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The History of the Global Climate Change Regime

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The development of the climate change regime in the late 1980s and early 1990s rode a wave of environmental activity, which began in 1987 with the discovery of the stratospheric "ozone hole" and the publication of the Brundtland Commission report, *Our Common Future* (World Commission on Environment and Development, 1987), and crested at the 1992 United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro.[1] An earlier wave of international environmental activity, culminating in the 1972 Stockholm Conference and the establishment several years later of the United Nations Environment Programme (UNEP), had tended to focus on local, acute, and relatively reversible forms of pollution—for example, oil spills and dumping of hazardous wastes at sea—by regulating particular pollutants. The more recent cycle of environmental activity has concerned longer-term, irreversible, global threats, such as depletion of the stratospheric ozone layer, loss of biological diversity, and greenhouse warming (Clark 1989, 47; see also chapter 12 in this volume), and has focused not merely on environmental protection per se, but on the more general economic and social policies needed to achieve sustainable development.

The development of the climate change regime until the conclusion of the Kyoto Protocol in 1997 can usefully be divided into five periods: the foundational period, during which scientific concern about global warming developed;[2] the agenda-setting phase, from 1985 to 1988, when climate change was transformed from a scientific into a policy issue;[3] a prenegotiation period from 1988 to 1990, when governments became heavily involved in the process; the formal intergovernmental negotiations phase, leading to the adoption of the FCCC in May 1992;[4] and a

postagreement phase focusing on the elaboration and implementation of the FCCC and the initiation of negotiations on additional commitments, leading to the adoption of the Kyoto Protocol in December 1997.[5]

1 The Emergence of Scientific Consensus

Although the greenhouse warming theory was put forward more than a century ago by the Swedish chemist Svante Arrhenius (1896), climate change did not emerge as a *political* issue until the 1990s. As late as 1979, efforts by the organizers of the First World Climate Conference to attract participation by policy makers proved unsuccessful, and even in 1985, when a major workshop on climate change was held in Villach, Austria, the U.S. government officials who participated went without specific instructions. However, by the late 1980s the U.S. Congress was holding frequent hearings on global warming. The issue was also being raised and discussed in the UN General Assembly; and international meetings such as the 1988 Toronto Conference, the 1989 Hague and Noordwijk Conferences, and the 1990 Second World Climate Conference were attracting numerous ministers and even some heads of government (see Table 2.1).

The development of the climate change issue initially took place in the scientific arena as understanding of the greenhouse problem improved. Through careful measurements at remote observatories such as Mauna Loa, Hawaii, scientists established in the early 1960s that atmospheric concentrations of CO_2—the primary greenhouse gas—are, in fact, increasing. The so-called Keeling curve (Keeling 1960), showing this rise, is one of the few undisputed facts in the climate change controversy, and led to the initial growth of scientific concern in the late 1960s and early 1970s. During the 1970s and 1980s, improvements in computing power allowed scientists to develop much more sophisticated computer models of the atmosphere, which, while still subject to considerable uncertainty, led to increased confidence by scientists in global warming predictions. A 1979 report of the U.S. National Academy of Sciences concluded, after reviewing these models, that, if CO_2 in the atmosphere continued to increase, "there is no reason to doubt that climate change will result and no reason to believe that these changes will be negligible" (National Research Council 1979, viii). Moreover, in the mid-1980s, scientists recog-

Table 2.1
Landmarks of the climate change regime

Conference	Date	Organizer	Conclusions and principal recommendations
Villach Conference	1985	WMO & UNEP	• Significant climate change highly probable • States should initiate consideration of developing a global climate convention
Toronto Conference	1988	Canada	• Global CO_2 emissions should be cut by 20% by 2005 • States should develop comprehensive framework convention on the law of the atmosphere
UN General Assembly	1988	UN	• Climate change a "common concern of mankind"
Hague Summit	1989	Netherlands	• Signatories will promote new institutional authority to combat global warming, involving nonunanimous decision making
Noordwijk Conference	1989	Netherlands	• Industrialized countries should stabilize greenhouse gas emissions as soon as possible • "Many" countries support stabilization of emissions by 2000
IPCC First Assessment Report	1990	WMO & UNEP	• Global mean temperature likely to increase by about 0.3°C per decade, under business-as-usual emissions scenario
Second World Climate Conference	1990	WMO & UNEP	• Countries need to stabilize greenhouse gas emissions • Developed states should establish emissions targets and/or national programs or strategies
UN General Assembly	1990	UN	• Establishment of INC

Table 2.1
(*continued*)

Conference	Date	Organizer	Conclusions and principal recommendations
UNCED Conference	1992	UNCED	• FCCC opened for signature
First Conference of the Parties	1995	FCCC	• Berlin Mandate authorizing negotiations to strengthen FCCC commitments
Second Conference of the Parties	1996	FCCC	• Geneva Ministerial Declaration
Third Conference of the Parties	1997	FCCC	• Kyoto Protocol
Fourth Conference of the Parties	1998	FCCC	• Buenos Aires Plan of Action

Source: Adapted from Bodansky 1995.

nized that anthropogenic emissions of other trace gases such as methane and nitrous oxides also contribute to the greenhouse effect, making the problem even more serious than previously believed. Finally, careful reassessments of the historical temperature record in the 1980s indicated that global average temperature had indeed been increasing since the middle of this century.

2 Agenda Setting, 1985–1988

Despite these advances, whether improved scientific knowledge would have been enough to spur political action is doubtful, particularly given the scientific uncertainties about climate change that persist even now. The growth of scientific knowledge was significant in laying a foundation for the development of public and political interest, but three additional factors acted as the direct catalysts for governmental action. First, a small group of environmentally oriented Western scientists—including Bert Bolin of Sweden, later the chair of the Intergovernmental Panel on Climate Change (IPCC)—worked to promote the climate change issue on the international agenda. As major figures in the international science establishment, with close ties to WMO and UNEP, these scientists acted

as "knowledge brokers" and entrepreneurs, helping to translate and publicize the emerging scientific knowledge about the greenhouse effect through workshops and conferences, articles in nonspecialist journals such as *Scientific American,* and personal contacts with policy makers. The 1985 and 1987 Villach meetings, the establishment of the Advisory Group on Greenhouse Gases under the joint auspices of WMO and UNEP, the report of the Enquete Commission in Germany, the testimony of climate modelers such as James Hansen before U.S. Congressional committees in 1987 and 1988—all of these helped to familiarize policy makers with the climate change issue and to convert it from a speculative theory into a real-world possibility.

Second, as noted above, the latter half of the 1980s was a period of increased concern about global environmental issues generally—including depletion of the stratospheric ozone layer, deforestation, loss of biological diversity, pollution of the oceans, and international trade in hazardous wastes. The discovery of the so-called Antarctic ozone hole, followed by the confirmation that it resulted from emissions of chlorofluorocarbons (CFCs), dramatically demonstrated that human activities can indeed affect the global atmosphere and raised the prominence of atmospheric issues generally. Initially, public concern about global warming rode on the coattails of the ozone issue.

Finally, the North American heat wave and drought of the summer of 1988 gave an enormous popular boost to greenhouse warming proponents, particularly in the United States and Canada. By the end of 1988, global environmental issues were so prominent that *Time* magazine named endangered Earth "Planet of the Year." A conference organized by Canada in June 1988 in Toronto called for global emissions of CO_2 to be reduced by 20 percent by the year 2005, the development of a global framework convention to protect the atmosphere, and establishment of a world atmosphere fund financed in part by a tax on fossil fuels.[6]

3 Early International Responses, 1988–1990

The year 1988 marked a watershed in the emergence of the climate change regime. Until 1988, the climate change issue had been dominated essentially by nongovernmental actors—primarily environmentally

oriented scientists. Although some were government employees, their actions did not reflect official national positions. In 1988, however, climate change emerged as an *intergovernmental* issue.

The period from 1988 to 1990 was transitional: governments began to play a greater role, but nongovernmental actors still had considerable influence. The IPCC reflected this ambivalence. Established by WMO and UNEP in 1988 at the instigation of governments, in part as a means of reasserting governmental control over the climate change issue, the IPCC's most influential output was its 1990 scientific assessment of global warming (Intergovernmental Panel on Climate Change 1990)—a product much more of the international scientific community than of governments. Cognizant of this fact, Brazil insisted on including a statement in the report that it reflected "the technical assessment of experts rather than government positions"—thus at least temporarily reading the "I" out of IPCC.

Among the landmarks of the prenegotiation phase of the climate change issue were:

- The 1988 General Assembly resolution on climate change, characterizing the climate as the "common concern of mankind"[7]
- The 1989 Hague Summit, attended by seventeen heads of state, which called for the development of a "new institutional authority" to preserve the earth's atmosphere and combat global warming[8]
- The 1989 Noordwijk ministerial meeting, the first high-level intergovernmental meeting focusing specifically on the climate change issue[9]
- The May 1990 Bergen Ministerial Conference on Sustainable Development, held in preparation for UNCED[10]
- The November 1990 Second World Climate Conference (SWCC) (Jäger and Ferguson 1991)

Until 1990, the governments interested in climate change were primarily those of Western industrialized countries; these countries had conducted the bulk of the scientific research on climate change and had the most active environmental constituencies and ministries. At the 1989 Noordwijk meeting, the basic split among Western countries became apparent. On the one hand, most European countries, joined to some degree by Canada, Australia, and New Zealand (the so-called CANZ group),

supported adopting the approach that had been used for the acid rain and ozone depletion problems. This entailed establishing quantitative limitations on national emission levels of greenhouse gases ("targets and timetables")—initially, stabilizing carbon dioxide levels at current levels. On the other hand, the United States (supported at Noordwijk by Japan and the former Soviet Union) questioned targets and timetables—the United States quite adamantly, Japan and the Soviet Union less consistently—on the grounds that targets and timetables were too rigid, did not take account of differing national circumstances, and would be largely symbolic. Instead, the United States argued that emphasis should be placed on further scientific research and on developing national rather than international strategies and programs.[11] The differences between the United States and other Western states deepened at the 1990 Bergen Conference and SWCC. The United States continued to block the adoption of targets and timetables, instead insisting on conference language that was neutral as between targets and timetables on the one hand and national strategies on the other.

What accounted for the differences within the West between the United States and other OECD countries? To some degree, they resulted from disparities in the perceived costs of abatement. For example, the United States has large reserves of cheap coal (a relatively high source of CO_2 per unit energy), while Germany still subsidizes coal production and consumption and could potentially save money by switching to natural gas (a relatively "clean" fuel).[12] But a simple explanation in terms of economic self-interest is insufficient, since, from an economic standpoint, a stabilization target would have been easier to achieve for the United States than for many other Western countries, including Norway and Japan, which subsequently backed away from country targets and began to support, instead, joint implementation. A more sophisticated interest-based approach is that the United States was jockeying for a favorable position—and attempting to create a reputation for toughness—in a much larger and longer-term game in which major cuts in emissions levels could be on the table (see also chapter 8).

Another explanation for the differences in national positions lies in domestic politics. Following the Montreal Protocol negotiations, international environmental negotiations were coordinated in the Reagan

administration by the White House Domestic Council, where such major domestic players as the Department of Energy, the Office of Management and Budget, and the Council of Economic Advisers were dominant, all of whom stressed the uncertainties of climate change and the economic costs of mitigation measures (see also chapter 4). In the immediate run-up to the Noordwijk Conference, they wrested control of the climate change issue from the Administrator of the Environmental Protection Agency (EPA), William Reilly, who reportedly supported U.S. acceptance of the targets and timetables approach. In contrast, in countries such as Canada, the Netherlands, and Germany, the climate change issue remained in the hands of the environmental and foreign ministries for a much longer period.[13]

At the SWCC, in late 1990, a second fault line began to emerge in the climate change negotiations, between developed and developing countries, or North and South. Earlier in the year, at the London Ozone Conference, developing countries had successfully pressed to establish a special fund to help them implement the Montreal Protocol on Substances that Deplete the Ozone Layer, and, in the UN General Assembly, they had insisted that the proposed environmental conference for 1992 give equal weight to environment and development. In the climate context, they sought greater representation, and argued that climate change be viewed not simply as an environmental issue but as a development issue as well. For both reasons, they sought to move the negotiations from the comparatively technical, narrow confines of the IPCC, in which they had found it difficult to participate on an equal basis with industrialized countries, to the UN General Assembly. Their efforts proved successful, and the December 1990 resolution authorizing the initiation of negotiations[14] placed the negotiations under the auspices of the General Assembly rather than the IPCC, UNEP, or WMO, as developed countries would have preferred.

Developing countries, however, displayed little more unity among themselves than did the developed countries. They agreed on the need for financial assistance and technology transfer—but on little else. At one extreme, the small island developing states, fearing inundation from sea-level rise, strongly supported establishing targets and timetables for developed countries. At the SWCC, they organized themselves into the Alliance

of Small Island States (AOSIS), which played a major role in the subsequent FCCC negotiations in pushing for CO_2 emissions reductions. At the other pole, the oil-producing states questioned the science of climate change and argued for a "go slow" approach. In the middle, the big industrializing countries such as Brazil, India, and China tended to insist that measures to combat climate change not infringe on their sovereignty—in particular, their right to develop economically. They argued that, since the North has historically been responsible for creating the climate change problem, the North should also be responsible for solving it.

4 Negotiations of the FCCC

Although international environmental law has undergone impressive growth over the past twenty years,[15] when the climate change issue emerged in the late 1980s, international environmental law had little to say about it (Zaelke and Cameron 1990). The only existing air pollution conventions addressed transboundary air pollution in Europe[16] and depletion of the stratospheric ozone layer.[17] While customary international law contains general principles relevant to atmospheric pollution,[18] these principles do not have the specificity and certainty needed to address the climate change problem effectively (Magraw 1990a, 8; see also Developments 1991, 1504–1506). As one leading international scholar has put it, "Customary law provides limited means of social engineering" (Brownlie 1973, 179). Therefore, legal action to address climate change required negotiation of a new treaty.

Initially, two alternative models were considered: (1) a general framework agreement on the "law of the atmosphere," modeled on the 1982 UN Law of the Sea Convention, which would recognize the interdependence of atmospheric problems and address them in a comprehensive manner; and (2) a convention specifically on climate change, modeled on the Vienna Ozone Convention (Zaelke and Cameron 1990, 272–278). Despite initial Canadian support for the former, the latter approach quickly prevailed; the unwieldiness of the Law of the Sea negotiations compared unfavorably with the step-by-step approach used with great success in the ozone regime (Sebenius 1991; Tolba 1989).

The total time for the formal treaty-making process, from the commencement of negotiations to the entry into force of the FCCC, amounted to little more than three years, a comparatively short period for international environmental negotiations.[19] The process began in December 1990, when the UN General Assembly established the Intergovernmental Negotiating Committee for a Framework Convention on Climate Change (INC/FCCC), to negotiate a convention containing "appropriate commitments" in time for signature in June 1992 at UNCED.[20] Between February 1991 and May 1992, the INC/FCCC held five sessions. It adopted the FCCC on May 9, 1992, and the Convention entered into force less than two years later—on March 21, 1994—as a result of its ratification by fifty states.

In understanding the INC process, two factors were critical. First, the June 1992 UNCED deadline exerted substantial pressure on governments. Given the public visibility of the UNCED process, most delegations wished to have a convention ready for signature in Rio. Second, the desire for consensus decision making gave individual countries (such as the United States) substantial leverage—if not a complete veto—over the final outcome.

The discussions in the INC/FCCC followed a pattern common to international environmental negotiations. At first, little progress was apparent, as states debated procedural issues and endlessly repeated their positions rather than seek compromise formulations. But, while frustrating to those hoping for rapid progress, this sparring process allowed states to voice their views and concerns, to learn about and gauge the strength of other states' views, and to send up trial balloons. Real negotiations, however, began only in the final months before UNCED, when governments realized that they would need to compromise if they wished to have a convention to sign at Rio. Agreement was facilitated by the preparation of a compromise text by the INC chair for the final session, which cleared away many of the incrustations of alternative formulations proposed during the course of the negotiations. Even so, agreement was not reached until late on the final day of the negotiations, following several late-night sessions involving a small group of key delegations.

The initial baseline for the negotiation was the "framework agreement" model used in the preceding decade to address the acid rain and

ozone issues: The 1979 Convention on Long-Range Transboundary Air Pollution (LRTAP) and the 1985 Vienna Convention for the Protection of the Ozone Layer (Lang 1991; Morrisette 1991). Both of these conventions are largely procedural. They establish only very general obligations—for example, to cooperate in scientific research and exchange information. Instead, their main value is to establish a legal and institutional framework for *future* work through regular meetings of the parties and the possible adoption of more substantive protocols.

Virtually all countries agreed on the need to include, at a minimum, the basic elements of such a framework convention—except for the oil-producing states, who would have preferred not to have had a convention at all. The main question was whether a framework convention was sufficient, and, if not, what additional provisions to include. The principal issues included the following:

Targets and Timetables The European Union and AOSIS advocated establishing a target and timetable to limit emissions by developed countries, while the United States and the oil-producing states opposed this idea. Other developing states generally supported targets and timetables, as long as it was clearly understood that these targets and timetables would apply only to developed states.

Financial Assistance and Technology Transfer Apart from targets and timetables, the financial-mechanism issue was the most contentious in the negotiations. Developing countries advocated establishing a new fund, while developed countries wished to use the Global Environment Facility (GEF), a joint project of the World Bank, UNEP, and UNDP that was established in 1991. Developing countries, led by India, also sought to include a commitment that developed countries provide "new and additional" financial resources to help developing countries implement the Convention—that is, money over and above existing aid flows.

Institutions and Implementation Mechanisms OECD countries, including the United States, generally sought to establish strong implementation machinery, including regular meetings of the parties, a scientific advisory body, a committee focusing on implementation issues, detailed reporting

requirements, and a noncompliance procedure modeled on that of the Montreal Protocol. Developing countries preferred the framework-convention approach, fearing that strong institutions and implementation procedures might infringe on their sovereignty.

The FCCC (FCCC 1992, see also Appendix) reflects a carefully balanced compromise on these and other issues. Many of its provisions do not attempt to resolve differences so much as paper them over, either through formulations that preserved the positions of all sides,[21] that were deliberately ambiguous,[22] or that deferred issues until the first meeting of the conference of the parties.[23] From this perspective, the Convention represents not an end point, but rather a punctuation mark in an ongoing process of negotiation.

5 Post-Rio Developments and the Negotiation of the Kyoto Protocol

Recognizing the substantial delays that can occur between the adoption of a treaty and its entry into force (Spector and Korula 1993), the INC/FCCC decided to continue meeting prior to the first meeting of the Conference of the Parties (COP-1), in order to elaborate and implement the reporting and review procedure, to address unresolved issues such as the relations between the COP and the financial mechanism, and to begin consideration of the next steps beyond the FCCC. This "prompt start" to the FCCC process may have helped speed the development of the climate change regime by as much as two or three years, by allowing multilateral negotiations to continue during the interim period before the Convention's entry into force (Chayes and Skolnikoff 1992). In addition, during this interim period, most industrialized-country parties submitted national reports and the international review process began, including the compilation of a synthesis report analyzing the overall progress by industrialized countries in implementing their commitments and the initiation of in-depth reviews of individual national reports.

The Convention entered into force on March 21, 1994, and one year later COP-1 met in Berlin. Among its significant outcomes, the Berlin meeting decided to:

• Establish an ad hoc committee to negotiate a protocol or other legal instrument by 1997 containing additional commitments for industrial-

ized countries for the post-2000 period. This was labeled the Berlin Mandate (see Appendix), and the new negotiating committee became known as the Ad Hoc Group on the Berlin Mandate (AGBM).

- Initiate a pilot phase of "joint activities," involving any country (either developed or developing) interested in participating, but with no provision for credits toward emissions limitation commitments.
- Continue to use, on an interim basis, the Global Environment Facility (GEF) as the FCCC's financial mechanism.
- Locate the FCCC's permanent secretariat in Bonn.

The AGBM negotiations continued for two years, leading to the adoption of the Kyoto Protocol in December 1997. Following the pattern of the FCCC negotiations, little progress was made initially. Some countries questioned the need for legally binding commitments either on targets and timetables (now referred to as "quantified emission limitation and reduction objectives" or QELROs) or policies and measures, while others questioned the authoritativeness of the IPCC's Second Assessment Report.

Against this backdrop, the adoption of the Geneva Ministerial Declaration (see Appendix) in July 1996 at COP-2 marked a turning point for two reasons. First, from a substantive standpoint, it reasserted the conclusions of the Berlin meeting, thereby countering attempts to backslide. In particular, it reaffirmed the need for legally binding QELROs; endorsed the IPCC's Second Assessment Report, which it characterized as the "most comprehensive and authoritative assessment of the science of climate change"; found that the Second Assessment Report indicates that the continued rise in greenhouse gas concentrations would lead to dangerous interference with the climate system, contrary to the objective of the Convention; and instructed delegates to accelerate negotiations on a legally binding instrument. Second, and perhaps more significantly, the Declaration marked the first time that countries were willing to act in the *absence* of consensus. Previously, the desire for consensus had given Saudi Arabia and the other OPEC states a virtual veto power over the negotiations. (Indeed, in the absence of rules of procedure specifying a different voting rule, most assumed that consensus was not merely a desirable goal but a legal requirement for action by the COP.) In the period

following COP-1, however, the OPEC countries overplayed their hand, provoking a backlash. Given the COP's lack of authority to take decisions by majority vote, supporters of the Declaration did not attempt to have it adopted by the COP. Instead, COP-2 merely took note of the Declaration and appended it to the final report, over the opposition of Saudi Arabia (and other OPEC states), Russia, and Australia. The willingness of the European Union, the United States, and most developing states to act in the absence of consensus sent a strong signal to the Berlin Mandate negotiations that these states were prepared to go their own way if necessary, if a small minority continued to block progress.

Nonetheless, for much of the following year, negotiations remained stalemated over two issues: first, the emissions-limitation targets for developed countries; and second, whether mechanisms should be established to allow developed states to meet their targets in a flexible manner. On the first issue, the European Union proposed a comparatively strong target, requiring a 15 percent cut in greenhouse gas emissions below 1990 levels by the year 2010, while other industrialized states such as the United States and Australia proposed weaker targets, with Japan somewhere in the middle. Ultimately the issue was resolved by specifying different emission targets for each party, ranging from an 8 percent reduction from 1990 levels for the European Union, to a 10 percent increase for Iceland. The debate about flexibility was equally, if not more, divisive, and resists easy summary. The United States, supported by some industry NGOs, sought mechanisms that would allow developed countries to achieve their emissions targets either through emissions-abatement projects in other countries or through emissions trading. In contrast, both the EU and developing countries argued that domestic action should be the main means of achieving emissions targets; developing countries, in particular, initially tended to resist any mechanism that would allow developed countries to receive credit for emissions reductions occurring in developing countries. In the end, the Protocol created several "flexibility mechanisms" or Kyoto Mechanisms, including emissions trading and joint implementation among industrialized countries, as well as a "Clean Development Mechanism" (CDM) for emission reduction projects in developing countries, but provided that these should be "supplemental" to

domestic action. The Kyoto meeting deferred to future negotiations most of the detailed issues about how the flexibility mechanisms would work. One year later, at COP-4 in Buenos Aires, the parties agreed on a work plan to develop the detailed rules for the flexibility mechanisms, with a view to adopting these rules at COP-6.

6 Conclusions

In reviewing the development of the climate change issue, several general features should be noted.

First, during the agenda-setting stage, the distinction between governmental and nongovernmental actors was blurred. What stands out was the importance both of a small group of "entrepreneurs," who promoted what they viewed as global rather than national interests, and the series of quasi-official meetings they organized—meetings that were highly influential, due in part to the sponsorship of international organizations such as UNEP and WMO or of sympathetic governments such as Canada, but that were *non*governmental rather than *inter*governmental in character. The 1985 Villach meeting and the 1988 Toronto Conference were particularly important—the former in communicating an ostensible scientific consensus about climate change and raising it as a policy issue; the latter in articulating a set of policy responses.

Second, during the actual negotiation of the FCCC, in contrast, governments were very much in control and nongovernmental actors played a quite limited role. Even the IPCC did not have a substantial effect on the actual negotiations. The one exception was the role played by a British environmental law group—the Foundation for International Environmental Law and Development (FIELD)—which helped organize and support the newly formed AOSIS. NGOs appeared to play a somewhat greater role during the Kyoto Protocol negotiations, particularly industry NGOs seeking either a weaker emissions-limitation commitment or stronger flexibility mechanisms.

Third, in the FCCC negotiations, it was *not* always possible to correlate the positions taken by delegates with "national positions." Many developing-country delegations—and even some developed-country

delegations—did not have detailed briefs from their capitals. Moreover, delegations were not always unified. In many ways, the U.S. Environmental Protection Agency was more closely aligned during the FCCC negotiations with the European Union than with the rest of the U.S. delegation.

Fourth, unlike the FCCC, the Kyoto Protocol specifies clear obligations for industrialized countries to limit and reduce their greenhouse gas emissions (although the specific ways of meeting these emissions targets remain under negotiation).

Finally, although many of the principal issues in the FCCC negotiations—including targets and timetables and financial commitments—were real issues with potentially substantial implications for national interests, the negotiations were often more semantic than substantive in character. Words were debated and selected as much for their political as for their legal significance. Proposed formulations took on a symbolic and even talismanic quality, only distantly connected to the actual meaning of the words. Linguistic debates became a proxy for political confrontation, with success or failure measured not just by the substantive outcomes, but by the inclusion or exclusion of particular terms.[24]

The consolidation of political will at national and international levels depends to a large extent on the domestic and interstate forces that shape the evolution of global politics. The analysis of these forces has traditionally been the focus of international relations theory, especially in the international security and economic fields. A preoccupation with the environment is comparatively recent, and large tracts of international environmental relations are still uncharted. It is nevertheless legitimate to ask to what extent international environmental relations and cooperation (or noncooperation) with respect to climate change can be explained by classical international relations theory. This is the purpose of the next chapter.

Notes

1. This chapter draws extensively from Bodansky 1992, 1994, 1995.

2. For general discussions, see Ausubel 1983; Cain 1983; Kellogg 1987; Revelle 1985; Weiner 1990.

3. See generally Pomerance 1989, 259.

4. See generally Bodansky 1994; Hecht and Tirpak 1995; Mintzer and Leonard 1994.

5. See generally Victor and Salt 1994; Rowlands 1995b; Oberthür and Ott 1999.

6. *Proceedings of the World Conference on the Changing Atmosphere: Implications for Global Security,* Toronto, June 27–30, 1988, WMO Doc. 710 (1989).

7. Protection of Global Climate for Present and Future Generations of Mankind, UN General Assembly Res. 43/53 (1988).

8. Declaration Adopted at the Hague, March 1989, reprinted in UN Doc. A/44/340-E/1989/120, Annex 5, and International Legal Materials 28: 1308.

9. Netherlands Ministry of Housing, Physical Planning and Environment, Noordwijk Conference Report (1989).

10. *Action for a Common Future: Report of the Economic Commission for Europe on the Bergen Conference,* UN Doc. A/CONF.151/PC/10 (1990).

11. The U.S. position on climate change paralleled its position vis-à-vis Canada regarding transboundary air pollution.

12. The FCCC gives Germany additional leverage in overcoming domestic interest groups that oppose reducing coal subsidies.

13. In 1991 and 1992, as economics and energy ministries in countries other than the United States began to recognize the potential implications of the climate change issue, the differences among OECD countries began to narrow.

14. Protection of Global Climate for Present and Future Generations of Mankind, UN General Assembly Res. 45/212, UN Doc. A/45/49 (1990).

15. See generally Sands 1995. There are now well over 150 treaties on the UNEP *Register of International Treaties in the Field of the Environment.*

16. Convention on Long-Range Transboundary Air Pollution (LRTAP), adopted Nov. 13, 1979, Int'l Legal Materials 18, 1442 (1979).

17. Vienna Convention for the Protection of the Ozone Layer, Mar. 22, 1985, Int'l Legal Materials 26, 1529 (1987); Montreal Protocol on Substances that Deplete the Ozone Layer, adopted Sept. 16, 1987, Int'l Legal Materials 26, 1550 (1987).

18. For example, the principle that states should "ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction" (Declaration of the 1972 UN Conference on the Human Environment (Stockholm Declaration), principle 21).

19. Recent international environmental agreements, however, have typically required less time to negotiate than earlier ones (Weiss 1993, 685–686).

20. Protection of Global Climate for Present and Future Generations of Mankind, UN General Assembly Res. 45/212, UN Doc. A/45/49 (1990).

21. See, for example, Article 11 (financial mechanism).

22. See, for example, Article 4(2) (commitments by industrialized countries to limit emissions).

23. See, for example, Article 13 (directing COP to consider establishing a multilateral noncompliance procedure).

24. Some of the intensity regarding the wording of the FCCC and the ensuing negotiations may stem from the fact that the FCCC constitutes a legal document that will subsequently be interpreted by its parties. Therefore, we will examine the legal implications and attend to the question of implementation in part IV.