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# International Political History of the Kyoto Protocol: from The Hague to Marrakech and Beyond

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The Kyoto Protocol is a landmark in international environmental law. As the first derived legal instrument of the United Nations Framework Convention on Climate Change, its negotiation has been pioneering, and consequently the path has not always been smooth. This paper outlines the international political history of the Kyoto Protocol, placing the key events in the negotiation process in the context of the national and interest group politics that have characterized the climate regime for the past decade. The key aims, intervening politics, and subsequent outcomes of the pivotal Conferences of the Parties (COPs) pertaining to the Kyoto Protocol—The Hague, Bonn, and Marrakech—are described. An evaluation of the Protocol is then made, using a mix of public choice and international relations theories. The final section takes a broader perspective, placing the Kyoto Protocol within the international climate regime and other multilateral environmental negotiations, which may affect its operationalization and effectiveness.

Keywords: Climate policy, Kyoto Protocol, United Nations Framework Convention on Climate Change, multilateral environmental agreements, climate change.

## 1. The Kyoto Protocol and the climate regime

Scientific research on climate change has a long history, but it was not until the late 1980s that a combination of factors prompted its construction as a key environmental issue. In 1988 NASA scientist James Hansen testified before a US Senate Committee that he was “99 percent certain” that global warming was underway (Pielke 2000). With the US Midwest being hit by severe heat waves, making 1988 the hottest summer on record (at that time), Hansen’s statement quickly elevated climate change to unprecedented levels of attention from the public, media, and policy-makers.

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In the same year, the World Meteorological Organization and the United Nations Environment Programme (UNEP) jointly established the Intergovernmental Panel on Climate Change (IPCC) to provide scientific advice to policy-makers on the problem of global climate change. The publication of the IPCC's First Assessment Report led the United Nations General Assembly to initiate negotiations on a Framework Convention on Climate Change (FCCC), which came into being in 1992, and was signed at the Rio Earth Summit (Irving and Amber 1994). At the First Conference of the Parties (COP-1) of the FCCC in 1995, Parties recognized the inadequacy of the Convention's voluntary targets,[1] and initiated the process of negotiating legally binding targets of emissions reduction or limitation for the so-called Annex I countries (that is, developed countries and those with economies in transition). This convoluted process culminated at COP-3, giving birth to the Kyoto Protocol to the FCCC, a historic landmark in international environmental law (Grubb et al. 1998, Oberthur and Ott 1999).

The Kyoto Protocol commits developed countries and economies in transition—referred to as Annex B countries in the context of the Protocol—to reduce their overall greenhouse gas (GHG) emissions to at least 5 percent below 1990 levels during the five-year commitment period 2008–2012. This overall commitment is differentiated between countries; thus the European Union (EU) reduces by 8 percent, the United States by 7 percent, Japan by 6 percent, whilst the Ukraine and Russia stabilize, and Australia and Iceland are allowed to increase their emissions compared to 1990 levels. In order to achieve this, Parties can use a range of sophisticated market-based instruments—called the Kyoto mechanisms—and land use, land use change, and forestry (LULUCF or simply "sinks") activities. The Kyoto mechanisms include international emissions trading, Joint Implementation (JI)—which allows emissions-saving or sink-enhancement projects between Annex B Parties—and the Clean Development Mechanism (CDM), which encourages joint emissions-reduction projects between developed and developing countries. To enter into force the Protocol must be ratified by 55 Parties, including Annex I Parties accounting for at least 55 percent of the total emissions from Annex I countries in 1990.

The six years since adoption of the Protocol have been characterized by intense political and technical debate over its operationalization. In recognition of the unfinished business from Kyoto, COP-4 adopted the Buenos Aires Plan of Action (BAPA), an ambitious work programme that included developing country issues, mechanisms, sinks, and compliance. The deadline for completion of this work was COP-6, which took place in The Hague in November 2000, and which spectacularly failed to reach agreement. Having suspended the meeting and resumed it eight months later in Bonn in July 2001, Parties managed to reach a political deal, even without the United States on board. This political deal then had to be translated into finer legal text, which took place at COP-7 in Marrakech. There, after another marathon midnight session, the Kyoto Protocol rulebook was finally finished and enshrined in almost 250 pages of the so-called Marrakech Accords (for discussions on the Marrakech Accords, see Boyd and Schipper 2002, Dessai and Schipper 2003, Dessai 2001a, Michaelowa 2001).

Since the successful negotiation of its overarching architecture, the Protocol has suffered a lull. By March 2003, 105 countries had ratified it, satisfying the first criterion, but only accounting for

1 Of stabilizing the greenhouse gas emissions of developed countries and economies in transition at 1990 levels by the year 2000.

43.9 percent of 1990 Annex I emissions. Attention is currently focused on Russia, which has suggested that ratification is imminent; with its 17.9 percent of Annex I emissions, this will satisfy the second criterion and be sufficient for entry into force (Korpoo 2002).

This paper describes the political history of the Kyoto Protocol within the wider context of the climate regime. Focusing on the ultimate decision-making body of the FCCC—the Conferences of the Parties—it places their foci and outcomes within Parties' wider political positions. The paper uses a mix of public choice theory (interest group politics) and insights from international relations theories—including (neo)realist, (neoliberal) institutionalist, and regime theories—to analyze the dynamic negotiation process. The paper concludes with an evaluation of the Kyoto Protocol thus far and some thoughts on likely future directions of the climate change regime.

## 2. Distrust in The Hague

The Sixth Conference of the Parties (COP-6) that took place in The Hague in November 2000 was intended to finalize the Kyoto Protocol rulebook. Delegates had a full agenda to deal with from the BAPA, including unresolved issues regarding: funding, capacity building, and technology transfer; the Kyoto mechanisms; sinks; and the compliance system. There are many interpretations of what happened in The Hague (among them Dessai 2001b, Egenhofer and Cornillie 2001, Grubb 2001, Grubb and Yamin 2001, Jacob 2001, Jacoby and Reiner 2001, Ott 2001a, Paterson 2001, Reiner 2001, Töpfer 2001, Vrolijk 2001). Even though the media blamed the collapse of the talks on a transatlantic dispute over carbon sinks, the reality was more complex. Even if a deal on sinks could have been reached at the last minute, many other issues had proved politically contentious throughout the meeting.

One set of issues that encapsulates the North-South divide is funding, capacity building, and technology transfer, usually treated under the theme of "developing country issues" and of prime concern to the Group of 77 and China (G77/China).[2] Annex I countries neglected G77/China's concerns for most of the conference. It was not until a day before the intended end that the Umbrella Group[3] revealed a proposal that offered the creation of a new window within the Global Environment Facility (GEF)[4], with additional funding that would reach a level of US$1 billion in the first commitment period. The European Union presented a counter-proposal shortly after, but neither proposal was to G77/China's liking.

Other stumbling blocks pertained more specifically to European Union-Umbrella Group divisions relating to the Kyoto Protocol. Regarding compliance the European Union wanted a strong system (independent and impartial with, for example, mandatory payments into a Compliance Fund in case of non-compliance), whereas the Umbrella Group opted for a softer version. The composition of the compliance committee branches was also contentious. Developing countries argued for equal regional representation, which Annex I countries were not willing to accept.

2 UN developing countries lobbying group that was founded in 1964 and later expanded to represent 133 nations. China is not a member but an associate of the Group of 77 (see, e.g., Williams 1997 on G77/China and the environment).

3 The Umbrella Group is an informal coalition that emerged after Kyoto, which includes the United States, Japan, Canada, Australia, New Zealand, Norway, Russia, and Ukraine.

4 The financial mechanism of the Convention administered by the World Bank.

The Kyoto mechanisms were also hotly debated at The Hague. The European Union argued for strong domestic action, which for them meant a 50 percent cap on the use of the mechanisms. The Umbrella Group, on the other hand, argued for no quantitative cap, for the sake of economic efficiency. Together with sinks this proved to be the breaking point in EU-US talks.

The issue of sinks proved to be one of the most contested at COP-6. The European Union wanted limited sinks activities and no sinks in the CDM. The United States argued that its acceptance of a –7 percent target at COP-3 was conditional on full use of the Protocol's sinks provisions. Consequently, the United States came to The Hague claiming that by managing existing forests properly it saved 300 million tonnes of carbon (MtC) a year. Neither the Umbrella Group nor G77/China was internally consistent with respect to this issue. Of the Umbrella Group Parties, only Canada and Japan appeared to follow the United States on sinks, whereas within G77/China the Group of Latin American Countries was lobbying to get sinks into the CDM. So whilst sinks were indeed a contentious issue, it was their combination with other disputed elements that led to the whole package crumbling.

It is also important to mention how the process led by the COP-6 president, Dutch Environment Minister Jan Pronk, took place. President Pronk's innovative negotiation style did not prove particularly conducive to achieving an agreement, according to some observers. With all the negotiation groups deadlocked, the "Pronk paper," a compromise deal, which was not a "take it or leave it" proposal, came out one day before the end of the conference. As Parties analyzed the paper, they further entrenched themselves in their own positions (Vrolijk 2001), which in conjunction with the lack of time remaining to negotiate amongst each other led to the collapse of the talks. Many other factors, such as the sheer breadth of the agenda and the political uncertainty about the next US president, could be added as contributing to the breakdown, but most of these concerns are subsumed within a general feeling of distrust that seemed to prevail. After expressing much disappointment, Parties decided to suspend COP-6 and resume it in the summer of 2001.

## 3. Bushwhacking the Kyoto Protocol

The breakdown of negotiations in The Hague was followed by extensive media coverage. The press capitalized on the blame game between the United States and the European Union, and within the European Union itself.[5] Climate change assumed a position alongside a growing portfolio of other transatlantic disputes such as banana wars, genetically modified foods, and nuclear missile defence systems.

The European Union and the Umbrella Group still tried to revive the talks at a meeting in Ottawa, Canada, shortly after COP-6, but with no success.[6] President Bill Clinton wanted to reach an agreement before he left office, but according to a senior American delegate there was lack of common understanding on some key issues.[7] In the meantime, the Bush-Gore election battle was being taken up

5 There were bitter recriminations between UK Deputy Prime Minister John Prescott and French Environment Minister Dominique Voynet (France had the EU presidency at the time).

6 Reuters, Friday, December 8, 2000, "U.S. says progress on climate talks depends on EU."

7 David Sandalow, US assistant secretary of state for oceans, environment, and science, as quoted by the *Washington Post*, Friday, December 8, 2000, "Global warming accord remains elusive."

in the courts. Whilst climate change itself did not become a major election issue, it was nonetheless encapsulated within the environmental issues that featured prominently. Al Gore, a self-proclaimed environmentalist, was known to be a strong supporter of the Kyoto Protocol. In fact, he even went to Kyoto in 1997 as US vice-president to instruct his delegation to show increased flexibility if a package deal could thus be agreed. On the other side, George W. Bush, a former Texas oilman,[8] was known to be suspicious of the Protocol,[9] but nevertheless pledged to regulate and reduce carbon dioxide emissions from power plants during his presidential campaign. Eventually Bush won in court and was sworn in as the forty-third president of the United States. After being queried by Senator Hagel on the administration's position on climate change, President Bush sent a letter to several senators on March 13, 2001 reversing his presidential campaign position.[10] He argued that mandatory controls on carbon dioxide emissions would lead to higher electricity prices as more utilities shifted to natural gas from cheaper coal. Nevertheless, he stated, he took climate change "very seriously." He went on to say:

> As you know, I oppose the Kyoto Protocol because it exempts 80 percent of the world, including major population centers such as China and India, from compliance, and would cause serious harm to the US economy. The Senate's vote, 95-0, shows that there is a clear consensus that the Kyoto Protocol is an unfair and ineffective means of addressing global climate change concerns.

This policy reversal received a massive wave of criticism that was quickly picked up by the international media. Environmental groups blasted the White House, while Europeans and Japanese alike expressed deep concern and regret.[11] President Bush responded saying, "We're in an energy crisis now … I was responding to reality, and reality is the nation has got a real problem when it comes to energy."[12] According to many experts, this was an overstatement used to cover up the big benefactors of this policy reversal; that is, the US oil and coal industries, which have powerful lobbies with the administration and conservative Republican lawmakers.[13] Calls for US leadership in this area followed from UN Secretary-General Kofi Annan, UNEP Executive Director Klaus Töpfer, and many other world leaders. On March 23, 2001, the European Union sent a letter to the White House emphasizing that a global strategy to tackle climate change was an integral part of relations with the United States (Dessai 2001b). European Commission President Romano Prodi and Swedish Prime Minister Goran Persson, whose country held the European Union presidency at the time, signed a joint letter that challenged the United States to find the "political courage" to agree on the fine print of the deal struck in Kyoto, at the resumed COP-6, due to take place in Bonn in July.[14] A series of transatlantic letters and diplomatic endeavours followed to try to keep the Kyoto Protocol alive. Even Canada, a key US ally,

8 As were other key administration officials: Vice-President Richard Cheney is also a former oilman, Attorney General John Ashcroft led the charge against the Kyoto Protocol in the Senate, and current Secretary of Energy Spencer Abraham fought to protect Detroit auto makers from stricter fuel-efficiency standards when he was a Michigan Senator (Bomberg 2001, Carpenter 2001).

9 While campaigning, Bush described the Kyoto Protocol as "a bad deal for America and Americans" (Jacoby and Reiner 2001).

10 White House press release, March 13, 2001, "Text of a letter from the President to Senators Hagel, Helms, Craig and Roberts." http://www.whitehouse.gov/news/releases/2001/03/20010314.html.

11 In the background, US lawmakers were actually preparing a bipartisan bill that would regulate carbon dioxide from power plants.

12 *Washington Post*, March 15, 2001, "Hill pressure fuelled Bush's emissions shift."

13 *New York Times*, March 15, 2001, "Bush defends emissions stance."

14 Reuters, March 23, 2001, "EU Tells Bush Climate Is Key to Europe/U.S. Ties."

expressed disappointment with President Bush's decision.[15] Climate change officially became a disputed area of transatlantic global foreign policy. Under such international pressure, the White House had to keep explaining its arguments: "The president has been unequivocal. He does not support the Kyoto treaty. It is not in the United States' economic best interest."[16] In reply, EU environment ministers pledged to pursue ratification of the Protocol with or without the United States. Various European environment ministers reiterated that the Kyoto Protocol was "the only game in town."[17] Almost all world leaders (including the leaders of China, Japan, South Africa, and Pacific Islands) expressed their disappointment at Bush's decision.[18] Both European and Japanese delegations went to Washington in an effort to persuade Bush not to pull out of the Kyoto Protocol, but neither succeeded. In fact, the European Union was reportedly even willing to renegotiate parts of the Protocol to accommodate the United States,[19] but the administration was simply not listening. After receiving a slap in the face in Washington, the European Union started gathering support for the Kyoto Protocol around the world (Gupta and Ringius 2001). A European delegation, headed by the Swedish environment minister, Kjell Larsson, visited Moscow, Tehran (the Islamic Republic of Iran was the presiding country of G77 at the time), Beijing, and Tokyo. The objective of this diplomatic tour was to gather support from a wider coalition of countries in the face of the US pull-out. Japan and Russia were key countries because of their share of greenhouse gas emissions. The Japanese supported the Protocol adopted in their ancient capital city, but stressed the importance of US participation for the environmental integrity of the deal.[20] Australia was the first country to follow the US line. Polls in both the United States and Australia, however, revealed that the majority of Americans and Australians wanted their countries to join the Kyoto Protocol.[21] It was also becoming increasingly clear that the Kyoto Protocol was causing friction in the business community.[22]

On April 9, 2001, COP-6 President Jan Pronk released a new proposal based on comments received from Parties on the original COP-6 Pronk paper[23] and extensive bilateral consultations. The new paper was to be discussed at informal ministerial consultations in New York on April 20–21.[24] The objective of these informal consultations was to advance political preparations before the resumed COP-6 in July 2001. During these consultations, all countries but the United States supported the Kyoto Protocol. With respect to the paper itself, Parties noted that it still had problems that needed to be resolved.

15 Reuters, March 29, 2001, "Canada disappointed by Bush move on pollution."

16 White House spokesman Ari Fleischer, as quoted by CNN, March 29, 2001, "Dismay as US drops climate pact."

17 BBC News, March 21, 2001, "US facing climate isolation."

18 Even prominent figures ranging from ex-Russian President Mikhail Gorbachev to actor Harrison Ford had written to President Bush urging him to develop a plan to cut greenhouse gas production (*Time* magazine, Letters section, April 2, 2001).

19 BBC News, April 7, 2001, "EU ready to renegotiate Kyoto."

20 *New York Times*, April 9, 2001, "EU: support rising for climate deal without U.S."

21 ABC News, April 17, 2001, "Six in 10 say U.S. should join Kyoto treaty"; Reuters, April 20, 2001, "Most Australians back Kyoto Protocol—poll."

22 *Financial Times*, April 18, 2001, "Raising the temperature: President Bush's rejection of the Kyoto Protocol has created a deep divide among businesses about the urgency of addressing global warming." Paterson (2001) explains this shift in terms of the discourse of ecological modernization in a technocratic/corporate-led version.

23 See FCCC/CP/2001/MISC.1.

24 Parallel but separate to the High-Level segment of the ninth meeting of the Commission on Sustainable Development.

While this major diplomatic endeavour was taking place, the new US administration was performing a Cabinet review of US climate policy so that it could be presented to other Parties in Bonn. In Washington, more senators were criticizing Bush for scrapping the Kyoto Protocol. These included Senator Robert Byrd, one of the most vocal critics of the Kyoto Protocol,[25] and Senator John McCain, Bush's arch rival during the Republican leadership campaign. In mid-May President Bush released details of the new US energy plan, which would undoubtedly increase GHG emissions. Both environmental groups and European ministers criticized the new plan for promoting use of oil and coal and for doing too little to promote conservation. Jan Pronk called it a "disastrous development" for international efforts to slow output of GHGs.[26]

Around this time, the Bush administration realized they would not have their proposal ready for Bonn. As part of their Cabinet review, they asked the US National Academy of Sciences to identify areas of greatest certainty and uncertainty in climate change science and whether there were any substantive differences between the IPCC reports and the IPCC summaries for policy-makers. The report concluded that "temperatures are, in fact, rising," and that "the changes observed over the last several decades are likely mostly due to human activities" (NAS 2001). More importantly, the report backed up the IPCC conclusions, which had previously been openly questioned by the new US administration.

On 11 June 2001, President Bush disclosed his administration's view on the development of "an effective and science-based approach to addressing the important issues of global climate change."[27] Bush continued to insist that "the Kyoto Protocol was fatally flawed in fundamental ways," but wanted the United States to collaborate within the UN framework. He argued that the Protocol did not include developing countries, failed to address two major pollutants (black soot and tropospheric ozone), and was unrealistic—"many countries cannot meet their Kyoto targets." Nonetheless, he recognized the United States' responsibility and commitment to a leadership role on this issue. The Cabinet-level working group proposal included: (a) investment in advancing the science of climate change; (b) setting up a National Climate Change Technology Initiative for advancing technology to monitor and reduce GHGs; and (c) partnerships within the Western Hemisphere and with other like-minded countries. The administration made these decisions public at an opportune moment just before Bush left to meet European leaders in Gothenburg, Sweden.

At the EU-US summit in Gothenburg, the two Atlantic powers agreed to disagree on the Kyoto Protocol, but were determined to work together in all relevant fora to address climate change. The European Union stood firm in its objective to ratify the Protocol, sending the strongest signal that it would go ahead in spite of the United States (Athanasiou 2001). The European Union also decided to send out another diplomatic mission to gather support from Australia and Japan. While the Australians were unconvinced, Japan was determined to try its luck at convincing the United States to come on board. Much faith was put in a summit at Camp David between Bush and Japanese Prime Minister

25 An author of the unanimously passed 1997 Byrd-Hagel resolution that says that any climate agreement must not harm the United States economy and must include provisions that bind key developing countries to domestic emissions reductions or limitations within the same compliance period.

26 CNN, May 18, 2001, "Anger over Bush energy plan."

27 White House press release, June 11, 2001, "President Bush discusses global climate change."

Junichiro Koizumi, but still no advancement was achieved. It was now European leaders who were urging Koizumi to continue the Kyoto process, even without the United States. At the same time, COP-6 President Pronk was having informal high-level consultations to provide an opportunity for Parties to present their views on the new Pronk paper.[28] While Parties did not reach any sort of agreement, there was a growing sense of co-operation reflecting the need for some sort of compromise. Some multinationals[29] were urging the Bush administration to get back into the Kyoto process.[30] They feared that if other countries ratified the Protocol, US business would be out of the trading game.

Just days before the resumed COP-6, the Bush administration revealed they would not offer an alternative approach when talks resumed in Bonn. The Cabinet-level climate change working group had very little to show.[31] The US lead negotiator at COP-6, Undersecretary of State Paula Dobriansky, said the administration would not block the Europeans from attempting to negotiate with the Japanese and others on an agreement that included mandatory targets. However, she said the United States would oppose any action that would adversely affect the country or commit it financially to international climate change activities.[32] Japanese efforts to persuade the United States back into the game were thus shattered on the Friday before the start of the Bonn conference. The Japanese were becoming increasingly pessimistic about going ahead without the United States. The European Union warned the United States not to obstruct the talks in Bonn. Last-minute diplomatic efforts continued throughout the major capitals,[33] building a highly uncertain atmosphere for the Bonn negotiations.

## 4. The Bonn Agreement

Under this mood of high uncertainty and low expectations, the Bonn climate talks started on July 16, 2001. It was clear to everyone involved that if a deal was not reached the Kyoto Protocol would certainly die. With the US withdrawal from the process it was understandable that any deal reached would have to accommodate the interests of other Umbrella Group members, in particular Japan, Russia, Canada, and Australia.[34]

Unlike previous COPs, ministers were asked to attend the first week of negotiations (in addition to the second week) in an attempt to address the time constraint that was evident in The Hague. On Thursday, President Pronk came out with his final compromise deal. Even though the deal did not please all Parties, most were willing to accept it, except Umbrella Group members Japan, Russia, Canada, and Australia;

28 FCCC/CP/2001/2/Rev.1.

29 For example, Enron Corp., DuPont Co., American Electric Power Co., Alcoa, BP, Ford Motor Co.

30 Bloomberg, June 7, 2001, “Enron, DuPont urge Bush to salvage environmental pact.”

31 Except for some specific initiatives, which included: (a) an investment of over US$120 million for NASA research on carbon cycle computer modelling, etc.; (b) carbon sequestration projects with NGOs and companies; (c) co-operation with El Salvador, Mexico, and Canada. However, most of these “initiatives” were repackaging proposals presented by the Clinton administration.

32 *Washington Post*, July 14, 2001, “U.S. won’t have new plan for global warming talks.”

33 John Prescott went to see Prime Minister Koizumi; Japanese Environment Minister Yoriko Kawaguchi went to see Paula Dobriansky, etc. It is important to acknowledge the role of President Pronk’s support team, who went around the world holding informal talks with heads of delegations and ministers in order to build a well-balanced package (Schoenmaeckers 2001).

34 Ironically, these countries were in many respects more conservative than the United States itself.

especially Japan, which was concerned with the compliance provisions of the deal. After many informal consultations and 48 hours of non-stop negotiations, a final deal was reached in the early hours of Monday. Euphoria was in the air, and the "Bonn Agreement"[35] was hailed as another milestone in the Kyoto process. According to the European Union, the Kyoto Protocol was saved. For G77/China it represented the "triumph of multilateralism over unilateralism."[36] Four main issues were encapsulated in the Bonn Agreement, which we describe next (see also: Athanasiou and Baer 2001a, Benedick 2001, den Elzen and de Moor 2002, Depledge 2001, Müller 2001, Ott 2001b, Torvanger 2001).

The first of these issues, *developing country concerns*, was a notable area of achievement in Bonn, with the creation of three new funds to facilitate adaptation, technology transfer, and economic diversification of vulnerable countries: the Special Climate Change and Least Developed Country (LDC) funds (under the Convention) and the Adaptation fund (under the Protocol) (Huq 2002). The Adaptation fund is to be financed by 2 percent of the share of proceeds on CDM projects (projects in LDCs are exempt from this levy) and will provide for concrete adaptation projects in developing countries that are signatories to the Protocol. As Ott (2001b) has pointed out, this decision represents a major breakthrough in environmental law because it establishes a levy on international business transactions for the financing of adaptation projects. All three funds will be managed by the GEF, a cause of some discontent among G77/China, who tend to perceive this institution as too bureaucratic. An Expert Group on Technology Transfer was also established to assist this process. The European Union, Canada, Iceland, New Zealand, Norway, and Switzerland pledged to contribute €450 million annually by 2005 (with this level to be reviewed in 2008) for the three funds, GEF climate change activities, bilateral and multilateral funding, and the CDM.

The second crunch issue the Bonn Agreement tackled was the *Kyoto mechanisms*. Surprisingly, the text's call for emissions to be reduced "in a manner conducive to narrowing per capita differences between developed and developing countries" paves the way for a contraction and convergence framework (Meyer 2000). On the issue of supplementarity, the European Union and others lost their battle to have a quantitative cap on the use of the mechanisms. Both project-based mechanisms (JI and the CDM) are to "refrain" from using nuclear projects, a provision much welcomed by environmental groups. Within the CDM, small-scale projects will be given priority, for example renewables up to 15 megawatts. Afforestation and reforestation projects were allowed in the CDM, only during the first commitment period, up to a ceiling of 1 percent of a Party's 1990 emissions times five.[37] In an attempt to avoid overselling of credits by Parties, a commitment period reserve was introduced, so that Parties should not drop below 90 percent of their "assigned amount" (that is, their emissions allocation).

The third issue was the expansion of eligibility for LULUCF or sinks activities. Indeed, forest management, cropland management, grazing land management, and re-vegetation were added to the list of sinks activities. Whilst Annex I countries are subject to a forest management cap, there is no equivalent for agricultural management, which could represent significant extra emissions. Many

35 Decision 5/CP.6 contained in FCCC/CP/2001/L.7.

36 Ambassador Bagher Assadi, Chairman of the Group of 77, at the closing session of the high-level segment of the resumed COP-6 to the UNFCCC, Bonn, July 22, 2001.

37 That is, 183 Mt $CO_2$ (Jotzo and Michaelowa 2002).

methodological issues, such as non-permanence, additionality, leakage, uncertainties, and socio-economic and environmental impacts, will need to taken up by the Subsidiary Body for Scientific and Technological Advice (SBSTA) and the IPCC.

The fourth and perhaps most contentious issue under negotiation in Bonn was matters relating to *compliance* under the Kyoto Protocol. With the withdrawal of the United States, the European Union remained the main Party advocating a strong compliance system. As a result, it had to cave in to the extreme positions of Umbrella Group members like Japan, who claimed this was a bottom-line issue for them. The outcome was the postponement of the adoption of a legally binding compliance system until the Kyoto Protocol enters into force, at the first meeting of the Parties (COP/MOP-1). Nevertheless, the creation of a two-branch Compliance Committee was agreed. The facilitative branch will act as an early-warning system and will facilitate compliance for Parties. The enforcement branch will apply the consequences of non-compliance, which include: restoration of 130 percent of the assigned amount in the next commitment period, preparation of a compliance action plan, and suspension of emissions trading. The Compliance Committee membership, the composition of which was much contested, ended up including 10 members: five from each regional group, one from a small island state, two from Annex I, and two from non-Annex I Parties. This was a considerable victory for G77/China.

The Bonn Agreement was a political deal. In order to take effect it had to be converted into decisions that the COP could then adopt. This was the task of delegates who remained in Bonn during the second week of negotiations. A day after the Agreement was reached, however, Russia held the negotiations hostage for a whole day because it wanted twice as many sinks credits as it had been given in the generous Bonn Agreement. While decisions pertaining to developing country issues were agreed and awaiting adoption, it soon became clear that different interpretations of the Bonn Agreement were emerging in all other negotiating groups, with the differences particularly convoluted in compliance. There was also little work done on the technical matters of monitoring, reporting, and verification (known in the jargon as Articles 5, 7, and 8), which were crucial for the architecture of the Kyoto regime. Therefore, the cumbersome task of translating the Bonn Agreement into COP decisions was deferred to COP-7, to be held at Marrakech in October/November 2001.

## 5. September 11 and the United States

The events of September 11, 2001[38] changed the world between the Bonn and Marrakech conferences. There is no doubt that their repercussions are being felt across the whole spectrum of international and national affairs, including global climate change negotiations. An immediate consequence of September 11 for the climate regime was that the United States was unable to prepare its proposal in time for the Marrakech conference. What most commentators were wondering, however, was whether the United States' multilateral approaches signalled by the fight against terrorism would be transferred into other arenas such as environmental policy or climate change. Opinions were divided: optimists argued that the

38 Nineteen terrorists hijacked four commercial airplanes and crashed two of the planes into the twin towers of the World Trade Center in New York City and one into the Pentagon in Washington, DC, while a fourth plane crashed in Pennsylvania; thousands of people were killed.

events would lead to enhanced co-operation and a stronger commitment to multilateralism, while "realists" believed that environmental issues would drop off the agenda (in favour of military security issues) and US unilateralism would be maintained in the areas of environment and development.[39] So far the realists' arguments have tended to ring true.

The "war on terror" declared by the United States and its allies in the wake of September 11 has very close connections with oil, itself inextricably linked with the climate change regime as a major contributor to GHG emissions; oil consumption accounts for about 25 percent of GHG emissions. George Bush Senior has made no secret of the importance of oil to the United States:

> [S]ecure supplies of energy are essential to our prosperity and security. The concentration of 65 percent of the world's known oil reserves in the Persian Gulf means we must continue to ensure reliable access to competitively priced oil and a prompt, adequate response to any major oil supply disruption. (Quoted in Barnett 2001).

The Kyoto Protocol will constitute the first step towards a gradual decrease in Parties' dependence on fossil fuels by decarbonizing their economies. The extent to which this dependence is decreased, however, will depend on Parties' domestic efforts vis-à-vis the usage of the mechanisms and sinks provisions.

## 6. Bargaining in the Marrakech bazaar

Building on the Bonn Agreement forged in July 2001, the Marrakech meeting (COP-7) was supposed to complete the Buenos Aires Plan of Action. The objective of this immensely technical meeting was clear: translate the political Bonn Agreement into legal decisions that could be adopted by the COP. On the last day of negotiations the small closed negotiation group co-facilitators, ministers from Switzerland and South Africa, presented a package that was acceptable to all Parties, apart from the usual four Umbrella Group members (Japan, Russia, Canada, and Australia). All-night negotiations were concluded in the early hours of Saturday, after which the COP adopted all the decisions in a mammoth 250-page document, known as the Marrakech Accords. The main political issues are briefly outlined below (for further information on the technical aspects see: Boyd and Schipper 2002, Dessai 2001a, Dessai and Schipper 2003).

Much as in the Bonn Agreement, the first major political issue in the Marrakech Accords relates to *compliance*. The adopted text honours the compliance section of the Bonn Agreement in its entirety, even though some Parties wanted to water it down further. Besides the features mentioned in section 4 above, some more detail was added to the compliance system in Marrakech. In particular, there will be opportunities for public participation in the compliance proceedings, which was a major victory for NGOs. Within the enforcement branch, there are now also expedited procedures for the reinstatement of eligibility to participate in the mechanisms, a key concern for Umbrella Group members, in particular Japan. The complex issue of legally binding consequences has been postponed until the Kyoto Protocol enters into force.

39 See Heinrich Boell Foundation and UNED Forum (2001) for many different insights on this issue in the context of the run-up to the World Summit on Sustainable Development.

The second major focus of discussion was unresolved issues about the *Kyoto mechanisms* and *sinks*. Among decisions to be made at COP-7 were several related to LULUCF reporting: composition of the Expert Review Teams (involved in monitoring national inventories and compliance); modalities for the accounting of assigned amounts; and eligibility requirements for participation in the mechanisms, all of which were critical prerequisites for finalizing the Kyoto regime architecture. With respect to sinks, Parties are required to report on sinks activities annually and how these activities are directly human-induced, but failure to meet the quality thresholds will not endanger eligibility to participate in the mechanisms. This was a necessary compromise because otherwise Russia, which apparently does not have the capacity to meet the sinks reporting requirements, would not be able to sell its surplus of carbon credits to other interested Parties. The European Union and the Umbrella Group preferred that the composition of Expert Review Teams be based on technical knowledge, while G77/China wanted it to be based on geographical distribution. As a compromise it was decided that: (a) the teams will refrain from making political judgements; (b) the Secretariat will choose the members so that there is North-South balance, and try to achieve geographic balance, but without compromising the expertise; (c) the team will be jointly led by an Annex I and a non-Annex I reviewer; and (d) training will be available for reviewers.

Issues relating to *emission units* were also heavily contested. One issue raised for the first time in Marrakech was the nature of the assigned amount and the occasions for adding or subtracting units to, and from, it. This prompted complex and long-winded discussions but concluded with agreement on the need for publicly available national registries detailing units from the various mechanisms. In terms of eligibility requirements for a Party to participate in emissions trading, the Umbrella Group wanted as few restrictions as possible, whilst the European Union and G77/China argued for strict requirements (albeit for different reasons). The link between compliance and the eligibility criteria was one of the main issues for ministers to decide at COP-7. For the four Umbrella Group members this was a bottom-line issue, in that they did not want to see any meaningful linkage with the compliance system. This issue will be taken up at the first COP/MOP when the form of the compliance regime will be finalized.

## 7. Evaluation

Analysis of three key COPs post-Kyoto highlights the complexity and intensely political nature of operationalizing an international legal instrument on climate change. While almost everyone hailed the Marrakech Accords as another milestone in the combat against climate change, was the Kyoto Protocol really saved or indeed sunk further? This section will try to evaluate and analyze the recent period of climate negotiations. We start with the drawbacks.

It is relatively easy to criticize the Kyoto regime, as the current US administration and some experts have done (Lomborg 2001, Reiner and Jacoby 2001, Soroos 2001, Victor 2001). Many commentators will surely argue that it is almost meaningless to worry about “the Marrakech dilution of the watered down Bonn Agreement to the fatally flawed Kyoto Protocol to the UNFCCC.” The weakening of the Kyoto Protocol, or “Kyoto-lite” as some NGOs put it, is a genuine concern. The sacrifice of *prima facie* environmental integrity for almost full-fledged economic flexibility was the price to pay to keep the

Umbrella Group on board the process without US participation. Compared to the original Kyoto Protocol (here referred to as pre-COP-6 Kyoto), we now have a regime with substantial amounts of sinks in the form of either forests or agricultural lands.[40] With so much emphasis on sinks, it has become harder to take up CDM energy emissions reduction projects. In fact, unlike forest management, agricultural practices are not capped, representing extra credits. Afforestation and reforestation are now allowable activities under the CDM. Sizable sinks credits were handed out to whoever called for them in Bonn, and the more one asked for the more one got; Russia got its Bonn deal doubled in Marrakech after much insistence.[41] It was an especially troubling precedent to remove the quality of sinks reporting as an eligibility requirement. In effect, what Russia and its allies in the Umbrella Group did was to demand ever-increasing sink credits[42] for which they will never be accountable. Based on this decision under the Bonn Agreement, and without US participation, it is expected that demand for CDM projects will be relatively small (Jotzo and Michaelowa 2002). Supplementarity, a former recurrent issue for the European Union and environmental NGOs, has now become an arcane, almost meaningless item within the Accords.[43] Units resulting from the use of the Kyoto mechanisms and sinks are all fungible and interchangeable. In effect, all the units Annex I Parties will have a surplus of (compared to their assigned amount) at the end of the commitment period will be carried over to their second commitment period, leaving newcomers to the regime in a fairly disadvantaged position.[44]

The decision about how far the compliance system would be legally binding, a matter dear to many Parties and NGOs, was postponed until the Protocol enters into force, at Japan's insistence.

Needless to say that the pledge by some developed countries[45] to contribute €450 million is utterly inadequate to tackle the ongoing and future negative impacts of climate change in the most vulnerable developing countries, whose contribution to the problem is, in some cases, virtually zero. More troublesome still is that some of the highest per capita emitters, including Australia, the United States, and Japan, failed to contribute anything to assist developing countries to cope with the detrimental consequences of climate change.

One of the disadvantages of this framework package is that it created a complex regime with an overwhelming number of institutions. Each institution has its own rules of procedure (some simple, some complicated) and configuration in a sea of acronyms that is only understandable to a handful of

40 The pre-COP-6 Kyoto already had a large potential supply of surplus emissions quota from Russia and other economies in transition, pejoratively known as hot air.

41 It is difficult to understand the reasoning behind Russia's insistence because one of the end results is a drop in the price of carbon. Vaguely similar strategies have been applied by Russia against the OPEC cartel in order not to cut oil exports (cf. *Guardian*, December 15, 2001, "Baron who beat the sheikhs"). These efforts seem to be aimed at gaining short-term benefits to boost the economy, whilst forgetting the long-term perspective.

42 Which, for most critics, represents a re-negotiation of the targets agreed at Kyoto.

43 According to one delegate, "The EU took a very public beating in Bonn, by not being able to explain how its own proposals [on supplementarity] would be operationalised in a context of international trading."

44 That is, developing countries will start negotiating their targets with the perception that Annex I countries will carry over so many credits to the second commitment period, and undertake such small reductions in the first, that they will certainly demand equally generous targets for themselves. This is one of the biggest problems of full-fledged banking based on very liberal sinks rules. It may make second commitment period negotiations much harder and less environmentally friendly than the first commitment period's.

45 It is astonishing that the European Union, which played a leadership role in the negotiations, is already backtracking on this matter; the European Commission already envisages a shortfall in Member States' contribution to this effort.

experts in the world. One could say the climate regime is suffering from bureaucratic entropy due to the creation of an excessive number of institutions.[46] It is virtually impossible to get a holistic perspective of the whole climate regime. Initial modelling of the Bonn Agreement showed that its environmental effectiveness dropped from the 755 MtC that would have been reduced in a pre-COP-6 Kyoto to 130 MtC, whereof 520 MtC are due to the US withdrawal (den Elzen and de Moor 2002).[47] This watered down agreement was the result of numerous concessions that had to be made because of the pivotal position of four Umbrella Group members. But did the hard bargaining of four countries leave the rest of the world (minus the United States) with an unworkable or virtually insignificant framework? It does not appear to be so. Arguments in favour of the regime are abundant (see, for example, Grubb and Depledge 2001).

Probably the most important feature of the Hague-Bonn-Marrakech process is that it finalized the Kyoto Protocol architecture; that is, there are no more unresolved issues that would prevent Parties from ratifying the Protocol.[48] We now know how the Kyoto Protocol will work up until the end of the first commitment period, in 2012. Despite the flaws mentioned above, the Marrakech Accords represent the culmination of 10 years of negotiations on one of the most complicated global problems of the day. As Ambassador Assadi from Iran—at the time Chair of G77/China—put it, "of course, we could always speculate on the contours of a perfect, ideal agreement, that may exist on paper only and rarely, if ever, as the practical, tangible outcome of a multilateral negotiating process."[49] Multilateral processes are inherently cumbersome as efforts are made to accommodate the interests and expectations of as many as 180 diverse sovereign states (Soroos 2001). This is the reason why global negotiations have been so complicated, rendering a convoluted outcome that, in our opinion, still honours the Bonn Agreement, and more distantly the Kyoto Protocol.

The Marrakech Accords have dealt with many developing country concerns with respect to the FCCC obligations, including capacity building and technology transfer. A welcome innovation was the establishment of the three new funds for developing countries, mainly to fund projects related to adaptation to climate change, a much-neglected area of climate policy (Sarewitz and Pielke 2000). It is a good omen that the FCCC process is starting to take a more holistic approach to climate change, and not focusing almost exclusively on climate mitigation through the Kyoto Protocol. In essence these funds and the financial pledge of €450 million by some developed countries were the *quid pro quo* for G77/China to accept the rest of the deal.

The upshots of the Marrakech Accords for the Kyoto mechanisms are numerous. The structure and processes of these instruments are now well defined, thus effectively creating a carbon market where international emissions trading between developed countries will start in 2008. In essence, the

46 We thank Tim O'Riordan for this insight.

47 Nordhaus (2001) concluded that without the United States, global $CO_2$ emissions would be about 1 percent below '"business as usual" during the first commitment period. These estimates, however, do not include reductions in targets due to new provisions regarding sinks and other technicalities of the Bonn Agreement.

48 Except maybe the United States, which is opposed to the whole Kyoto process for the reasons elaborated in section 3.

49 Statement by Ambassador Bagher Assadi, Chairman of the Group of 77 (Islamic Republic of Iran), before the Second Committee of the General Assembly on Agenda item 98 (f): "Protection of global climate for present and future generations of mankind." New York, November 28, 2001.

Marrakech Accords have definitively commodified the atmospheric commons (see, for example, Glover 1999). Another bonus from the Accords is the possibility of having unilateral CDM projects, where a developing country Party can undertake the project itself and then sell the credits accrued in the international market.

The Accords have also brought clarity about how emissions will be counted, traded, subtracted, and added. This was of crucial importance for the assessment of compliance.

As mentioned above, the sinks section of the Accords provides the flexibility demanded by four members of the Umbrella Group (Russia, Australia, Japan, and Canada) to keep them on board and thus save the Protocol from collapse. From COP-6 to COP-7 the compliance system evolved considerably to become one of the most sophisticated and far-reaching systems of its kind.

Even though a decision on the legally binding nature of compliance consequences was postponed until COP/MOP-1, Parties that are in non-compliance will have to restore an extra 30 percent in the second commitment period and prepare a compliance action plan. Even if one is critical of the achievement, one should look at the first commitment period as a learning-by-doing experiment, which will be improved in subsequent commitment periods. As Nordhaus (2001) notes, this process brings institutional innovation, with the first experience with market instruments in a truly global environmental agreement. The efforts that ministers, government officials, NGOs, and the FCCC Secretariat have put into the Marrakech Accords, in times of international insecurity, are a fine example of human ingenuity and international co-operation at its best.

Insights from an international relations perspective can be useful to understand the climate negotiations. The collapse of negotiations in The Hague was a blessing for realists, lacking examples of power struggles in the context of environmental affairs. Realists would argue that the barraging power between the United States and the European Union was so equal that an agreement was not possible. Realist theories are mostly based on power and the existence of a hegemon (Rowlands 2001). Clearly there is no longer a hegemon, if there ever was one, in the climate regime. While not being the climate hegemon, the United States indirectly affected the Marrakech Accords by giving *de facto* ratification (or veto) power to the rest of the Umbrella Group, in particular to Japan, Russia, Australia, and Canada. It will be interesting to see the future dynamics of this informal group now that the United States has alienated itself from the Kyoto process. Knowing that the Protocol would not enter into force without their ratification, these four Umbrella Group members extracted as many benefits as possible from other Parties, very much in line with neorealists' expectations.[50] Though these four countries had incredible veto power, they did not prove to be the hegemons of Marrakech or Bonn. This is because climate negotiations are a clear example of give and take, which is much more aligned with neoliberal institutionalist theories. Although the four Umbrella Group countries might have taken the most, they also had to give, for example regarding Article 3.14 (the OPEC clause) or the composition of boards or committees. If there is any framework that best fits the Bonn-Marrakech process it is probably the modified structural approach of the regime theorists. For these scholars co-operation can be achieved

50 In the context of climate change, "an international relations neorealist would look to the distribution of power among the world's states in order to assess the prospects for cooperation."—I. H. Rowlands (2001).

when individual decision making leads to sub-optimal outcomes, but only under circumstances that are not purely conflictual. Under these circumstances regimes can be formed to make agreement easier by resolving institutional deficiencies. However, states' power and interests remain the dominant factors in regime formation. According to these scholars, regimes facilitate co-operation by building trust between parties, transferring information and resources, and highlighting free-riding. Business and environmental NGOs and the Secretariat helped shape Parties' perceptions, which ultimately created the Kyoto regime, now inscribed in the Marrakech Accords.

Sometime around 2014 we will be able to measure the effectiveness of the regime that was created. While the European Union proclaimed itself leader of the climate regime throughout the year 2001, especially after US President Bush denounced the Kyoto Protocol, Parties still have mixed perceptions about the European Union's leadership (Gupta and Ringius 2001). The European Union certainly played a very important role in rallying support for the Protocol, without which the regime probably would not have formed. It appears that the European Union has learned its lesson from The Hague—avoid staying in the European Union "bunker" discussing amongst each other; instead negotiate with other Parties—but it still looks as if the European Union is a leader only by default. This perception could simply be a result of the successful use of bargaining leverage by the Umbrella Group, who managed to get almost all they wanted, but it nevertheless sometimes appears that the leader seat is there for the taking. Leadership by example will be crucial in the next couple of years; the European Union should take the initiative.[51] Recent reports have been promising, with some Member States (for example, Sweden) taking on tougher targets than their Kyoto Protocol commitments without the use of carbon sinks or flexible mechanisms, thus deprecating the "freebies" introduced into the Accords. In addition, the European Union and the remaining Member States are undergoing, for the first time, comprehensive assessments of how, and whether, they can meet their Kyoto Protocol targets through the development of implementation plans. At the EU level, for example, a groundbreaking emissions-trading directive came into force in 2003, and is expected to prove a vital boost for the Kyoto Protocol in the long run.[52]

G77/China played a critical role throughout the negotiations. They did particularly well in Bonn, but have been criticized (Loong 2001) for not seizing gains in Marrakech when they were being handed out to some Umbrella Group members. The real question is whether G77/China could have gained much more after the developing countries package had been agreed in Bonn. Probably not. It is still surprising to see how many concessions were granted in favour of OPEC countries. Also remarkable was the "narrowing per capita differences between developed and developing countries" language inserted in the mechanisms text. Overall, G77/China—a group difficult to keep together because of its diverse interests—ranked highly in their performance.

Institutional bargaining was a major feature of the Hague-Bonn-Marrakech process. The real question we should be asking is not whether the Protocol was sunk or saved, but whether Parties have paid what

51 For a more in-depth analysis of how the European Union has dealt with the problem of climate change see Lacasta et al. (2002).

52 The European Union has also enacted legislation on renewables targets (albeit not binding), biofuels, energy taxation, voluntary agreements with the car industry (Lacasta et al. 2002). It is expected to also develop more Kyoto mechanisms legislation.

they think the Protocol is worth. In general, our analysis of group positions and dynamics suggests that Parties perceive that they have paid the right price.[53] In the next section, we offer some considerations on how the Kyoto Protocol might evolve in the short, mid and long terms as a key instrument within the climate regime.

## 8. Outlook

Since the adoption of the Marrakech Accords several relevant events have taken place. One of these was the World Summit on Sustainable Development (WSSD) in Johannesburg in August 2002. Held ten years after the signing of the Framework Convention, it provided an ideal opportunity for critical reflection on the accomplishments of the negotiations in addressing climate change. In an attempt to continue "directional leadership"—that is, leadership by example—in the process, the European Union ratified the Protocol and stepped up diplomatic efforts to ensure its entry into force by the WSSD. Unfortunately, continuing inaction by critical players such as Russia did not allow the threshold of 55 percent of 1990 Annex I emissions to be reached at that time, a requirement for the Protocol to become international law.

Without entry into force of the Protocol there was precious little evidence of the tangible contributions of the FCCC. Voluntary targets of returning emissions to 1990 levels by 2000 were met by the UK, Germany, Russia, and most economies in transition, but this was attributable more to flukes of changing energy use and consumption levels than explicit attempts at addressing climate change.

Now that the Kyoto Protocol architecture is in place, ongoing pressure for ratification of the Protocol is critical, particularly as global politics and international relations draw attention away from climate change. For those that have ratified, domestic constituencies need to be encouraged to develop plans and programmes that will enable the fulfilment of their Kyoto Protocol commitments. Legge and Egenhofer (2001) have dubbed this next phase "the regionalization of the Kyoto Protocol." Just before the Marrakech meeting, the European Commission adopted a major package of decisions on the ratification of the Kyoto Protocol, and the implementation of the European Climate Change Programme and a host of other regulatory instruments is underway. This effort represents considerable progress towards implementation, but the European Union should not be complacent. European bureaucracy can be complicated because of shared competences between Member States and the European Commission,[54] the complicated EU burden-sharing agreement[55] and Member States' politics and interests.

Even ratification of the Protocol does not signal the end of the story—rather this is the first step in a very long journey to stabilize GHG emissions at a level considered safe. It appears that the first commitment period will resemble more a test drive than the tough emission reductions envisaged by Parties in December 1997 when the Protocol was adopted. The impact of the Kyoto Protocol on the

53 Athanasiou and Baer (2001b) answered the same question in other words: "This is not a good deal, but there is no reason to believe that a better one was possible in the past, or will be possible in the future if this one is derailed."

54 Each Member State legislature had to ratify the Kyoto Protocol as well as the European Community (cf. Lacasta et al.. 2002).

55 Using article 4 of the Kyoto Protocol (also called "joint fulfilment"), the European Community is allowed to redistribute its –8 percent target among its members states; countries like Germany and the UK will reduce emissions by much more than 8 percent, while Portugal and Spain will actually be allowed to increase their emissions.

atmopshere will be almost negligible (Dessai and Hulme 2001, Wigley 1998), but this will be dependent on the targets set during future commitment periods and the underlying development path the world takes during this century. Having this in mind, some final thoughts on where the climate regime is heading are briefly presented.

The Kyoto Protocol architecture is now in place, but there are still some details that need to be fleshed out. The Marrakech Accords have introduced a number of new sinks activities that will need proper reporting, accounting, and verification. According to some experts (for example, Nilsson et al. 2001), mainly due to the inclusion of biospheric sinks, it will be impossible to know whether mean fluxes are rising or falling over the five year commitment period of the Kyoto Protocol, thus rendering precise determinations on compliance virtually impossible. These are some of the issues the IPCC will have to overcome in its good practice guidelines with respect to methods and guidelines for reporting information on LULUCF activities, which was due at COP-9 in 2003. It will be crucial, but probably difficult, to not politicize this IPCC process so that definitions and modalities of sinks projects are based on sound science. COP-9 also dealt with the remaining technical issues of the Kyoto regime accounting system. The question of legally binding consequences will resurface at the first COP/MOP for yet more contention amongst Parties.

Whilst mitigation issues have dominated the climate regime, the past year has made it clear how important adaptation to climate change will become in the coming decade, with COP-8 in New Delhi heralded as the "adaptation COP." No matter how fast climate mitigation takes place in the coming decades we are already committed to some degree of climate change to which societies will have to adapt. The IPCC Third Assessment Report concluded that those with the least resources have the least capacity to adapt and are the most vulnerable (IPCC 2001). This has captivated the interest of LDCs and other developing countries in trying to operationalize adaptation within the FCCC. At Marrakech, these countries were successful in designing guidelines for the preparation of National Adaptation Programmes of Action and the establishment of an LDC expert group, whose objective is to advise on the preparation and implementation strategies of these programmes, amongst others. These are just the initial steps of a much more complicated process that is taking its first concrete steps within the FCCC process. There are many methodological issues[56] that will have to be dealt by the SBSTA and the IPCC in order to get adaptation projects up and running in the next decade. In effect, the process of mainstreaming adaptation into the FCCC process has barely started. It is also crucial not to forget that the most vulnerable countries will most likely lack the technologies to adapt to climate change, thus making technology transfer of the utmost importance in addressing both the adaptation and mitigation sides of the problem. The creation of the three new funds for developing countries by the Marrakech Accords shows political commitment to this aim, but details of their operationalization will have to be negotiated in future COPs.

The placing of the climate change regime within a complex and rapidly evolving global geopolitical configuration is difficult to predict. Initially it did not look like the war on terrorism had an adverse

56 For example, methods and tools to evaluate impacts and adaptation (see FCCC/SBSTA/2001/INF.4) need to be further explored and elaborated.

effect on global climate negotiations. COP-7 was the first major intergovernmental conference after the events of September 11 and it succeeded in its objective, the completion of the Buenos Aires Plan of Action, which finished the work for the ratification and allows the entry into force and implementation of the Kyoto Protocol. The Doha World Trade Organization meeting and WSSD were both convened, each surrounded by a flurry of (largely negative) publicity, and each concluding with decisions that will interact with the climate change regime; through the relationship with trade and multilateral environmental agreements in the case of the former (Brewer 2002, Kim 2001, Werksman et al. 2003); and biodiversity, water, agriculture, and sustainable production/consumption in the case of Johannesburg.

As the major emitter of carbon dioxide, the need for the United States to take responsibility in the climate regime remains critical. While it might be possible to ignore the United States in other contexts (Murphy 2000, Washburn 1996), the global nature of climate change does not allow us this luxury. The "indispensability and indefensibility" of US climate policy (Agrawala and Andresen 1999) is clearly at play here; but work is underway to investigate potential avenues that might be amenable to US participation yet still effective in dealing with climate change (see, for example, Lisowski 2002, Matsuo 2002).

The role of non-state actors (business and environmental NGOs) in prompting the complicated multi-level policy process (Lee et al. 2001) will be important, particularly as foreign affairs and international security begin to make headway in national politics. Lobbying for national legislation needs to be accompanied by international diplomatic pressure for the United States to return to the Protocol. This has wider implications—allowing the United States a free ride raises deeper issues of equity for the international community as a whole that could strengthen the resistance of developing countries to accede to the Kyoto regime in future commitment periods (Soroos 2001). Furthermore, the United States needs to be reminded that there are a number of reasons (other than climate change) to improve energy policy (Pielke and Sarewitz 2003).

Second commitment period target negotiations are another key strategic issue for the next couple of years. At COP-8, the United States and certain key developing countries, such as India and China, refused to even mention the beginning of a process leading towards these negotiations in the Delhi Declaration that came out of the COP. A division between North and South, and between supporters and opponents of the Kyoto Protocol, was apparent at this COP. If the commitment period 2008–12 is to be a test drive, then second commitment period targets will have to be strengthened, especially as we start detecting the impact of climate change on natural systems (Parmesan and Yohe 2003). In some aspects the negotiations leading to the second commitment period targets will be a replay of earlier pre-Rio and pre-Kyoto negotiations. In 1992, in Rio, US President George Bush refused to accept any binding commitments that would jeopardize the American way of life. Almost 10 years later in 2001, George W. Bush did exactly the same by rejecting the Kyoto Protocol. Several other examples could be given on repeated technical or political discussions within the negotiations. This clearly emphasizes the importance of learning lessons from history.

This synthesis of the political history of the Kyoto Protocol and the climate regime has provided a number of lessons to be learned. First, the problem of climate change still needs much human ingenuity to be solved because of the scientific, technical, and ethical issues it raises. Second, the Kyoto-Bonn-Marrakech Accords are only a starting point in a long journey that will carry on for decades. Third, the negotiation and development of the Kyoto Protocol within the FCCC regime has been and will likely continue to be a complex process, with the outcomes reflecting the highly political nature of the issue and its solution. In this way addressing climate change typifies the evolution of a new form of environmental governance, in which occasional large-scale conferences focus attention on decisions that are in fact taken on the basis of an ongoing process of diplomatic negotiation and lobbying by multiple actors (state and non-state) (Haas 2002, Seyfang and Jordan 2002). The ongoing success of any such environmental regime is thus highly dependent on the nature of international relations and the commitment of states to multilateralism.

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