Getting climate policy on track after The Hague

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At The Hague in November 2000, a decade of apparent progress in the climate negotiations seemed to run off the tracks. The precipitating event was the meeting intended to settle the details of the Kyoto Protocol, which ended instead in disarray and recrimination. Though a surprise to many, this was a train wreck that had been proceeding in slow motion for several years, as the European Union, the United States and like-minded nations, and developing countries squabbled over the design and implementation of measures to limit greenhouse gas emissions. Some negotiators and analysts hope that agreement on the details, which seemed so close on the last day in The Hague, can be resurrected. We are not optimistic. It may, in fact, take many more years to put together the kind of effective, grand international deal that was sought in Kyoto, covering both the US–EU sticking points and difficult North–South issues. It is not clear that short-term failure is irreversible, however—or even undesirable, *if* what replaces the grand deal is a period of national experimentation that can then be knit back together into a more effective international system. Progress might well be found in a transitional period of modest domestic actions among the major developed-country emitters rather than in an effort to resolve all the outstanding issues of the Kyoto process.

The collapse of this first attempt to construct a global emissions control treaty does not mean that the Framework Convention on Climate Change (FCCC), ratified by some 186 nations, needs to be replaced. Many elements essential to future progress are incorporated in the FCCC, and should be preserved and strengthened. Also, many domestic measures to mitigate greenhouse emissions have begun since the start of the climate negotiations, and these will continue because they are driven by domestic constituencies and reinforcing scientific evidence as much as by any international process. The problems encountered in the Kyoto negotiations should not incapacitate those seeking solutions. Climate policy involves the most complex of commons problems, with high economic stakes and with negotiating partners who disagree both philosophically and materially over the shape of any comprehensive package. The task in sifting through the wreckage is to identify those extensions of the nascent international

regime on which agreement might now be reached. Particularly important are those next steps that will aid national governments seeking convergence of approaches —if not in the short term via a wide-ranging international treaty, then eventually as national systems interact and demands grow for greater coordination.

To prepare for discussion of possible ways forward, we begin with our interpretation of the history of the climate negotiations. We trace the sequence of events from the FCCC signed at the Rio Earth Summit in 1992, through crucial decisions reached in Berlin in 1995 and at the Kyoto meeting in 1997, and finally to the debacle in The Hague. In this process, the negotiators attempted to establish the long-term architecture of an emissions control pact among countries with very different political institutions and economic circumstances, and at the same time tried to set stringent targets for short-term action.[1] They appear to have been too ambitious. The process never dealt adequately with developing country issues, and in setting targets they ran far ahead of domestic support in key countries.

Against this background, we turn to an exploration of next steps in the international process. One conclusion is that the international discussions need to give serious attention to the prospect that mitigation actions will proliferate and deepen even without common agreement, as nations develop their own definitions, policy measures and market institutions. While modest, but important, short-term actions will proceed on a nation-by-nation basis, the public goods nature of the climate problem means that any meaningful long-term response will ultimately require agreement among nations over burdens and rules.[2] The question then is what, short of a Kyoto-style protocol, can be done *now* to facilitate consistency later. Clearly, creative thought is needed, perhaps on a less grand scale than in recent years, to guide inevitable mitigation activities in more-or-less coherent directions, in the hope that tighter coordination will emerge.

The path from Rio to The Hague

From Rio to Kyoto

Drawing on the earlier success of the Vienna Convention on the Protection of the Ozone Layer and its Montreal Protocol, the early climate negotiators envisioned a weak framework agreement that would be followed a few years later by a legally binding Protocol with tough commitments to emissions control.[3] The extrapolation from ozone to climate was a natural one because many of the diplomats and environmental officials negotiating the FCCC were at the same

[1] See Henry D. Jacoby, Ronald G. Prinn and Richard Schmalensee, 'Kyoto's unfinished business', *Foreign Affairs* 77: 4, July/August 1998, pp. 54–66.

[2] For example, stabilizing atmospheric concentrations would require a reduction in global emissions substantially below current levels, necessitating some form of global burden-sharing agreement.

[3] Richard E. Benedick, *Ozone diplomacy* (Cambridge, MA: Harvard University Press, 1998).

time putting the finishing touches to amendments to the Montreal targets.[4] In fact, the Vienna–Montreal model provided a 'go-slow' alternative to European proposals for an immediate parallel effort to develop a binding protocol.[5]

In the FCCC, nations agreed on a long-run goal of stabilizing atmospheric concentrations at a level that would 'prevent dangerous anthropogenic interference with the climate system'. Also central to the climate regime was the call for 'common but differentiated responsibilities' among nations. The Annex I nations, or the more advanced states, would 'take the lead' in reducing emissions, while non-Annex I parties, or developing nations, were committed to monitoring and reporting emissions. After much resistance to binding emissions limitations by the US administration of George H. W. Bush, a 'voluntary aim' was included to return Annex I emissions to 1990 levels by 2000. As an indication of the FCCC's mildness, the US Senate, which is seen by some as the most difficult obstacle to the Kyoto Protocol, ratified the Framework Convention by a voice vote without debate or dissent. Indeed, the United States was the first industrialized nation to ratify the FCCC.

The first Conference of Parties to the FCCC (COP-1), meeting at Berlin in 1995, created the Ad Hoc Group on the Berlin Mandate (AGBM) to negotiate a legally binding instrument to reduce emissions, specifying that it should conclude its work within two years, in time for COP-3 in Kyoto. In spite of initial misgivings by some, the negotiators followed the precedent set by the voluntary aim agreed at Rio, endeavouring to agree to national emissions reductions below the same base year of 1990. They also decided not to discuss any sort of binding commitments from developing countries, effectively splitting the world along the Annex I/non-Annex I divide. The United States and Japan, which had been the most reluctant to embrace such an approach, nevertheless acquiesced at COP-2 in Geneva. At the time, US Under Secretary of State Timothy Wirth recommended 'that future negotiations focus on an agreement that sets a realistic, verifiable and binding medium-term emissions target…met through maximum flexibility in the selection of implementation measures'.[6] The main storyline of the next five years might be summarized as an effort by Europe to force the United States to accept a fossil emissions target while resisting efforts to enshrine the flexibility that would help reduce the cost of such a commitment and increase the likelihood of ratification.

The divisions between the EU and the core of the loosely organized 'Umbrella Group' (United States, Japan, Canada, Australia, Norway, and New Zealand and Iceland; more recently expanded to include Russia and Ukraine) reflected differences in national circumstances and institutions. With keen media attention devoted to the climate issue in key member states, the EU treated the

[4] See e.g. David A. Wirth and Daniel Lashof, 'Beyond Vienna and Montreal: multilateral agreements on greenhouse gases', *Ambio* 19, Oct. 1990, pp. 305–10.

[5] Gareth Porter and Janet Welsh Brown, *Global environmental politics*, 2nd edn (Boulder, CO: Westview Press, 1996), pp. 94–6.

[6] Quoted in Michael Grubb with Christiaan Vrolijk and Duncan Brack, *Kyoto Protocol: a guide and assessment* (London: Royal Institute of International Affairs, 1999), p. 54.

climate negotiations as an opportunity to further the post-Maastricht project of greater harmonization and speak with one voice on the world stage. In the AGBM negotiations, the Europeans fought hard for a list of specific policies and measures, including energy or carbon taxes. National commitments were facilitated by an EU-wide burden-sharing arrangement (the 'EU bubble'), whereby the emissions of poorer nations such as Spain and Greece were to be allowed to grow, compensated for by steeper reductions among better-positioned and wealthier member states such as Britain and Germany. Unlike many nations, such as the United States and Japan, that are represented by their foreign ministries, the EU countries were led in the negotiations by their environment ministers, resulting in a further toughening of Europe's negotiating position.[7]

In contrast, the Umbrella Group wanted flexibility to help its members meet any emissions targets by using mechanisms that would allow it to carry out emissions reductions abroad, and by crediting carbon 'sinks' in forests and agricultural soils. The Clinton administration was averse to energy taxes after a bitter budget dispute in 1993, and faced on the one hand congressional questioning of the validity of the science of climate change and on the other a dearth of media attention to encourage action. In advance of the Kyoto meeting, the US Senate, which would need to ratify any protocol by a two-thirds majority, passed the non-binding Byrd–Hagel resolution, by a vote of 95–0, opposing any climate treaty that would harm the US economy or that omitted commitments from developing countries in the same compliance period. A collection of US industries, labour unions and agricultural interests also weighed in with an advertising campaign that decried the exclusion of developing countries from binding commitments as a threat to US export competitiveness.

Unfortunately, throughout the AGBM process and beyond, the focus on reducing emissions below 1990 levels served to reinforce national positions and exacerbate differences. Several key EU nations benefited from the 1990 base year, for reasons unrelated to climate. Reunification saw German emissions fall by some 15 per cent overall as inefficient East German industries were shuttered, and Britain was helped by the 'dash to gas' as its electric sector converted from coal to recently discovered North Sea natural gas, after the defeat of the coal-mining unions. Moreover, overall EU economic growth was substantially lower than in the United States. With a few exceptions, such as the Netherlands and Denmark, which saw rapid growth in emissions throughout the 1990s, EU member states could plausibly believe that they were in a position to meet their bubble-adjusted Kyoto targets with domestic actions, even though independent analyses of national programmes cast doubt on this article of faith.[8]

In contrast, the American economy boomed through most of the 1990s and, in spite of a long recession, Japanese emissions also rose as energy consumption

[7] Eugene B. Skolnikoff, 'Same science, differing policies; the saga of global climate change', MIT Joint Program on the Science and Policy of Global Change, report no. 22, Aug. 1997.

[8] John Gummer and Robert Moreland, 'The European Union and global climate change: a review of five national programmes', Pew Center on Global Climate Change, Washington DC, June 2000.

increased from very low per capita levels in the transportation and residential sectors. Other Umbrella Group members saw similar growth in emissions, so that by the time of the Kyoto negotiations in 1997, most were 5–10 per cent above 1990 levels. Thus, nations inclined to call for tougher measures were slated to have the easier time meeting them.

At Kyoto, the primary focus was on these target numbers. As the chief US negotiator Stuart Eizenstat noted, 'single percentage points took on almost cosmic proportions.'[9] In the end, the EU assumed a commitment to reduce emissions 8 per cent below 1990 levels by 2008–12, the United States accepted –7 per cent and Japan and Canada –6 per cent. The closeness of target percentages among most of the developed nations, even when they implied different levels of effort, was facilitated by tentative agreement (subject to approval of the rules) to include mechanisms that offered flexibility in accomplishing the reductions, as sought by the Umbrella Group. After much acrimonious negotiation, the final text allowed for 'joint implementation' (JI) or project-based activities in other Annex I countries, a 'clean development mechanism' (CDM) to claim credit for projects carried out in developing countries, an emissions trading system for parties undertaking binding commitments, and credit for carbon sinks. Russia and Ukraine were given generous allocations that were unlikely to constrain emissions.

Agreement was also facilitated by a number of special circumstances: Raul Estrada, the chair of the AGBM negotiations, deftly pushed the negotiations forward; the British Deputy Prime Minister John Prescott, who was more sympathetic to American concerns, negotiated on behalf of the EU presidency; and US Vice President Al Gore flew to Kyoto to signal US desire for an agreement. Perhaps most importantly, nations avoided defining the rules associated with any of the flexibility mechanisms, allowing all sides to claim victory.

As a result, by the subsequent meeting of the parties at COP-4 in Buenos Aires, the parties could agree to little other than a list of the areas of conflict found throughout the Protocol text and a date for resolving them: COP-6 in late 2000 in The Hague. The three years from Kyoto to The Hague were frittered away, leaving negotiators with more issues outstanding at the opening of COP-6 than at the end of COP-3.

Deadlock in The Hague

Going into The Hague, many of the signs did not augur well for agreement. The Green Party environment minister, Dominique Voynet, negotiated on behalf of France, which held the EU presidency, while Germany was represented by Jürgen Trittin from the 'fundamentalist' wing of the German Green Party. The attentions of Vice President Gore, who had played such a pivotal role in Kyoto, were diverted to his legal strategy in the aftermath of the presidential election.

[9] Stuart Eizenstat, Under Secretary of State for Economic, Business and Agricultural Affairs, press conference, Kyoto, Japan, 11 Dec. 1997. Found at <*http://www.state.gov/www/global/oes/971211_eizen_cop.html*>.

After the first week of negotiations, little substantive progress had been made on the critical outstanding questions from three years earlier: new sources of funding for activities in developing countries and the conditions for their eventual participation; the role of sinks in meeting national targets; penalties for non-compliance; and the rules for the Kyoto mechanisms, especially emissions trading. When negotiations ground to a halt with two days left, the president of COP-6, Dutch environment minister Jan Pronk, presented a compromise that attempted to bridge the differences among the parties. The Pronk text might be faulted for relying too heavily on under-prepared ministers, expected to cut a Gordian knot, and for coming too late in the proceedings. It did, however, seek to strike the 'grand bargain' sought by many to move the Kyoto process forward. Not surprisingly, all sides initially deemed the proposal unacceptable for offering too many concessions to others.

Yet in spite of the differences, early on the last morning John Prescott was able to negotiate a tentative deal on behalf of the EU with a Clinton administration that hoped to reach an accord before leaving office. In the compromise, the Umbrella Group substantially reduced the amount of sinks it would claim, while the EU softened its position on quantitative restrictions on emissions trading. However, when the deal went back to the EU as a whole, ministers from Scandinavia and Germany refused to accept it. As the compromise collapsed, the French and British environment ministers engaged in verbal warfare over responsibility for the failure. Ultimately COP-6 was not adjourned but suspended to be resumed in several months.

In retrospect, in spite of their calls for the strictest possible arrangement, many environmental groups regretted the inability to reach agreement before George W. Bush, perceived as hostile to the Kyoto Protocol, became US President.[10] On the surface, the difference that derailed the provisional settlement at The Hague appeared to be paltry, amounting to perhaps some 25 million metric tones of carbon out of a potential Kyoto reduction of some 30 times that amount.[11] One might ask why, under such circumstances, the European environment ministers did not seek to salvage *something* rather than sacrifice the Protocol on the altar of 'environmental integrity'. Perhaps the barrier was procedural: there was not enough time to assimilate and assess the new trade-offs. For some their action may have been publicity-driven, in that it offered an opportunity to posture to the media and domestic constituencies. Or the EU negotiators may simply have felt that offering further concessions to the United States would violate a long-standing position against provisions they characterized as loopholes.

A few weeks after the close of the meeting in The Hague, a last-ditch attempt was made to salvage the agreement. Delegates from key EU and Umbrella Group parties met in Ottawa to prepare for a ministerial-level meeting planned

[10] Vanessa Houlder, 'Greenhouse gases environmental campaigners call for talks to resume: EU and US under pressure on climate deal', *Financial Times*, 2 Dec. 2000, p. 6.

[11] Under Kyoto, OECD emissions would be reduced by approximately 830 million tonnes of carbon below the 2010 baseline: International Energy Agency, *World energy outlook 2000* (Paris: OECD/IEA, 2000), p. 233.

soon after in Oslo, where it was hoped the differences could be resolved. Ottawa did not go well. The talks again collapsed, with each side accusing the other of hardening positions taken in the final hours in The Hague, and the Oslo meeting was cancelled.

Prospects for the resumed COP-6 talks do not appear any brighter since The Hague and Ottawa. In January 2001 Sweden, a critic of the attempted compromise at The Hague, assumed the EU presidency. The incoming US administration has offered no hint of a possible retreat from its criticism of the Kyoto Protocol during the election campaign. While campaigning, Bush described Kyoto as a 'a bad deal for America and Americans'.[12] The new National Security Adviser, Condoleezza Rice, singled out the Kyoto Protocol for special criticism, saying that 'a treaty that does not include China and exempts "developing" countries from tough standards…cannot possibly be in America's national interest.'[13]

Given the significance attached to the climate question by many governments, the United States cannot simply disengage from the FCCC process. One of Colin Powell's first actions as Secretary of State was to ask that the reconvened COP-6, originally scheduled for May–June 2001, be deferred at least until July to give the administration time to prepare. Even with that delay agreed, however, it may be only at COP-7, slated for Marrakech in November 2001, that a serious discussion can be conducted with the new US administration. Even then the prospects are not good. Official comments submitted in early January on the Pronk proposal (even before the change in US administration) suggest how far apart the United States and EU were all along.[14]

Prospects for US ratification

Even if agreement had been reached in The Hague, would US ratification have been likely? Some see movement in this direction: in an increasing public awareness and acceptance of the science behind the threat of climate change, in growing numbers of US firms taking on voluntary commitments, and in interest among farm state Senators in credits for carbon sinks. However, while these changes may alter the tenor of the debate, the opposition of the incoming Bush administration is clear and we know of no serious observer of US congressional politics who believes that the Senate will ratify the Protocol with its current structure and targets, or anything like the definitions in play at the close of The Hague negotiations. The US Senate acts as a high barrier to ratification of international treaties: not only is a two-thirds vote required, but Senate rules and practices give blocking power to small coalitions (or even key individuals). Examples of these difficulties can be seen in the recent defeat of the Comprehensive Test Ban Treaty, and in the refusal to bring agreements to a vote even when

[12] Todd Ackerman and R. G. Ratcliffe, 'Bush blasts global environmental plan', *Houston Chronicle*, 2 Sept. 1999, p. A3.
[13] Condoleezza Rice, 'Promoting the national interest', *Foreign Affairs* 79: 1, Jan./Feb. 2000, p. 48.
[14] See 'General Comments of the United States on the COP-6 President's Informal Note', 19 Jan. 2001, and 'Submission by the European Union on the informal note by the President of COP6', 11 Jan. 2001.

there seems to be no strong opposition.[15] More troublesome still, the most visible Senate critics of Kyoto, Senators Byrd and Hagel, a conservative Democrat and a Republican respected in foreign affairs, represent precisely those views that will have to be won over to reach the two-thirds majority. Further, the current Senate leadership is made up of conservatives who have neither a strong domestic environmental record nor any great fondness for international agreements.[16]

In keeping with at least the spirit of the Byrd–Hagel resolution, two conditions appear necessary for US ratification, even given resolution of the conflict over sinks and emissions trading. One is architectural: agreement is needed on a path for voluntary accession by developing countries to participate in Kyoto-style commitments and the associated emissions trading provisions. The other is a revision of the targets to levels more in keeping with this stage in the development of a response to climate change. The reductions required to meet the current targets vary dramatically across regions. Europe would have to achieve a cut below its forecast baseline of some 17 per cent (adding an estimated 9 per cent growth to the 8 per cent Kyoto cut), whereas the United States would require a reduction below baseline of around 30 per cent.[17] The reductions in key Umbrella Group members would be similar in stringency to those required of the United States.

The difficulty is not just in the Kyoto reduction targets, but in the associated timetable. Even if the US Senate somehow ratified the treaty within a year or two, for Congress to develop and approve the necessary implementing legislation and the administration to prepare the needed federal rules and regulations would take several years. Even with political commitment greater than now evident, the policy measures needed to achieve this degree of change could not be put in place until, say, 2005 or later. The notion that a modern industrial state could muster the political will to turn around its heavily capital-intensive energy system and achieve a reduction in emissions of almost one-third within half a dozen years is simply not credible.

International permit trade could ease the burden of such a commitment, as would substantial credits for sinks. Unfortunately, permit trading systems also take time to create. Even with agreement on terms, such a system could be implemented only for a limited number of nations or sectors on such a short timescale; while only a very generous sinks agreement, beyond anything we can imagine the EU accepting, would provide much of a boost to the prospects for Kyoto ratification.

[15] With the recent ratification by Saudi Arabia of the Convention on the Elimination of All Forms of Discrimination Against Women, the United States, Afghanistan, and Saõ Tome are the only signatories that have not ratified it. The United States and Somalia, which has no government, are the only two nations that have not ratified the Convention on the Rights of the Child.

[16] For example, among the 30 *current* Senate Republicans who received a zero rating from an environmental NGO for their performance in the last Congress were the majority leader, the chair of the Energy and Natural Resources Committee, the chair of the Foreign Relations Committee and the chair of the Republican Policy Committee. None of the four has received a non-zero score since 1993. See League of Conservation Voters, *2000 national environmental scorecard*, Washington DC.

[17] IEA, *World energy outlook 2000*, p. 233.

Next steps in the negotiations

Given this state of affairs, what are the possible ways forward for the climate regime? We see three possible directions that the international negotiations might take. First, the Kyoto text could be accepted as is, with the EU leading the way, and the Protocol ratified even knowing that the United States and many other Umbrella Group members would not follow suit. Alternatively, if the global approach taken in the FCCC were deemed to be flawed, climate negotiations could be restricted to those nations willing to undertake short-term emissions reductions. Finally, nations could stay with the general approach adopted in Rio, Berlin and Kyoto, but fashion changes to the existing Protocol to attract the participation of all Annex I states.

Entry into force without the United States

For the Kyoto Protocol to enter into force, it must be ratified by at least 55 nations, including those representing 55 per cent of 1990 Annex I emissions. It is this second provision that makes it difficult (though not quite impossible) for the Protocol to enter into force without the United States. If the Protocol were ratified by the EU, Russia, Ukraine and Japan, however, the 55 per cent condition would be met, and the group that had ratified it could proceed to try to resolve the issues that have confounded international negotiations in recent years. For the EU and others to take this kind of leadership would put both the European commitment and the architecture developed in the Rio–Berlin–Kyoto process to a real-world test.[18]

How likely is this outcome? In 2002, the World Summit on Sustainable Development or 'Rio+10' will provide the first formal opportunity to review the state of the different conventions signed at Rio. At the G8 meeting in Otsu, Japan in April 2000, Japanese and EU leaders supported the entry into force of the Kyoto Protocol by the symbolic 2002 date, though this proposal was resisted by Canada and the United States.[19] Further, many European environmentalists and even some European leaders argue that ratification should proceed even in the absence of agreement on the issues so far left unsettled.[20] The response of Russia and Ukraine is uncertain, but agreement to proceed with Kyoto might be integrated with continuing European–Russian discussion of energy cooperation. For Japan, ratification by Europe, combined with a desire that the Protocol, named after its ancient capital of Kyoto, be a success would create pressure for action. On the other hand, the costs of meeting its Kyoto commitment would be very high, particularly if the use of flexible mechanisms were limited, as insisted by the EU, and resistance from economic ministries and industry would likely be intense in the absence of American ratification.

[18] For an exploration of this prospect, see Hermann Ott's article in this issue.
[19] Mikiko Miyakawa, 'Climate change commitment real, G-8 ministers say', *Daily Yomiuri*, 13 April 2000, p. 3.
[20] Paul Brown, 'Leave US out of deal, propose Greens', *Guardian*, 27 Nov. 2000.

Many pieces have to fit together for such an EU-led strategy to succeed, and we view it as highly unlikely that the Protocol with its current provisions and targets will enter into force in this way.

Return to Rio?

Events in the last days of negotiations in The Hague and Ottawa indicate the degree to which progress depends on agreement between Europe and the United States. Over the months ahead, the discussions could move outside the UN and into a smaller setting, perhaps the Organization for Economic Cooperation and Development. To deal with longer-term issues, this group could be expanded to include key developing countries such as India and China. An analogous pattern can be found in the development of the trade regime over the last half-century, where the advanced, industrialized nations agreed to various rules and restrictions, anticipating that others would join as they developed. New ideas might emerge more easily in a smaller, less formal setting. Other architectures for the system could be explored, along with alternatives to national targets and timetables that might allow differences to be bridged in ways hitherto impossible in a global forum.[21]

Such a formal move to another venue seems very unlikely, however. Early in the evolution of the climate negotiations a limit on the number of participants might have been feasible, but virtually every nation in the world has now ratified the Framework Convention. To put this treaty aside would have wider implications for global diplomacy and the role of international institutions, and few countries are likely to support abandoning this global approach. Moreover, the 'softer' provisions of the FCCC that promote capacity building, emissions inventories, reporting and monitoring are vital to any eventual credible participation by developing countries. Throughout the Kyoto process most attention focused on reconciling the EU and the Umbrella Group, and an outright break from the UN forum would further antagonize many in this important group. As a Malaysian newspaper noted after the Ottawa meeting, 'The entire voice of the majority of the world's people and governments is now lost…The final deal that the US and EU agree on may not be the best deal for the rest of us.'[22] Unlike the international trading system, even the early stages of the climate process are susceptible to considerable leverage on the part of the developing countries, both because of the interest among developed nations in access to cheaper emissions reductions and, ironically, because the Byrd–Hagel resolution makes their participation a pivotal condition for US ratification.

[21] Examples include taxes (see Richard N. Cooper, 'Toward a real global warming treaty', *Foreign Affairs* 77: 2, March/April 1998) and 'safety valve' systems (as proposed by Raymond Kopp, Richard Morgenstern, William Pizer and Michael Toman, 'A proposal for credible early action in US climate policy', *RFF Weathervane*, Feb. 1999). <http://www.weathervane.rff.org/features/feature060.html>. An emphasis on adaptation is suggested by Daniel Sarewitz and Roger Pielke, Jr, 'Breaking the global-warming deadlock', *The Atlantic Monthly*, July 2000, pp. 54–64.

[22] Sarah Sabaratnam, 'Stormy weather ahead', *New Straits Times (Malaysia)*, 2 Jan. 2001, p. 1.

Return to Kyoto?

Suppose, then, as is likely, that negotiations continue to be deadlocked over the details of the Kyoto definitions, and ratification by the required 55/55 per cent cannot be achieved while important components remain in dispute, yet nations do not yet see an advantage in moving the negotiations outside the UN framework. Another possibility is to correct the problems in the Kyoto text. Nations could put aside the targets negotiated at Kyoto, and seek agreement on the definitions. Once the structure was agreed, they could return to negotiate targets that were appropriate to the detailed provisions and to the economic conditions relevant at that point. In the meantime, whether causally related or not, severe weather events could strengthen support for short-term actions, and new scientific evidence could further improve public understanding of the issue. In this manner the overall architecture of the Kyoto approach, including national targets and timetables and flexibility mechanisms, would be preserved, albeit with different numbers. As a senior official in Japan's ministry of foreign affairs observed early in the conference at The Hague, 'To be honest, we should have made the rules first.'[23]

Considering its opposition to sinks and significant use of credits for emissions reductions carried out abroad, however, the EU would not be likely to renegotiate the targets unless the changes were accompanied by American support for stricter rules. Unfortunately, the current strategy for securing Senate approval now appears contingent on inclusion of substantial contributions from sinks to appeal to farm state Senators. In any case, it is unclear whether the EU would be willing to retreat from the more favourable position in which it finds itself with respect to the Kyoto targets, because some in Europe interpret this result as emanating from a stronger moral commitment rather than to good fortune. In addition, issues of importance to developing countries such as adaptation aid, technology transfer and compensation were shouldered aside in the last days of The Hague. Thus it may be some years before a fundamental revision of the Kyoto rules and targets is undertaken.

Constructive actions in the absence of a global agreement

Given the level of distrust among key participants, it is not clear which, if any, of the three approaches above will be followed. One might even ask whether there is any real prospect for progress in the climate negotiations in the short term. An essential question to address is what intermediate actions can productively be taken now, while negotiations proceed. Several areas of effort recommend themselves: domestic actions to reduce emissions, already under way in most Annex I countries, should be strengthened; valuable activities established in the Framework Convention need to be preserved; and work should proceed on accounting rules that are essential to the Kyoto agreement and are not in

[23] Malini Goel, 'The Japanese perspective, three years after Kyoto', *Earth Times*, 16 Nov. 2000.

dispute. Progress in these areas might facilitate consensus on the more divisive issues. If these easier steps are not pursued, and if, even worse, the policy dialogue descends into recrimination, future negotiations will surely be made more difficult.

Domestic actions

Whatever happens in the international negotiations, programmes already under way in many countries will continue. Some Annex I countries will ratify the Kyoto Protocol, and use their negotiated reduction as an 'aim', or perhaps even a hard target, for domestic programmes. Others, which may reject the Kyoto targets, will still pursue domestic programmes with or without an overarching national goal by which to judge progress. Countries may also evolve various forms of international flexibility mechanisms to recognize reductions purchased though emissions trades or acquired by means of projects in other countries. While the sum of these actions may not amount to reductions on the scale of the Kyoto targets, it is important that these efforts proceed and grow in scope and intensity. As noted earlier, the lack of trust among the parties is a corrosive element in the negotiations, and demonstrations of national action could improve the likelihood of success at a later date.

Beginning in the early 1990s a number of European countries, primarily in Scandinavia, imposed carbon taxes designed to slow growth in emissions and in some cases to raise revenue for environmental priorities. At the same time, in response to the voluntary 'aim' agreed at Rio, most Annex I nations developed largely voluntary programmes to reduce emissions. The stringency of such measures may be limited by concern for competitiveness or claims that burdens are inequitable. Still, it may be possible to make early-stage efforts without raising these problems, particularly among the richer countries. In the United States, resistance to 'backdoor ratification' of Kyoto has actually retarded progress or even analysis of emissions reduction measures, and removal of the basis for this argument could allow a number of useful proposals to proceed.[24]

More strenuous efforts also need to be made in the search for long-term options. The Kyoto text emphasizes the obligation of the richer countries to encourage technology transfer to developing countries. But little or nothing is said about the need for new technology to deal with emissions mitigation *within* the developed world. In fact, if nations ever do commit to deep emissions reductions, the only way to preserve healthy economic growth will be through low-carbon technologies that at present either do not exist or are high cost. Thus an important advance that could be achieved now is a commitment by developed countries, individually or jointly, to increase R&D funding substantially and promote technology diffusion. Such an effort need not conflict

[24] Véronique Bugnion and David M. Reiner, 'A game of climate chicken: can EPA regulate greenhouse gases before the US Senate ratifies the Kyoto Protocol?', *Environmental Law* 30: 3, Sept. 2000, pp. 491–525.

with the FCCC process. In a similar vein, the funding of increased scientific understanding, including training scientists from developing countries, will be critical to maintaining and deepening popular and political understanding of the issues at stake.

Activities already initiated under the FCCC

A number of useful programmes have been initiated under the FCCC, and care should be taken not to damage them if the negotiations themselves are disrupted. Crucial among these is the system of periodic national communications covering greenhouse gas emissions and national response programmes. These data are vital to understanding the climate issue and to future negotiation among nations, both for assessing compliance and for enabling the credible accession of developing countries. Reporting should be expanded to include all international emissions transactions, including trade in emissions permits and exchange of project-level credits (into some easily accessible registry). Institutionally, the FCCC Secretariat has acted as a valuable clearing house for national communications and other climate change resources, and its role should be preserved and enhanced.

Another example is capacity-building. An effective long-term programme to address climate risk is not possible without the eventual participation of developing countries. So, whatever the fate of Kyoto-style targets and timetables, it makes sense to proceed with proposals made in The Hague for increases in aid for capacity-building in these countries and for assistance with technology transfer. A major component of this capacity-building is the continuation and augmentation of support for work on national communications. Further, because some low-lying and least-developed countries are particularly vulnerable to the effects of climate change, the richer countries should proceed to meet their FCCC obligation to provide aid for adaptation to climate change, as further elaborated in the Kyoto text and in the Pronk proposal.

Developing accounting guidelines

Lacking a Kyoto-type global agreement, nations will develop their own schemes, with the details tailored to the economic structure and political institutions of each. For most domestic programmes, diversity presents no problem to international discussions, and may provide useful experience with a wide set of measures. However, diversity in the treatment of cross-border exchange of emissions allocations, or project-level credits, may make it difficult to achieve integration later. Trading systems will be helpful in achieving cost reductions, and may serve as a mechanism for expanding the membership of any emissions agreement. Therefore, the preservation of as coherent a set of definitions and rules as possible may improve the prospects for a well-functioning market if and when a comprehensive agreement is finally achieved.

Unfortunately, national systems are already progressing in potentially inconsistent directions.[25] Differences are manifest both narrowly, in terms of how emissions are defined and measured, and more broadly, in terms of their scope (i.e. the number of sectors included, and whether the trading system includes greenhouse gases besides carbon dioxide, or sinks).[26] Other important differences include whether national, sectoral or firm-level caps are binding, and whether the entire allocated quota of permits can be traded or just a much smaller quantity of credits generated *ex post*.

On the trading front, Denmark moved first by enacting a trading programme limited to the electric power sector that it hopes to expand to other nations. The United Kingdom's national strategy is centred on a climate change levy planned for April 2001, but the plan includes a carbon emissions trading system (limited to industry) that allows firms to adopt a cap on emissions and thereby avoid most of the levy.[27] France allows energy-intensive industries to negotiate voluntary agreements to avoid a proposed national carbon tax, but the French system allows tradable permits to be generated only *ex post*, when emissions can be proved to have been lower than the target.[28] The most ambitious national systems extend beyond the industry and utility sectors and carbon dioxide emissions. Sweden hopes to cover 75 per cent of its overall (multi-gas) greenhouse emissions by 2008, and Norway has a system that would cover almost 90 per cent. To build expertise and support an EU-wide compliance system, the European Commission has proposed starting a limited EU-wide emissions trading scheme by 2005, beginning with carbon dioxide emissions from large fixed-point sources.[29]

The difficulties that might result from inconsistent systems within the EU offer a microcosm of the larger challenge. In the United States most proposals have been explicitly designed to be independent of Kyoto. For example, a bipartisan group of senators has proposed a cap-and-trade system for carbon dioxide from the electric power sector, with a cap unrelated to the Protocol's provisions.[30] Moreover, nations are not the only entities that will not wait for resolution of the international process. Large multinationals such as Shell and BP-Amoco have developed internal emissions trading systems, and utilities have engaged in trades of carbon emissions permits. The first cross-border trades,

[25] For a review of progress in developing emissions trading programmes as of autumn 2000, see A. Denny Ellerman, 'Tradable permits for greenhouse gas emissions: a primer with particular reference to Europe', MIT Joint Program on the Science and Policy of Global Change, report no. 69, Nov. 2000.

[26] On the problems of partial caps, see Robert W. Hahn and Robert N. Stavins, 'What has Kyoto wrought? The real architecture of international tradable permit markets', Resources for the Future, discussion paper 99–30, Washington DC.

[27] UK Emissions Trading Group, 'Outline proposals for a UK emissions trading scheme', 2nd edn (London: Confederation of British Industry, 2000).

[28] MIES-Industry Working Group, *Implementing an emissions credits trading system in France to optimize industry's contribution to reducing greenhouse gase*s, Paris, 31 March 2000.

[29] European Commission, 'Green paper on greenhouse gas emissions trading within the European Union', COM (2000)87. Found at: <*http://europa.eu.int/comm/environment/docum/0087_en.htm*>.

[30] During the campaign President Bush endorsed a four-pollutant regulatory scheme including carbon dioxide, but has since retreated from this pledge. See Eric Pianin and Amy Goldstein, 'Bush drops a call for emission cuts', *Washington Post*, 14 March 2001, p. A1.

between the American utility Niagara-Mohawk and Canada-based Suncor, have been concluded, signalling the potential expansion of trading beyond national borders from the very beginning. Markets for carbon futures have even begun to develop, though these systems are contingent on at least national- or sectoral-level caps.

Creativity may also be found in the initiation of project-level credit schemes. Such a development is likely to first be taken between nations with existing close relationships (e.g. the United States and Mexico, or Finland and Estonia). Independent schemes also may emerge from international organizations. One example of a new multilateral form is the World Bank's Prototype Carbon Fund (PCF), launched in January 2000. Instead of negotiating emissions reductions projects on a bilateral, project-by-project basis, a number of national governments and firms are funding a basket of projects, in exchange for a pro rata share of the emissions reductions.[31] Though originally meant to complement the Kyoto mechanisms, PCF has generated its own momentum and funding and could move forward even without a comprehensive agreement defining the CDM.

In the interest of the eventual integration of such arrangements into an encompassing international agreement, it will be useful for any bilateral or multilateral agreements to be roughly consistent in their terms and definitions. Critical questions include the setting of common rules or conditions for participation, the definition of where and how permits are defined (e.g. upstream or downstream, direct and/or indirect *via* some energy measure), and rules for banking and borrowing. As with permit trading systems created in the absence of a global agreement, the terms for receiving JI- or CDM-type project credits will also be worked out in bilateral agreements. Therefore, a valuable intermediate step, while awaiting the resolution of the larger issues, would be an effort to lay out accounting guidelines for these transactions, gaining agreement where it can be found. The reliance on reductions carried out abroad and what gets credited were, of course, at the heart of the disagreement at The Hague. But the division has been over *how much* a party can count (e.g. amount of sinks, numbers of permits purchased abroad), not *how* the counting is to be done.

Final thoughts

We do not pretend that this brief list contains all of the activities that need to go forward, nor are we confident that the political will exists even to support adequate funding for these measures, which face little opposition in principle. One could imagine that failure of the Kyoto process might provide these elements with a new impetus and lead to their strengthening, or that deadlock may rob the entire process of its rationale and motive force. Nor do we know the extent to which multinational firms may act as an important catalyst for action.

[31] John J. Fialka, 'World Bank ties new fund to emissions', *Wall Street Journal Europe*, 19 Jan. 2000.

However, we are convinced that, while effort needs to continue in the search for a global agreement on Kyoto-scale issues, some domestic and international attention needs to be re-allocated from the battle over national targets and timetables to these intermediate gains. If a Kyoto-style agreement is put back on the rails, the effort will not have been wasted, because these issues would have needed to be dealt with in any event. If international agreement on binding emissions reductions is delayed for a number of years, then the effort made on these 'smaller' measures can yield experience with greenhouse emissions mitigation policies and help in creating conditions favourable to a future international agreement.