Current Developments: The Sixth Session (Part Two) and Seventh Session of the Conference of the Parties to the Framework Convention on Climate Change

David A. Wirth, Boston College Law School

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CURRENT DEVELOPMENTS

THE SIXTH SESSION (PART TWO) AND SEVENTH SESSION
OF THE CONFERENCE OF THE PARTIES TO THE FRAMEWORK
CONVENTION ON CLIMATE CHANGE

The reconvened sixth session of the Conference of the Parties (COP-6bis) to the UN Framework Convention on Climate Change (FCCC) took place in Bonn from July 16 to 27, 2001, under the presidency of Jan Pronk, Netherlands minister of housing, spatial planning, and the environment. The meeting was noteworthy as the occasion for adopting the Bonn Agreements on the Kyoto Protocol rules, a crucial juncture for entry into force of the principal international instrument for reducing emissions of greenhouse gases. The rules were adopted in final form as the Marrakesh Accords at the seventh session of the Conference of the Parties (COP-7), held in Marrakesh, Morocco, from October 29 to November 9, 2001.

I. IMPLEMENTATION OF THE KYOTO PROTOCOL

The FCCC, which was adopted in 1992 at the UN Conference on Environment and Development and entered into force in 1994, specifies an annual meeting of the parties to the instrument. The Third Conference of the Parties (COP-3) adopted the Kyoto Protocol, an ancillary instrument to the Convention, in 1997. Annex B of the protocol sets out commitments by twenty-one industrialized states (plus the European Union), as well as by eleven states undergoing the process of transition to a market economy, to limit or reduce their emissions of greenhouse gases—carbon dioxide, methane, nitrous oxide, and others. During the first commitment period, which covers the years 2008 to 2012, the required reductions average about 5 percent and range as high as 8 percent for particular countries, measured by reference to 1990 levels. The protocol also anticipates additional reductions in a second and subsequent commitment periods, although the specific obligations have not yet been negotiated.

The Fourth Conference of the Parties (COP-4), held in Buenos Aires in 1998, adopted a plan of action to address remaining unfinished business that included a call for rules to implement key provisions of the Kyoto Protocol. Because of the need for technical elaboration of the protocol’s broad-gauge requirements, agreement on the terms of the implementing rules is critical to the ratification of the protocol by most, if not all, states with substantive


emission-reduction obligations under it. As of the end of COP-6, held in The Hague in No-

vember 2000 while the outcome of the U.S. presidential election was still uncertain, agree-

ment still had not been reached on decisions to implement the protocol. Consequently, par-

ties to the Convention agreed to convene a resumed sixth session in Bonn, the seat of the


In late March 2001, the prospects for progress on rules implementing the Kyoto Protocol
darkened considerably when President Bush announced that the United States would not
ratify the protocol, which had been signed by the Clinton administration. As a condition pre-
cedent for entry into force, the protocol requires fifty-five ratifications representing 55 per-
cent of total carbon dioxide emissions from industrialized countries in 1990; emissions of
carbon dioxide from the United States account for slightly more than 36 percent of that
year’s total. The support of Japan, with somewhat more than 8 percent of 1990 emissions, was
consequently essential in order to salvage the protocol after the U.S. withdrawal.

II. THE BONN AND MARRAKESH NEGOTIATIONS

COP-6bis, at which delegations of 179 parties to the FCCC and two observer states were
joined by 1,587 representatives of 219 nongovernmental organizations, included routine
meetings of the Convention’s Subsidiary Body for Implementation (SBI) and Subsidiary Body
for Scientific and Technical Advice (SBSTA). The Bonn meeting is of particular interest, how-
ever, because of the highly precarious status of the Kyoto Protocol rules at its start, and the
progress that had been made toward implementation by its end.

The Sixth Conference of the Parties (COP-6) had concluded in November 2000 with a
lengthy, heavily bracketed text reflecting considerable remaining disagreement on the ma-
jor issues relating to the rules for implementing the Kyoto Protocol. ¹ Prior to the resumed
sixth session, President Pronk, “seek[ing] to present a comprehensive and balanced package
draft decisions on all issues covered by the Buenos Aires Plan of Action,” prepared a new,
consolidated set of negotiating texts. ⁵ Also prior to that session, informal consultations be-
tween the president and the major negotiating groups were held in Scheweningen, the Neth-
erlands.

As in previous rounds of negotiations on climate change, the parties organized themselves
into a number of negotiating groups of varying degrees of cohesiveness. The fifteen mem-
ber states of the European Union (EU), including the delegation of the European Commis-
ion, operate as a formally coordinated unit, with the member state then holding the rotating
presidency—Belgium at both COP-6bis and COP-7—speaking for all the members. Central
Group 11 (CG-11) includes a number of Eastern European countries that are candidates for
EU accession. The Umbrella Group includes a variety of non-EU developed countries, among
them Australia, Canada, Iceland, Japan, New Zealand, Norway, the Russian Federation, and
the United States. (After President Bush’s announcement concerning U.S. ratification, the
United States’ formal position was to refrain from intervening or blocking consensus on mat-
ters related to the Kyoto Protocol unless U.S. interests were adversely affected or undesirable
precedents were created.) The Group of 77 (G-77) (which now includes over one hundred
developing countries), together with China, operates as a loosely structured grouping, with
Iran as chair during the Bonn negotiations. The Alliance of Small Island States (AOSIS) is
a coalition of forty-three small-island and low-lying coastal countries that share a vulnerabil-
ity to the adverse effects of global climate change. The alliance, which operates within the
larger framework of the G-77 and China, was chaired by Samoa at COP-6bis. An Environ-
mental Integrity Group, which comprises Mexico, South Korea, and Switzerland, emphasizes
the need to achieve “environmental integrity” in the work product resulting from the ongoing
negotiations on climate change under the auspices of the FCCC and the Kyoto Protocol.

At a high-level segment of COP-6bis beginning on Thursday, July 19 (the fourth day of the session), eighty-eight countries were represented at the ministerial level. Late Saturday evening, President Pronk presented a proposed text containing a "balanced package of [ministerial-level] decisions." That was followed by private consultations between the president and the various negotiating groups. After intense negotiations, ministers reached agreement in the early morning hours of Monday, July 23, on an interrelated group of ministerial decisions collectively known as the Bonn Agreements for the Implementation of the Buenos Aires Plan of Action. The final version modified the president's proposal only with respect to the text on compliance, which had been the principal source of disagreement among the ministers. After the departure of the ministers, negotiations resumed at the working level based on the political agreement that the ministers had reached, but little, if any, further progress was made. As of the end of COP-6bis, major political issues in the implementing rules and guidelines had been resolved, but the texts of the decisions embodying them had not yet been settled.

While the two-week negotiation at COP-7 in Marrakesh was likewise intense, the meeting lacked the sense of uncertainty and high drama that characterized the Bonn session. Instead, the Marrakesh meeting, held not long after the September 11 attacks on the World Trade Center and the Pentagon, was characterized by a sense of quiet determination. COP-7's focus was on resolving the issues that remained after Bonn, thereby reaching agreement on the final rules. On November 10, 2001, more than 170 governmental representatives of the parties to the FCCC adopted by consensus the Marrakesh Accords, a set of rules nearly two hundred pages in length implementing the Kyoto Protocol and the Convention.

III. THE BONN AGREEMENTS AND MARRAKESH ACCORDS

The Bonn Agreements are divided into reasonably discrete, but nonetheless interrelated, segments that track the major outstanding issues then awaiting resolution. The structure of the agreements is somewhat unusual, coming at an intermediate juncture in the negotiations on the rules implementing the Kyoto Protocol. Consequently, rather than being a comprehensive text of the Kyoto rules, the Bonn Agreements represent a delicately balanced package designed to resolve a large number of discrete, contentious issues at the political level, with the goal of breaking deadlocks preventing the adoption of the larger body of rules. By contrast, the Marrakesh agreement is a unified set of rules intended to set out the complete framework for implementing the Kyoto Protocol and the FCCC.

Funding for Developing Countries

One of the major policy issues concerning global climate change is that of providing financial assistance to developing countries. The FCCC identifies the need for industrialized states to provide financial resources and technology to assist developing countries in meeting their obligations under the Convention, in complying with any future substantive obligations, and in adapting to climate change. The Kyoto Protocol embellishes this framework but leaves the details to subsequent elaboration.

To date, the principal funding mechanism for climate-related activities, as well as the funding mechanism contemplated by the Convention, has been the Global Environment Facility (GEF), a multilateral entity whose projects are developed and implemented by the World Bank, the UN Development Programme, and the UN Environment Programme. The United

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8 FCCC, supra note 1, Art. 4, paras. 3-10, & Art. 11.
9 Kyoto Protocol, supra note 2, Art. 11.
States' announcement that it would not ratify the Kyoto Protocol was accompanied by a statement that it did not intend to provide any funding for protocol-related activities. This U.S. posture enhanced the complexity of the post-COP-6 negotiations by requiring clear segregation of funds under the Convention and the protocol, respectively.

The Bonn Agreements and Marrakesh Accords call for an increase in the level of GEF financing and create three new funds: a special climate-change fund; a least-developed-countries fund; and an adaptation fund. The first two will operate pursuant to the FCCC, and the third, under the Kyoto Protocol. Consequently, parties to the Convention that decline to ratify the protocol will nonetheless be eligible for financing through at least some of these new channels. While contributions to the funding mechanisms under the Convention are voluntary, the adaptation fund, operating under the protocol, will be partly financed by proceeds from the Clean Development Mechanism, described below. Ministers also agreed on approaches to minimizing adverse social, environmental, and economic effects on developing countries from the implementation of climate-change policies, identified assistance with insurance for climate-related damage as a priority topic, and decided to establish an Expert Group on Technology Transfer and a Least Developed Countries Expert Group.

The Bonn Agreements do not include specific levels of funding—an outcome seen by developing countries as critically important. In a separate political statement referenced in the Bonn Agreements, Canada, the EU, Iceland, New Zealand, Norway, and Switzerland committed to contribute $410 million per year by 2005 and to reevaluate the level of funding in 2008. Japan made a separate statement pledging to enhance its level of development assistance by providing concessional credits for activities related to climate change.

**Flexible Mechanisms**

Among the novel features of the Kyoto Protocol are its "flexible mechanisms" designed to reduce the cost of implementation by expanding the range of options available to states in fulfilling their obligations under the agreement. The terms on which the protocol’s flexible mechanisms are structured can be expected to have a major impact on both the efficacy of the agreement and the shape of international markets in emissions reductions.

The protocol’s Annex B establishes legally binding targets and timetables in the form of quantified emissions limitations and reduction commitments for greenhouse gases by industrialized countries, each identified by name with an associated numerical commitment, to be achieved by a deadline of 2012. To implement this obligation, the protocol anticipates an initial allocation of what have since come to be identified as "assigned amount units" (AAUs) corresponding to each state party’s legally binding cap.

The protocol establishes that rights to emit may be traded among the parties to the protocol that are identified in Annex I of the FCCC (a group that is similar, but not identical, to those with identified emissions limitations in Annex B of the protocol). This prerogative to engage in international emissions trading (IET), the first of the flexible mechanisms, is one

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11 The special climate-change fund is designed to finance activities, programs, and measures undertaken by developing countries related to adaptation to climate change; transfer of technologies to combat or mitigate climate change; efforts in the sectors of energy, transport, industry, agriculture, forestry, and waste management; and diversification of the economies of developing countries. The least-developed-countries fund is designed to assist those countries in preparing and implementing their national action programs pursuant to the FCCC. The adaptation fund is intended to finance projects and programs designed to assist developing countries in responding to the effects of climate change (including in the areas of water-resources management, land management, agriculture, health, infrastructure development, fragile ecosystems, and integrated coastal zone management); in improving the monitoring, control, and prevention for diseases whose incidence may be affected by climate changes; in building capacity with respect to the prevention, planning, and preparedness for climate-related disasters such as droughts and floods; and in establishing and strengthening national and regional networks for rapid responses to extreme weather events.

12 Articles 5 and 7 of the Kyoto Protocol require Annex I parties to establish systems for calculating their greenhouse gas emissions and to report them annually. The Marrakesh Accords contain standards for accounting and reporting of emissions units in accordance with the flexible mechanisms.

13 Kyoto Protocol, supra note 2, Art. 17.
of the protocol’s important innovations. Second, the protocol permits Annex I parties to undertake cooperative projects that reduce emissions of greenhouse gases in other Annex I parties and to obtain credit for those reductions, an option known as “joint implementation” (JI).\textsuperscript{14} Like AAUs, the resulting “emission reduction units” (ERUs) are tradable. Third, the protocol establishes a “clean development mechanism” (CDM),\textsuperscript{15} which provides a basis for Annex I parties to implement their reduction commitments by undertaking projects in developing countries. “Certified emission reduction units” (CERs) generated by such projects may also be traded. The initial allocation of AAUs is fixed for each Annex B state in accordance with the emissions limits established in the protocol. Trades of ERUs are zero-sum transactions, with an increase in the allocation to the state of purchase offset by an equivalent decrease for the state of sale. By contrast, CERs, which are generated by activities in developing countries that do not have emissions targets under the protocol, may increase the total number of AAUs.\textsuperscript{16}

Because of the significance of the reduction obligations and the essentially unprecedented nature of these schemes on the international level,\textsuperscript{17} the text concerning the flexible mechanisms was subject to intense scrutiny and heated negotiations. The bulk of the discussion centered on terms of eligibility for, or access to, the mechanisms as vehicles for facilitating the goals of the protocol.

For example, certain countries, most notably Russia, have large amounts of unused emissions rights due to negative economic growth since the base year of 1990. Some have questioned the appropriateness of trading these excess emissions, occasionally informally and pejoratively characterized as “hot air.” Another issue was the extent to which a state may meet its obligations by relying on trading instead of reductions in domestic emissions, an issue known as “supplementarity.” Analogously, a “commitment period reserve,” which would prohibit a state from trading more than a certain amount of its AAUs, was proposed as a fail-safe in order to assure that states do not compromise their capacity to deliver on their reduction obligations through overselling. Whether ERUs and CERs could be earned from nuclear power projects was another source of disagreement. As a general matter, the EU has tended to favor limited access to the flexible mechanisms on the theory of protecting the environmental integrity of the reduction commitments, while the Umbrella Group countries of Australia, Canada, Japan, and Russia have argued against restrictions as impeding economic efficiency.

Under the rubric of equity, developing countries argued for the need to reduce national disparities in per capita emissions of greenhouse gases, differences that reflect disproportionately high consumption patterns in industrialized countries. Several issues relating to the CDM were also of concern to developing countries: the desirability of giving priority to the least-developed countries and to small island states that are particularly vulnerable to climate change; the need for CDM-financed projects to provide resources in excess of existing foreign aid (“additionality”); and the goal of achieving an equitable geographic distribution of projects.

\textsuperscript{14} Id., Art. 6.
\textsuperscript{15} Id., Art. 12.
\textsuperscript{16} Article 4 of the Kyoto Protocol allows regional economic-integration organizations to reapportion their obligations among their member states. This provision was drafted in anticipation of its utilization by the European Union (EU), which has adopted an internal agreement redistributing the EU member states’ uniform reduction target of 8 percent. While non-EU states raised questions in Bonn (and also earlier) concerning the terms of access to Article 4, the Marrakesh Accords do not treat the EU “bubble” as a mechanism subject to potential restrictions.
In the Bonn Agreements, ministers decided first to initiate a “prompt start” for both JI and the CDM—that is, to allow access to these mechanisms in order to earn credits against the first commitment period, perhaps even in advance of the protocol’s entry into force. The agreements specify that domestic action should constitute a “significant element of the effort” made by each party in implementing its obligations under the protocol, but without specifying a quantitative limitation on the use of the mechanisms. Eligibility for participation in the flexible mechanisms will be limited to those states that are fulfilling their reporting and other technical requirements and that have adhered to the compliance regime described below. Nuclear projects will be excluded from eligibility under the JI scheme and the CDM. Otherwise, host countries will be able unilaterally to determine, free from external oversight, whether particular JI or CDM projects facilitate sustainable development in accordance with the protocol.

The commitment period reserve was set at 90 percent of a party’s AAUs or 100 percent of the level of the most recent emissions inventory, whichever is lower. As a consequence, most countries cannot trade more than 10 percent of their emissions budget. Countries such as Russia, whose actual emissions have fallen well below their budgets, are confined to trading the difference between them. Two percent of the proceeds from each CDM project are to be distributed, through the adaptation fund described above, to developing countries that are particularly vulnerable to climate change.

As of the beginning of COP-7, among the key questions concerning the mechanisms was “fungibility”: whether the emissions units under all three flexible mechanisms—AAUs, ERUs, and CERs—were interchangeable and freely tradable multiple times. Another was the capacity of a party to “bank” emissions units from one commitment period to another. In a compromise reflecting some parties’ concerns about accounting for sinks, the negotiators created a new “Removal Unit” (RMU), generated from sinks credits in Annex B countries, which can be used only to meet a party’s emissions target in the commitment period in which it is generated. CERs and ERUs can be banked up to a limit of 2.5 percent of a party’s initially assigned amount, and there is no restriction on banking AAUs. Depending on their interpretation, the Marrakesh Accords may also accommodate the possibility of “unilateral” CDM projects, undertaken without industrialized-state partners by developing countries, which can then sell the resulting emissions credits.

Sinks

The world’s forests serve as vast storehouses, or “sinks,” for sequestering carbon. Worldwide loss of forest cover, by releasing this vast stockpile of carbon into the atmosphere as carbon dioxide, aggravates the greenhouse problem. Conversely, reversing deforestation and creating new forested areas (“afforestation”) can help to offset current levels of carbon emissions. New forests, in absorbing carbon dioxide from the atmosphere during photosynthesis, can contribute to climate stabilization by serving as supplementary reservoirs for carbon. Shifts in agricultural practices can also result in releases or removals of carbon dioxide to or from the atmosphere.

It is reasonably clear from a scientific perspective that preventing deforestation and encouraging forest conservation and afforestation are desirable public policies from the point of view of climate stability. The treatment of sinks in the Kyoto Protocol, however, was a controversial issue. By comparison with data on industrial sources such as power plants, national data on forests and agricultural lands were spotty or nonexistent, and the methodologies for measuring and reporting were not standardized. Even more fundamentally, the storage rate of biospheric sinks was and is poorly understood, meaning that the contribution of forest- and agriculture-related activity to a party’s compliance with its protocol obligations would be difficult to ascertain.
Translated into the operative form of legal obligations, these considerations created significant concerns about the reliability and transparency of reporting and verification, and about the analytical integrity of the protocol’s baselines and reduction obligations. During negotiations, Australia, Canada, New Zealand, and the United States favored the inclusion of sinks in the agreement, while the EU, Japan, and developing countries generally opposed that approach. The result was a compromise for the first commitment period of 2008–12 that excludes sinks from the calculation of baselines, but that includes “direct human-induced land use change and forestry activities, limited to afforestation, reforestation, and deforestation since 1990.” The protocol leaves open the treatment of sinks in second and later commitment periods that have yet to be negotiated, but specifies that a party “may choose” to apply such guidelines to the first commitment period as well.\footnote{Kyoto Protocol, supra note 2, Art. 3, para. 3; see generally OBERTHÜR & OTT, supra note 2, at 130–36.}

The Bonn Agreements and Marrakesh Accords expressly address the question of sinks, more precisely identified as land use, land-use change, and forestry (LULUCF). Although the shape of the rules is constrained by the protocol’s requirements, the treatment of sinks continued to be controversial during subsequent negotiations. The protocol’s text leaves open for subsequent resolution the treatment of agricultural activities—revegetation, cropland management, grazing-land management—and also of forest management other than afforestation and reforestation. Consistent with their positions in the protocol negotiations, the Umbrella Group countries generally advocated liberal credits for carbon offsets in these areas, with regard both to meeting their reduction obligations and to calculating credits in the CDM. The EU and developing countries tended to oppose those proposals, although some developing countries supported at least some credits for sinks earned through the mechanism of the CDM.

Consistent with its compromise character, and as demanded by members of the Umbrella Group, the Bonn Agreements expanded the range of sink-related activities that operate to fulfill a party’s obligations, but with strict limitations. The ministers decided that these activities may, at each party’s option, contribute toward that party’s progress toward its reduction target, provided that the activities are “human-induced” and have occurred since 1990. Changes in agricultural patterns result in credits only to the extent that the net effect is to sequester more carbon. Forest management (for example, conservation of existing forests) is also subject to a global limitation of about 83 million tons of carbon per year, apportioned by formula among Annex B countries other than the United States. On the controversial issue of sinks in the CDM, ministers struck a deal that confines projects eligible for credits to afforestation and reforestation during the first commitment period, without prejudice to the second. Net credits earned for these sink-related activities in the CDM may not exceed 1 percent of a party’s base-year emissions, and the SBSTA is requested further to elaborate accounting methodologies for this category of activities. In Marrakesh, Russia successfully obtained an increase in its ceiling for forest-management credits to roughly double what the Bonn Agreements had allocated it. Contrary to the concerns of some parties, this concession did not trigger a cascade effect from other countries demanding similar special treatment.

Compliance

A robust regime for ensuring compliance with the Kyoto rules is widely viewed as a critical part of the overall package. This viewpoint reflects the perceived need for meaningful guarantees of strict implementation in order to assure the stability and predictability of markets in emissions rights (AAUs, ERUs, CERs, and RMUs). Moreover, procedures and mechanisms for compliance are the principal vehicle for assuring the integrity of other important features.\footnote{Kyoto Protocol, supra note 2, Art. 3, para. 4. There is also a special exception in Article 3, paragraph 7 for states for which LULUCF constituted a net source of emissions in 1990, a provision inserted at the request of Australia. See GRUBB, supra note 2, at 121.}
of the Kyoto Protocol, such as accounting and reporting obligations, and access to the flexible mechanisms. The Kyoto compliance regime is unprecedented in the environmental field and, more generally, breaks considerable new ground in international law and practice. For this reason, and because of the importance of compliance to the full set of implementing rules, compliance was the last issue to be resolved in the ministerial negotiations on the Bonn Agreements.

The protocol itself does not address the question of compliance in detail, but instead defers the issue to the Meeting of the Parties to the protocol. Prior to the Bonn meeting, there was already agreement on the basic outlines of the regime to be contained in the Kyoto rules. The principal institutional vehicle for encouraging implementation of the protocol’s rules will be a Compliance Committee comprising a facilitative branch and an enforcement branch. The facilitative branch, as the name suggests, is intended to provide advice and assistance to parties in complying with their obligations. This approach is similar to that of the noncompliance procedure under the Montreal Protocol on Substances That Deplete the Ozone Layer, which has had some success in providing nonadversarial support to parties in their efforts at compliance. The enforcement branch, which is intended to be more adjudicatory in character, has the power to reduce emissions budgets of a noncomplying party or to suspend its eligibility to participate in the flexible mechanisms.

Notwithstanding a prior loose consensus on these basic outlines, there was considerable divergence of opinion among the negotiators in Bonn. One important question concerned the legal form of the compliance regime, with the EU advocating the adoption of a compliance agreement, which would be mandatory for all protocol parties, prior to the protocol’s entry into force. Umbrella Group countries that were less enthusiastic about binding legal consequences—most notably, Japan—obtained language in the Bonn Agreements anticipating, instead, a nonbinding decision concerning compliance. Indeed, this language was the most contentious at COP-6bis, and the Marrakesh Accords defer the question of the legal form of the compliance regime—whether a legally binding agreement or a nonbinding decision—until the first Meeting of the Parties to the Kyoto Protocol after the instrument’s entry into force.

The most controversial of the remaining compliance issues addressed in Bonn concerned the enforcement branch, perceived as having more powerful remedies available to it than the facilitative branch. One major question was the “restoration rate” at which emissions units would be deducted from the allocations of those states found to be in noncompliance with their emission-reduction obligations. The EU and also some other states had argued for a ratio of deductions to shortfalls as high as two to one, a deterrent to noncompliance. Other delegations, chiefly from the Umbrella Group, characterized high restoration rates as punitive and argued for setting the multiplier at, or closer to, one. In the end, a compromise was reached: for the first commitment period, a restoration rate of 30 percent over the amount by which a party fails to be in compliance, with the rate for subsequent commitment periods subject to later negotiations. Developing countries also significantly furthered their negotiating objectives in Bonn by securing the opportunity to appeal the enforcement branch’s decisions to the Meeting of the Parties “if a Party believes it has been denied due process.”

IV. DEVELOPMENTS IN THE UNITED STATES

The March 2001 decision of the Bush administration on behalf of the United States not to ratify the Kyoto Protocol sent shock waves through the negotiating process at a critical juncture, but ultimately did not derail adoption of the implementing rules. The United States—the single largest national emitter of carbon dioxide (the principal greenhouse gas) and a major economic power—remains an important component of any international effort to
control global warming. Further, the protocol will not enter into force absent ratification by states representing 55 percent of total carbon dioxide emissions from industrialized countries in 1990; of this amount the United States accounts for more than a third. Moreover, under the Clinton administration, the United States was a principal architect of the trading scheme, the protocol's major structural innovation. Notwithstanding these impediments, the protocol is expected to enter into force, perhaps in time for the World Summit on Sustainable Development, the so-called Rio + 10 meeting—a ten-year follow-up to the 1992 summit-level UN Conference on Environment and Development—to be held in Johannesburg, South Africa, from August 26 to September 4, 2002.21

Questioning the IPCC

An additional factor affecting the climate negotiations after COP-6 in The Hague was the release of the Third Assessment Report of the Intergovernmental Panel on Climate Change (IPCC). That report, which concluded that the “Earth’s climate system has demonstrably changed on both global and regional scales since the pre-industrial era, with some of these changes attributable to human activities,”22 reinforced the seriousness of the global-warming problem. Notwithstanding the IPCC’s broadly international character, its consensus-based decision-making process, and its high degree of international respect,23 the Bush administration requested the U.S. National Academy of Sciences to review the IPCC’s work product. Instead of contradicting the panel’s conclusions, the National Academy reaffirmed them,24 thereby negating any inference that the panel’s conclusions had been politically motivated.

Policy Objections

While the Bush administration could hardly deny the seriousness of the global-warming problem after the National Academy’s report, or the scientific basis for the conclusion that human activities are adversely affecting the world’s climate, the president nonetheless reiterated his opposition to the Kyoto Protocol mere days after the document’s release. The

21 As of July 24, 2002, seventy-six states representing 36 percent of Annex I emissions in 1990 have ratified or acceded to the Kyoto Protocol. Japan and all EU member states have now ratified. See <http://unfccc.int/resource/ kpstats.pdf>. While not the only possible scenario leading to entry into force, ratifications by both Russia and Poland would now be sufficient to reach 55 percent.

22 See Intergovernmental Panel on Climate Change (IPCC), Climate Change 2001: Synthesis Report: Summary for Policymakers, question 2 (2001), at <http://www.ipcc.ch/pub/syr/001.htm>. The IPCC, which met for the first time in November 1988, was created under the auspices of the UN Environment Programme and the World Meteorological Organization, with a mandate to study the climate-change issue primarily from a scientific perspective. The IPCC’s principal activities are divided among three working groups: a scientific one that addresses the causes of climate change (Working Group I); one that studies the social and environmental impact of climate change (Working Group II); and one that addresses response options for limiting greenhouse gas emissions and mitigating the effects of climate change (Working Group III). The IPCC’s First and Second Assessment Reports, released in 1990 and 1995, respectively, at <http://www.ipcc.ch/pub/reports.htm>, provided much of the scientific basis for the FCCC and the protocol.

23 For instance, the contribution of IPCC Working Group I to the Third Assessment Report had 122 lead authors and coordinating lead authors, 515 contributing authors, 21 review editors, and 337 expert reviewers; was reviewed by governments on a line-by-line basis; and was adopted by consensus. See Intergovernmental Panel on Climate Change, Working Group I, Climate Change 2001: The Scientific Basis: Technical Summary (2001), at <http://www.ipcc.ch/pub/wg1TARtechsum.pdf>.

24 The National Academy’s report begins the summary of its findings with an unequivocal statement about global warming:

Greenhouse gases are accumulating in Earth’s atmosphere as a result of human activities, causing surface air temperatures and subsurface ocean temperatures to rise. Temperatures are, in fact, rising. The changes observed over the last several decades are likely mostly due to human activities, but we cannot rule out that some significant part of these changes is also a reflection of natural variability. Human-induced warming and associated sea level rises are expected to continue through the 21st century.

Committee on the Science of Climate Change, National Research Council, Climate Change Science: An Analysis of Some Key Questions 1 (2001), at <http://books.nap.edu/books/0309075742/html/>. The committee also stated that it “generally agrees with the assessment of human-caused climate change presented in the IPCC Working Group I . . . scientific report.” Id.
Bush administration’s June 2001 critique of the protocol labeled it as “fundamentally flawed” and identified five themes that were familiar from earlier debate on the greenhouse issue, but that until that time had not precluded executive branch support for the protocol. The subsequent adoption of the Marrakesh Accords can likewise be taken as an implied rejection of these objections by the rest of the states on the planet.

The Kyoto Protocol reduction targets—7 percent for the United States and an average of roughly 5 percent for the industrialized world—are said to be “precipitous” because of the increase in U.S. emissions during the last decade of the twentieth century, thereby necessitating actual reductions of 30 percent from current emissions in order to reach the protocol’s target for the United States. This position ignores the fact that the FCCC, adopted nearly a decade earlier, had already established the goal of limiting greenhouse gas emissions to 1990 levels. The U.S. share of the reduction goal is disproportionately small by reference to its current emissions, which amounted to nearly a quarter of the global annual total of carbon dioxide emissions from fuel combustion in the late 1990s.

From the broader perspective of environmental necessity, the protocol’s goals can hardly be said to be precipitous. Because of the long atmospheric lifetimes of the gases concerned, significant reductions in emissions would be necessary merely to stabilize concentrations at their current levels, let alone reverse the warming phenomenon. The long-standing criticism of the supposedly inconclusive science underlying climate-change hypotheses—no longer even remotely credible in the face of the overwhelming consensus of scientific opinion—has been modified to address the lack of scientific support for the protocol’s emissions targets. In a literal sense, this criticism perhaps has some merit since the protocol’s modest goals represent a political compromise that even at the time of adoption were understood as only a first step toward environmentally meaningful reductions.

Yet another Bush administration criticism is that the Kyoto Protocol is ineffective in addressing climate change because it excludes developing countries. This objection mirrors one presented in a 1997 Senate resolution. Developing countries are, to be sure, an important component of a long-term strategy for protecting the global climate. Greenhouse gases from this group of states are expected to constitute the largest source of future increases in emissions. Nevertheless, industrialized countries represent the bulk of current and past greenhouse gas emissions—a situation that has led most of the developing countries to object on

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26 See FCCC, supra note 1, Article 4 ("Commitments"), where parties recognize in paragraph 2(a) the need to "return by the end of the present decade to earlier levels of anthropogenic emissions of carbon dioxide and other greenhouse gases" and articulate in paragraph 2(b) the "aim of returning [these emissions] individually or jointly to their 1990 levels."

27. The most recent report of the IPCC’s Working Group I, addressing the scientific explanation for global warming, concluded that "[t]here is new and stronger evidence that most of the warming observed over the last 50 years is attributable to human activities." Intergovernmental Panel on Climate Change, Working Group I, Climate Change 2001: The Scientific Basis: Summary for Policymakers 10 (2001), at <http://www.ipcc.ch/pub/spm22-01.pdf>; see supra notes 22-24 and accompanying text. In the most recent of its periodic reports to FCCC parties, the United States acknowledges that greenhouse gases are accumulating in Earth’s atmosphere as a result of human activities, causing global mean surface air temperature and subsurface ocean temperature to rise. While the changes observed over the last several decades are likely due mostly to human activities, we cannot rule out that some significant part is also a reflection of natural variability.


28 See S. Res. 98, 105th Cong., 143 CONG. REC. S8138 (1997) (adopted by vote of 95-0, specifying that "the United States should not be a signatory to any protocol to, or other agreement regarding, the United Nations Framework Convention on Climate Change of 1992, at negotiations in Kyoto in December 1997, or thereafter, which would mandate new commitments to limit or reduce greenhouse gas emissions for the Annex I Parties [to the Convention, consisting of industrialized states], unless the protocol or other agreement also mandates new specific scheduled commitments to limit or reduce greenhouse gas emissions for Developing Country Parties within the same compliance period").
equity grounds to including substantive reduction obligations for them in the FCCC or the protocol. Consequently, at the time of this writing, a nonnegotiable requirement for quantified reductions from developing countries would amount to a "poison pill," impeding even the modest first steps represented by the Kyoto Protocol. By contrast, a phased integration of developing countries into a global regime to limit greenhouse gas emissions is a reasonable goal that would be simultaneously responsive both to the environmental imperative and to equity constraints.

It would be wrong to infer that developing countries are merely free riders under the current international regime consisting of the FCCC and its protocol. The Convention includes obligations for all parties to adopt programs to control greenhouse gas emissions and to address emissions issues in specific sectors, such as energy, transport, industry, agriculture, forestry, and waste management. Although the protocol does not contain substantive reduction obligations for developing countries, the CDM is designed to facilitate reductions in emissions from those countries. Moreover, some developing countries, such as India and China, have already begun to take voluntary steps to control emissions.

Alleged economic harm to the U.S. and global economies, amounting to as much as 4 percent of U.S. GDP, is another stock criticism reiterated in the Bush announcement. Other analyses—particularly after the Bonn and Marrakesh meetings, at which concessions were made to some developed states in order to secure broad participation—suggest that concerns about the cost of implementation may be overstated. The United States' final objection, namely, that the protocol would leave it "dangerously dependent on other countries to meet its emission targets," is disingenuous at best. The protocol's flexible mechanisms were originally adopted at the insistence of the United States, over the objections of the EU, as a strategy for controlling the costs of reductions.

Subsequent Developments

Having completed its own review of the climate-change issue, the White House in February 2002 released a new Clear Skies and Global Climate Change Initiative. Instead of reducing emissions from a fixed baseline, the Bush proposal would lower the intensity of greenhouse gases, defined as "the ratio of greenhouse gas emissions to economic output," from today's 183 metric tons per million dollars of GDP, to 151 by 2012. The proposal includes such voluntary and incentive-based features as tax credits for investments in renewable energy, and calls for a reassessment of needs in 2012, the end of the first commitment period under the Kyoto Protocol. It is not yet clear whether the Bush proposal could be meshed with the Kyoto approach; in the former, emissions limits are keyed to economic performance, a formula that may even allow actual emissions to increase if economic activity is sufficiently vigorous.

25 FCCC, supra note 1, Art. 4, para. 1 (b), (c).
28 ENVIRONMENTAL PROTECTION AGENCY, supra note 25, at 14.
More or less simultaneously, the Bush administration declined to support the candidacy of Robert Watson, a U.S. citizen, for a subsequent term as chair of the IPCC. To a storm of international controversy, Watson—one of the world’s leading climate scientists who, in addition to his previous experience in the National Aeronautics and Space Administration, and then in the Clinton White House, is currently director of the World Bank’s Environment Department—was replaced by Indian scientist Rajendra Pachauri, director general of a private research organization, the Energy Research Institute, in New Delhi, India.

V. NEXT STEPS AND LONG-TERM IMPACT

More so perhaps than for most international pacts, the Bonn Agreements are distinguished by the very fact that they exist. After the disappointing and inconclusive end to COP-6 in The Hague, followed by the United States’ announcement that it would not ratify the Kyoto Protocol, it was widely reported that the protocol was doomed never to enter into force. Consequently, although there might be some dispute as to whether the Bonn Agreements should be considered, as some have asserted, the most important international environmental instrument ever, there is little doubt that the high drama associated with the genuine uncertainty about the likelihood of reaching a consensus has rarely been equaled.

Had the outcome of the Bonn and Marrakesh negotiations been other than what it was, the prospects for the protocol would likely have been grim indeed. As things turned out, however, the outlook for the protocol’s success is considerably better than it was before Bonn and Marrakesh. Notwithstanding the withdrawal of the United States, it is still possible that fifty-five ratifications representing 55 percent of 1990 carbon emissions from Annex I states can be obtained, which would allow the protocol to enter into force. Indeed, although there is little margin for error, entry into force appears to be a realistic possibility; the implementing rules and guidelines contain obligations that are sufficiently specific that states with substantive obligations under the agreement feel that it is possible for them to complete their domestic processes of ratification.

In Bonn and Marrakesh, the EU was clearly the most committed to reaching consensus on rules that would elaborate the Kyoto framework in sufficient detail to enable domestic ratification of the agreement by the EU itself, by its member states, and by other Annex B countries with numerical emissions targets. The G-77 and China were also supportive. The Umbrella Group countries were generally more equivocal, and because Japan’s support was key to reaching agreement, its role was pivotal. Prior to and during the Bonn conference, there were conflicting accounts of Japan’s position—reports that emanated, in part, from a summit-level meeting with the United States immediately beforehand. At the meeting itself Japan was viewed, perhaps somewhat starkly, as presented with an uncomfortable choice between the United States and the rest of the world. Reflecting her crucial role in the negotiation, the Japanese environment minister was greeted with sustained applause in the celebratory plenary following her agreement to the text.

The Bonn Agreements have also been widely cited as emblematic of the EU’s capacity to exercise global leadership in the absence of U.S. support for multilateral initiatives. Dubbed by some participants “The Mission to Rescue the Kyoto Protocol,” COP-6bis has since become a larger metaphor for the potential of multilateral cooperation, as juxtaposed against a go-it-alone unilateralism embodied by the United States. Notwithstanding the dire advance predictions for the outcome of the meeting, and despite the opposition of the United States, there was no formal discussion at the Bonn conference of abandoning the protocol and considering an alternative approach. Somewhat ironically, hostility from the United States seemed to invigorate the determination of other countries to make the Kyoto regime work.

It is possible that the purely environmental significance of the resulting Marrakesh Accords is, as some have asserted,\textsuperscript{35} attenuated by necessary compromises that had the effect of reducing the magnitude of the Kyoto Protocol's already modest reduction commitments. But it was clear that without those concessions the protocol would no longer be available as both a contemporary vehicle and an ongoing framework for further progress on the pressing problem of climate change. As the situation stands now, there is at least reason to be optimistic that states and governments will gain useful experience within a policy and legal structure that can serve as a meaningful tool for negotiating more aggressive reductions in the future. Indeed, the increasing vigor over time of treaty regimes such as the FCCC and Kyoto Protocol is a consistent theme in international environmental law and policy.

More generally, the Marrakesh Accords may prefigure the future of international environmental negotiations. In their level of particularity and prescriptiveness, the Kyoto rules have very much the character of what in the United States would be considered administrative regulations, or in the United Kingdom, secondary legislation. Leaving aside the political significance of their adoption, the Bonn Agreements and Marrakesh Accords are noteworthy for their high level of technical complexity, extensive use of specialized jargon, and lengthy enumeration of a mass of apparent minutiae. Indeed, the text would be nearly incomprehensible to almost anyone not directly involved in the negotiating process.

But the Bonn Agreements and the Marrakesh Accords very much reflect the dynamics of the negotiation, in which governments approached with gravity the terms that would define their obligations to reduce greenhouse gas emissions. Notwithstanding more than a decade of international attention in the form of the FCCC and the Kyoto Protocol, states behave as if an enormous amount is at stake even at the very high level of detail of the Kyoto rules. Governments even of small countries send large delegations to the conferences of the parties and devote intense staffing resources to climate-policy implementation at the domestic level.

One important question that has yet to be answered is the long-term compatibility or convergence between the Kyoto Protocol, on the one hand, and unilateral U.S. policies, on the other. During the Clinton administration, a moderately enthusiastic executive branch encountered considerable hostility in the Congress. Given the likely need for legislative action to implement the Kyoto Protocol, that opposition appeared to be a well nigh insurmountable barrier. Somewhat ironically, at the same time that the Bush administration has taken a hostile attitude toward the Kyoto Protocol and reversed its predecessor's position, the Congress has warmed somewhat to policy action to protect the global climate. Moreover, some states and municipalities have begun to take their own initiatives. An additional important factor, whose magnitude is as yet difficult to ascertain, is the potential cost to U.S. business interests from remaining outside the Kyoto trading scheme.

Overall, there is a sense of optimism that an agreement of this immense technical complexity can be agreed upon by a consensus of the representatives of nearly two hundred states. Simultaneously, the Bonn Agreements and Marrakesh Accords are very much a political deal, characterized by an enormous network of interlaced linkages and trade-offs. As with any process involving compromise, the result is less satisfying than some would like. Realistic expectations focus on the Kyoto Protocol's future promise, as to which the forecast, though now brighter, is still clouded by uncertainty.

David A. Wirth*