced climate change." Based on the risk posed to the site by climate change, the petitioners requested that the World Heritage Committee list the site as in danger and adopt a management plan with a set of corrective measures that should "focus on reductions in U.S. greenhouse gas emissions because the glaciers, which are so rapidly melting, are within the United States' territory, implicating the obligation of the World Heritage Convention to conserve and protect natural and cultural heritage within a Party's boundaries." The petition has the two-fold goal of protecting the site from further degradation and finding a legal foothold for forcing the United States to regulate greenhouse gas emissions.

Four other petitions have been filed by conservation organizations worldwide to add Mount Everest, the Peruvian Andes, the Great Barrier Reef and the Belize Barrier Reef to the list of

sites in danger due to climate change. In 2005, in response to mounting concern, the World Heritage Committee commissioned an expert report on the effects of climate change on heritage. The report found that the effects of climate change may jeopardize World Heritage natural and cultural sites and the "fact that Climate Change poses a threat to the outstanding universal values (OUV) of some World Heritage sites" requires the Committee to, among other things, "design appropriate measures for monitoring the impacts of Climate Change and adapting to the adverse consequences." After recognizing that climate change is a threat to heritage, the report analyzes the key issues for the World Heritage Committee to consider when deciding how to respond to climate change.

At its annual meeting in July 2006, the World Heritage Committee took the issue into consideration. After consultation, the Committee issued a Decision on the question of climate change and heritage. The Decision acknowledges the links between climate change and heritage and the importance of creating an institutional strategy for responding to this new challenge. The Decision, however, fell short of the expectations of many people. With the Decision, the Committee created an institutional framework for beginning to respond to the impacts of climate change. It did not, however, create any mechanisms for addressing the causes of global climate change. The Committee rejected a call by campaigners to cut greenhouse gas emissions and took no direct action on the pending petitions to place properties on the "in danger" list. In addition, the final Decision reflected concessions to State Parties, including the United States, to delete references to the Kyoto Protocol and IPCC scientific findings.

NOTES AND QUESTIONS

1. Climate change differs from the type of problems typically addressed through environmental rights claims or the danger listing problems because of its geographic scope and complexity. Typically, those bodies remedy the issues brought before them by having a particular country or countries take particular steps. If a commission found a human rights violation or endangered world heritage, what would be the appropriate remedy? Would it be fair to just focus on the countries that have the highest per capita or total emissions? How might such a remedy interact with the UNFCCC process?

2. The then-Chair of the Inuit Circumpolar Conference Sheila Watt-Cloutier, in a presentation during the 2005 UNFCCC Conference of the Parties, described the petition as an important way of initiating a dialogue about climate change and human rights with the United States regardless of its changes of formal success:

> A declaration from the commission may not enforceable, but it has great moral value. We intend the petition to educate and encourage the United States to join the community of nations in a global effort to combat climate change . . ..
> . . ..
> This petition is our means of inviting the United States to talk with us and to put this global issue into a broader human and human rights context. Our intent is to encourage and to inform.

Presentation by Sheila Watt-Cloutier, Chair, Inuit Circumpolar Conference, Eleventh Conference of Parties to the U.N. Framework Convention on Climate Change, Montreal, December 7, 2005.

Do you agree that there is value in framing climate change as a human rights issue regardless of the likelihood of a petition succeeding or a declaration being formally enforceable? To what extent, if at all, do such petitioners form part of climate change governance?

3. Because climate change potentially implicates so many areas of international law, commentators have explored the possibility of claims before other international bodies such as the International Court of Justice, the World Trade Organization, and international financial institutions. How might those claims compare to the ones that have been brought before the Inter-American Commission and World Heritage Commission? Do they seem more or less appropriate as mechanisms to address climate change?