

Cooperating Without America

Theories and case studies of
non-hegemonic regimes

**Edited by Stefan Brem
and Kendall Stiles**

- (1988b) Report of the Committee on the Rights of the Child. CRC/C/16/3/5/93: 36.
- (1989) Report of the Working Group on a Draft Convention on the Rights of the Child. E/CN.4/1989/48.
- (1992) Report of the Committee on the Rights of the Child on its second session, September 28–October 19, Geneva, CRC/C/10.
- (1995a) Joint Written Statement Submitted by the International Save the Children Alliance and the Friends World Committee for Consultation. E/CN.4/1995/NGO/4.
- (1995b) Draft Optional Protocol to the Convention on the Involvement of Children in Armed Conflicts. E/CN.4/1995/96.
- (1996) The Working Group on the Involvement of Children in Armed Conflict, Report on its Sixth Session. E/CN.4/1996/102.
- (1997) Report of the Working Group on a Draft Optional Protocol to Convention on the Rights of the Child on Involvement of Children in Armed Conflicts on its Third Session. New York, March 13. E/CN.4/1997/96.
- United Nations. General Assembly (1993a) Vienna Declaration and Programme of Action. World Human Rights Conference, Vienna, June 14–25. A/CONF.157/23.
- (1993b) Resolution 48/157. December 20.
- (1996) Resolution 50/153.
- (2000) Resolution 54/263.
- Van Bueren, Geraldine (1991) *The International Law on the Rights of the Child: Save the Children*. The Hague: Martinus Nijhoff Pubs.
- Williams, J. and Goose, S. (1998) "The International Campaign to Ban Landmines," in J. Williams and S. Goose (eds), *To Walk Without Fear: The Global Movement to Ban Landmines*. Oxford: Oxford University Press.
- Woods, D. (1983) *Children Bearing Military Arms Newsletter*. Geneva: Quaker United Nations Office.

4 The hardest problem in the world

Leadership in the climate regime

Josh Busby

Introduction

In February 2007, Working Group I to the Intergovernmental Panel on Climate Change (IPCC) released its contribution to the Fourth Assessment Report detailing the state of the science on climate change. Their report concluded that warming of the climate system is "unequivocal" and that they could say with "very high confidence"—90 percent probability—that human activities have contributed to that warming trend. The report noted that in 2005 the atmospheric concentration of carbon dioxide, the main greenhouse gas, exceeded the natural range found in ice cores from the last 650,000 years. Climate change, the working group concluded, is likely to yield heat waves, droughts, heavy precipitation events, and possibly increased tropical cyclone activity (IPCC 2007).

To respond to the challenge posed by climate change, a number of states—including the members of the European Union, Japan, and Canada—have ratified the Kyoto Protocol and begun discussion of the second commitment period after 2012 when Kyoto expires. The Kyoto Protocol, negotiated in 1997, was meant to marginally decrease the amount of greenhouse gas emissions and facilitate the transition to a post-carbon economy through so-called flexibility mechanisms. In 2005, the European Union launched one of those flexibility mechanisms in the form of an emissions trading system that caps the level of carbon dioxide emissions and allows firms to buy and sell permits as needed. This was and remains the single most serious commitment states have made to address climate change since the Kyoto Protocol entered into force.

This chapter seeks initially to answer two related questions. First, what motivated those countries to ratify the Kyoto Protocol and, in some cases, take early action on climate change? Second, in keeping with the theoretical thrust of this volume, what arguments, if any, beyond rationalist approaches are necessary to explain the behavior of early climate leaders? Any assessment of leadership capability also has to review the sustainability of those programs. Leadership here reflects the possibilities for first mover advantages to lock in the character of the policy response. Where policies are not robust, then the long-term viability of a leadership effort is suspect. With the United States—the world's strongest power—having exempted itself from the Kyoto

Protocol, this chapter also address a third question: to what extent can these non-hegemonic powers (that is, states other than the United States) sustain their leadership in the climate arena?

The chapter is divided in three sections. The first section provides a basic overview of the negotiations on climate change that have taken place since the mid-1980s and the steps that leading countries have taken since the Kyoto Protocol was ratified. The next part suggests that a combination of prestige motivations and ideational commitment drove European, Japanese, and Canadian decision-making to ratify the Kyoto Protocol. I note the ways in which climate leaders have since sought to insulate themselves from incurring high costs. The final section draws on theories of collective action and public goods to demonstrate the difficulty of sustained leadership of early movers without participation by the US, India, and China.

Background on climate change negotiations

Despite almost a century of knowledge of the possibility of global warming, the issue only emerged on the policy agenda in the late-1980s. The US Congress held hearings in 1988 to assess NASA scientist James Hansen's claims that the earth's surface temperature seemed to be rising in concert with man's emissions of carbon dioxide. The scientific community was then further mobilized to assess the validity of this finding and the implications for humans and natural ecosystems.¹ By the mid-1980s, environmentalists picked up the warnings from the scientific community (Sarewitz and Pielke 2000). A number of entrepreneurial scientists working with advocacy NGOs helped to politicize the issue and translate scientific concern into the basis for government action (Betsill 2000: chapter 3). By the late-1980s and early 1990s, politicians (and the media) were sufficiently aware of "global warming" (also referred to as "the Greenhouse effect"² or "climate change") that they folded the issue into international environmental negotiations.

In 1988, the Canadian government hosted an important meeting on the global atmosphere that was attended by scientists, government ministers and civil servants, industrialists, and environmentalists. While not a treaty-negotiating session, the participants agreed on a statement that called on developed countries to cut CO₂ emissions by 20 percent from 1987 levels by 2005. The "Toronto goal" was one of the first international efforts to set targets and timetables for emissions reductions (Pomerance 1989: 44–5; Haigh 1996: 18).

Soon after the Toronto conference, the IPCC was established to bring together the science on the subject.³ These developments set in motion a series of international meetings geared to produce a treaty for signature at the 1992 Earth Summit. The final negotiations of the United Nations Framework Convention on Climate Change (UNFCCC) took place in Rio, Brazil.⁴ However, prompted by lobbying by the George H.W. Bush administration, no binding targets on CO₂ emissions were negotiated.⁵

Subsequent studies produced near unanimity of scientific judgment that global warming was indeed a serious concern,⁶ giving incentive for additional negotiations on specific commitments. In 1995, at the first Conference of Parties (COP)⁷ meeting in Berlin, states agreed that voluntary targets would not be enough and that a round of negotiations would be needed to identify what were enigmatically referred to as "Quantified Emission Limitation or Reduction Objectives" (QELROs) (Grubb, Vrolijk, and Brack 1999; Oberthür and Ott 1999). Importantly, the principle of "differentiated responsibilities" was recognized in Berlin such that developing countries were exempt from having to make any binding commitments through this process. In Geneva the following year, the US went beyond the ambiguous QELRO terminology and formally embraced a "realistic, verifiable and binding medium-term emissions target" (Wirth 1996). Despite the tentative steps to move closer to the European position, the US, along with the loosely aligned group of states JUSSCANZ,⁸ continued to clash with the Europeans and developing countries over the institutional climate architecture. The Americans pushed for a multi-gas regime, emission trading, carbon sinks, and credit for action in developing countries while the Europeans and others insisted that domestic action be the primary basis of emissions reductions.

Going into COP-3, the EU Environment Council, composed of the Environment Ministers from member governments, made an informal proposal in March 1997 to cut the combined emissions of three greenhouse gases (CO₂, CH₄, and N₂O) in industrialized countries by 15 percent by 2010 (Oberthür and Ott 1999: 55). At the end of September 1997, Japan announced a –5 percent target for greenhouse gases, with countries with better energy efficiency or higher population growth eligible for lower reductions targets.⁹ The Clinton Administration, for its part, announced on October 22, 1997 a target of stabilizing emissions of all six greenhouse gases at 1990 levels by 2008–2012 (Clinton 1997).

In December 1997, negotiations on these targets culminated in the Kyoto Protocol through which a number of industrial countries (so-called Annex I or Appendix B countries)¹⁰ committed themselves to reductions in CO₂ (and five other greenhouse gases).¹¹ For the three major greenhouse gases—CO₂, methane and nitrous oxide—Annex I countries pledged to reduce average emissions by 6 percent—8 percent below 1990 levels by the "commitment period" between 2008 and 2012. The US, the single largest emitter, producing 23 percent of the world's CO₂ emissions, committed to a 7 percent reduction after Vice President Al Gore made a last minute intervention at Kyoto to help strike a compromise.¹² However, unlike the stabilization target, the Kyoto commitment included the use of forests as sinks, reducing the US actual obligation to about a 4 percent reduction.¹³

However, Kyoto left unresolved the mechanisms by which countries would attain those reductions and also excluded a number of developing countries such as China and India from mandatory CO₂ emissions reductions.¹⁴ Anticipating such a result, the US Senate passed a non-binding sense of the

Senate resolution S. Res. 98 (the so-called "Byrd–Hagel resolution") by a margin of 95–0. The Byrd–Hagel resolution suggested the Senate should not support any climate change treaty that did "serious harm" to the American economy or failed to include "specific scheduled commitments" by developing countries in the same compliance period.¹⁵

At Kyoto, the US successfully pressed for flexible market mechanisms (including an emissions trading system) to achieve reductions at the least cost.¹⁶ Although conceptually these ideas were agreed to, it was again left up to later negotiations to specify the precise form of these tradable permits and other flexibility mechanisms.¹⁷ Having theoretically achieved agreement on such mechanisms, the Clinton Administration signed the Kyoto Protocol on November 12, 1998¹⁸ but indicated that it had no intention of ratifying the treaty without it being altered to include "meaningful participation" by developing countries (Office of the Press Secretary 1997).

In June 1998, the European Union negotiated an intra-EU burden-sharing agreement or bubble by which to achieve its –8 percent Kyoto target. The bubble allowed some countries like Germany and the UK to accept ambitious emissions reductions targets (–21 percent and –12.5 percent respectively), while poorer industrializing members committed to restrain the rate of emissions growth (for example, Ireland +13 percent; Spain +15 percent).¹⁹

Ultimately, negotiations that would have settled questions left over from Kyoto founded in November 2000 in The Hague (Drozdiak 2000). The primary disagreement was over sinks or how much credit countries would receive for having large forests to take carbon dioxide out of the air. At The Hague, the Europeans nixed a deal with the United States that was brokered by the UK's John Prescott because of concerns that sink credits were overly generous. European negotiators and environmentalists were concerned countries would be able to meet their Kyoto commitments through existing land-use practices and thus not have to change their domestic policies.²⁰

Following The Hague, George W. Bush became president of the United States. Despite an indication during the 2000 US presidential campaign that he would promote mandatory CO₂ emissions reductions,²¹ Bush made an abrupt turnaround on March 13, 2001 (Pianin and Goldstein 2001), overruling pleas by Christine Todd Whitman, the administrator of the US Environmental Protection Agency (Pianin 2001b). Moreover, the Bush administration soon announced its intent to pull out of the Kyoto Protocol, even though Bush had not sent it to the Senate for advice and consent (Pianin 2001c).

In reaction, Europe spearheaded an effort to save Kyoto in Bonn, Germany and then Marrakech, Morocco by making concessions on sinks to the Japanese, Canadians, and Russians.²² In 2002, European countries took the lead in ratifying and encouraging other key signatories to ratify the Kyoto Protocol. On May 31, 2002, the fifteen Member States to the European Union ratified the protocol (Lynch 2002), followed by Japan on June 4 (BBC 2002b). In December 2002, Canada ratified Kyoto (CBC 2002). To enter into force, Kyoto required that 55 countries and Annex I countries responsible for 55 percent

of carbon dioxide emissions in 1990 ratify the treaty (Fletcher 2001). With the United States and Australia implacably opposed to ratification, the only way the treaty could clear the hurdle of 55 percent of Annex I country emissions was to get the Russians to ratify.²³

The Russians proved difficult. In May 2004, after the EU announced they were willing to look positively upon Russia's application to the WTO, President Putin strongly signaled intent to ratify. Actual ratification was not forthcoming until November 2004, which finally allowed Kyoto to enter into force in February 2005.²⁴

Since Kyoto entered into force, perhaps the most significant climate policy that has been enacted is the European Emissions Trading (EU ETS) system. The first phase of EU ETS came into operation on January 1, 2005 and lasted through 2007. It covered about 11,400 installations and encompassed the power sector (including all fossil fuel generators over twenty megawatts), oil refining, cement production, iron and steel manufacture, glass and ceramics, and paper and pulp production. It only included CO₂ emissions and excluded emissions from transportation, agriculture, and households and small businesses. The first phase of the EU ETS therefore covered only about 45 percent of the EU's total CO₂ emissions. The second phase of the EU ETS began in 2008 and will continue through 2012.²⁵

By March 2004, European governments were required to submit National Action Plans (NAPs) for the period 2005–2007. The NAPs set specified emissions caps for all the eligible installations. These caps were meant to help member states meet their specific commitments under the EU bubble agreement so that collectively the EU would meet its –8 percent Kyoto target. In 2006, it became clear that member governments had been overly generous with those caps.²⁶ As a consequence, the price of allowances in the carbon market declined dramatically from a peak of €30 per metric ton of CO₂ in May 2006 to below €10 per ton by the end of 2006.²⁷ As the EU ETS moves in to phase 2, there was some fear that overly generous allowances would further undermine the regime and the incentives the private sector had to invest in emissions-reducing technologies (Energy Business Review Online 2006). Ten proposed NAPs for the second phase of EU ETS (2008–2012) were rejected by the European Commission as too lenient and sent back for revision.²⁸ The assertion of EU authority in the second phase NAPs gave the carbon markets more confidence, leading to a stabilization and improvement of the second phase allowance prices, which rose from €15 per metric ton in April 2007 to more than €20 per metric ton from mid-2007 through mid-2008.²⁹

These setbacks notwithstanding, Europe, thanks to large emissions reductions from the UK and Germany, has slightly reduced its emissions below 1990 levels. In 2004, emissions by the fifteen EU members were 0.9 percent below 1990 levels.³⁰ This is about a tenth of the way towards the EU-15 Kyoto target. The EU, nonetheless, remains confident that a mix of measures—emissions trading, sinks, and additional domestic policies—will bring emissions down by 8 percent below 1990 levels by 2010 (European Environment Agency

2006: 5). In early 2007, even as national governments sought generous caps for the second phase of the EU ETS, the European Commission proposed an ambitious energy plan with a goal of reducing greenhouse gas emissions by 20 percent by 2020 (BBC 2007).

As Europe has been implementing its trading scheme with mixed success, other Kyoto ratifiers—Japan and Canada notably—have faced the daunting prospect of implementing expensive climate policies despite facing emissions profiles much more like the United States. Both Japan and Canada have a Kyoto target of emissions of 6 percent below 1990 levels. Already one of the most energy efficient economies in the world, Japan has found it difficult to reduce emissions further. Even before Japan emerged from its economic doldrums, its greenhouse gas emissions increased by 12.6 percent between 1990 and 2000 (WRI 2006). Japanese plans for meeting their Kyoto targets rely mostly on carbon sinks from forests and the purchase of emissions credits from abroad.³¹

The Japanese, in a rare breach with the United States, nonetheless went ahead and ratified the Kyoto Protocol. However, Japan has subsequently sought different ways to engage its most important ally on climate change. In 2005, Japan joined with the United States and four other countries in the Asia Pacific Partnership on Clean Development and Climate (AP6), a voluntary effort to foster technological cooperation on clean energy technologies.³² In 2006, at COP-12 in Nairobi, the Japanese proposed emissions intensity targets rather than outright emission caps for the new commitment period 2008–2012 and suggested that non-compliance not be subject to penalties. Given that the Bush Administration had embraced domestic energy intensity targets, it could only have been intended as another move to engage the United States (De Souza 2006).

In Canada, the 2006 election brought the Conservatives to power for the first time in twelve years in a minority government. Prime Minister Stephen Harper, while not outright withdrawing from the Kyoto Protocol, made it known that the country's Kyoto target was not attainable. With its booming oil economy in Western Canada, Canadian greenhouse gases emissions increased by 24 percent between 1990 and 2006 (Fekete 2006). That recognition, however, was not received well by the public; the opposition Liberal Party sought to make climate change a central issue as the country headed into national elections in October 2008 (CBC 2007).

EU, Japanese, and Canadian leadership on the Kyoto Protocol

While concern and commitment to climate change were partially responsible for their decision, ratification of the Kyoto Protocol by the EU, Japan, and Canada was largely driven by prestige and reputational concerns. European resolve was steered by US withdrawal. Ironically, the lack of US commitment initially helped Europe overcome its own collective action problems. However,

despite a willingness to ratify the Kyoto Protocol, none of the early leaders are willing to impose especially costly measures in the absence of US participation. That said, the EU ETS is much more substantive than anything the Japanese or Canadians have yet been willing to pursue.

In March 2001 in a meeting of Europeans ambassadors, Condoleezza Rice, then National Security Advisor to President Bush, unceremoniously declared that “Kyoto was dead” (Pianin 2001b). This move set in motion a diplomatic dispute that lingered for the duration of the Bush presidency. Immediate reactions from the Europeans were swift. The EU's Environment Commissioner, Margot Wallstrom, said on March 29: “The U.S. position is extremely worrying.” She elaborated: “To suggest scrapping Kyoto and making a new agreement with more countries involved simply reflects a lack of understanding of political realities. . . . Kyoto is the platform we have to build upon and we would lose years of work if we were to start from scratch” (European Commission 2001).

The European Commission's then President, Romano Prodi, wrote: “There can be no real leadership without responsibility. . . . The message that the United States will not make an effort unless others much less able to do so make an effort as well, is shocking to European ears” (Prodi 2001). This decision quickly became bound up with Europeans' early judgments of the Bush Administration, taking on larger significance than “just” climate change. The Canadian Prime Minister Jean Chrétien echoed the European reaction: “We think we have to continue with Kyoto and we think the Americans should do the same” (Weaver, McLean, and Lonergan 2001). While disappointed, the Japanese Foreign Minister was more guarded: “Japan is concerned about the effects such a development may have on the climate change negotiations” (Kono 2001).

What explains the decisions by the Europeans, Canadians, and Japanese to ratify the Kyoto Protocol? What explains their subsequent behavior? In his opening chapter, Kendall Stiles laid out three approaches—realist, liberal, and constructivist—that potentially explain dynamics of non-hegemonic leadership.

Realist or power-based explanations would emphasize the importance of relative gains concerns among states, a preoccupation that others will turn benefits in the climate arena into potential military advantage. Thus, this variant might explain the non-participation of the United States in the climate regime as a consequence of fears the extra costs of climate mitigation would hand potential military rivals like China (or Russia) gains that could be used against the Americans. At the very least, even if states are unconcerned about the implications of climate costs for the military arena, realists would suggest states will care about relative gains by economic competitors including allies.

Liberal approaches would focus on the strategic maneuvers of states to maximize their long-run material benefit. From a rational choice or economic perspective, states will act in support of climate policies when, given what everyone else is going to do, the likely benefits exceed the costs. This explanation might explain the behavior of leading nations and lagging states

on the basis of this instrumental calculus: leaders faced low costs and potential net benefits while lagging countries faced high costs in implementing climate policies. For the delays and inability to foster cooperation among all players, this approach would emphasize the collective action problems of coordinating many actors with different interests for a problem for which much uncertainty exists. In game theoretic terms, while Kyoto supporters thought they were playing a coordination game, the different interests of the players suggest climate politics are more like a game of deadlock. Institutional liberal theory, on the other hand, would focus on the painstaking institutional agreements that states have engaged in to create the UNFCCC and Kyoto Protocol. They would likely highlight the benefits of information and coordination fostered by these agreements. These must have some potential compliance pull, they would argue, because why would states otherwise spend such time negotiating them? They might underplay the difficulties experienced thus far as growing pains and stress the climate regime has not yet had sufficient time to lock in benefits to participants.

Finally, *constructivist* approaches would emphasize the importance of non-state actors and ideas in being able to create new norms and shift the global or at least regional consensus to favor action to combat climate change. Sociological variants would focus on the importance of international reputation and prestige as motives that explain the behavior of leaders in the climate regime. In this view, the peer pressure of other states, reinforced by the actions of international environmental NGOs, created collective expectations of right and appropriate behavior among the climate leaders. Ideational strains of constructivism would focus more on the origins of preferences, and the ways in which ideas circulated by epistemic communities and norms entrepreneurs had appeal in their own right among the leaders. Scientific information on the causal role of human action, the consequences of climate change, and the importance of precautionary action would help explain leaders' interest in mitigating climate change. Constructivists would explain laggards' behavior by looking for differences in the environmental values and beliefs between leaders and laggards.

As *sociological constructivism* would expect, reputation and prestige concerns loom large in the decision-making calculus of the leaders. However, consistent with *rationalist liberal* theory, their lack of willingness to absorb high costs in the absence of US participation suggests a cost sensitivity and an understanding of the limits of unilateral behavior on climate. Some evidence supports a *realist or mercantilist* approach to political economy. While states are not as preoccupied by the fungibility of economic gains into military power, they are worried about their own competitiveness and the possibility that international bargains might unfairly advantage other states.

None of these explanations on its own is able to explain outcomes in the climate regime. Rational choice accounts correctly capture why leading states have been reluctant to impose steep costs on themselves,³³ but these arguments have trouble explaining the extra-rational prestige and reputational motives

to ratify Kyoto. Moreover, they cannot explain the willingness by the Europeans to impose modest, yet significant, costs on themselves as part of the EU ETS. Constructivist accounts get at the reputational motivations but have some difficulty explaining variation in state behavior, particularly since publics in the US are nearly as concerned with climate change as are publics in Europe, Japan, and Canada.³⁴ Realist/mercantilist theories raise good points about relative gains, but given the success of instruments like the General Agreement on Tariffs and Trade (GATT)/World Trade Organization (WTO), these appear to be less constraining where states can fashion bargains that accommodate their needs and minimize their disadvantages.

The lack of serious action to date by the Canadians and Japanese as well as the overly generous emissions caps of the first round of the National Allocation Plans in the EU ETS supports rationalist explanations of state behavior. A rationalist, however, could only explain treaty ratification if they have a specific and limited view of international legal agreements. Some rationalists believe international institutions possess no compliance pull because of weak or non-existent enforcement mechanisms. States will ratify treaties that specify policies they intend to enact anyway. At best, treaty negotiations and international institutions serve to coordinate collective expectations (Downs, Rocke, and Barsoom 1996: 380; Goldsmith and Posner 2003–2004; Goldsmith and Posner 2005; von Stein 2005b; von Stein 2005a: 612). Such rationalists might also note that deeper commitments in treaties constitute “cheap talk” that nations have no intention of abiding by and cannot be compelled to implement (Morrow 1994; Farrell and Rabin 1996). The extra concessions on sinks that the Japanese and Canadians were able to extract show how leaders made their Kyoto talk even cheaper.

Other rationalists reject this view of international agreements. States would not bother negotiating detailed international agreements if they did not feel compelled, at some level, to live up to the agreement. For these rationalists, the motive that ultimately drives state decisions to ratify treaties and live up to their commitments is reputational (Simmons 1998; Simmons 2000; Simmons and Hopkins 2005; see also Busby 2005; Busby 2006b). However, for these rationalists, reputations have material roots. States can gain most from cooperative endeavors when they enter into long-run relationships undergirded by a sense of “diffuse reciprocity,” that cooperation in the present period will be rewarded by cooperation over the long run. The costs of a bad reputation should be a foregone stream of benefits from missed opportunities or more conditions for agreements they do enter into (Keohane 1986; Tomz 2000; Guzman 2002; Guzman 2005).

There are limits to rationalist accounts of reputation. As Sandler notes, punishment is a costly public good that is likely to be under-provided (Sandler 2004). Consequently, states are willing to impose only modest reputational costs on defectors (Guzman 2002). Furthermore, as Downs and Jones argue, states have multiple reputations that are domain-specific. A reputation for compliance with international agreements may be less important than a

reputation for toughness (Downs and Jones 2002). Moreover, as Keohane has argued in his work on reciprocity, “the actor making a short-run sacrifice does not know that future benefits will flow from comparable restraint by others, and can hardly be regarded as making precise calculations of expected utility” (Keohane 1982, 342). For these reasons, the material bases of reputations likely only have a modest influence on state behavior, particularly when the costs of adhering to an agreement are potentially quite high.

Cooperative attitudes also rest on beliefs about right and appropriate behavior that may represent, as Legro argues, an embedded view of instrumental rationality that becomes an end in itself (Legro 2005: 7). Decision-makers sometimes act in accord with the established patterns of behavior or self-image of their country’s role on the international stage—such as a good international citizen, a leader, a trustworthy ally, an independent agent, and so on.³⁵ While these may have material roots, they take on a normative status as they continue to serve a country well over time. These normative pressures can reinforce the modest reputation costs states face for non-compliance.

Individual leaders also have incentives for prestige that may encourage them to over-promise.³⁶ Some scholars believe leaders have innate desires for prestige. The motivations are ultimately psychological, that humans are hard-wired to seek status (Markey 2000; Larson and Shevchenko 2005; Lebow 2005). However, the prestige mechanism can also work through the domestic benefits that leaders receive from good international press. Such positive media attention can enhance a leader’s stature and enable them to achieve more both internationally and domestically. They may also enhance their re-election prospects or their legacy in history. The prestige motive can help us understand what Levy called “tote-board diplomacy,” where politicians engage in competitive promise-making (Levy 1993). These dynamics become especially salient if a leader hosts a meeting like the G8 summit or one of the Conference of Parties, as Japan did in 1997 in Kyoto.³⁷

In the context of Kyoto, non-state actors had a key role in agenda-setting and shaping what kinds of promises were rewarded politically. While their power was circumscribed by the countervailing influence of carbon-intensive industries, environmental groups defined what policies were considered “green.” For politicians for whom that mattered, whether out of conviction or political necessity, that capacity narrowed the policy options that were potentially attractive. David Sandalow, the former Assistant Secretary of State for Oceans, Environment and Science in the Clinton Administration, suggested the main metric of whether a state was green was how deep the emissions cut it pledged to make. Deeper was better.³⁸ Nigel Purvis, former Deputy Assistant Secretary of State for Oceans, Environment and Science in the George W. Bush Administration, echoed those comments. Purvis suggested environmental groups were the “deal-breakers” with the public whether or not Kyoto was considered “environmental” (Purvis 2003). In this context, American environmental groups, more so than their European counterparts, were willing to praise

Al Gore’s last minute intervention in Kyoto and the final agreement.³⁹ By contrast, European environmental groups’ immediate reaction to Kyoto was one of skepticism and disappointment that governments had not gone further and had, through flexibility mechanisms, saddled the agreement with “loopholes.”⁴⁰ While governments had some scope to shape the agreement in ways that green groups may not have been as enthusiastic about, the environmental lobby’s focus on short-term binding emissions constraints shaped policymakers’ views about what kinds of actions they could take and still get public affirmation.

In one sense, through their mediating role, environmental groups serve to signal to mass publics what type of leaders their politicians are: Are they pro-environment or are they not? While game theorists like Fearon have ably explored this informational account, the role of conscience is in danger of being lost in this characterization.⁴¹ Why would decision-makers wish to reveal their type to electorates? Simply put: to get re-elected. However, a signaling argument based solely on the re-election motive eviscerates the central insight of constructivism. The effectiveness of a normative appeal—to protect the planet for future generations—ultimately depends upon someone, either the politician or mass publics, believing that a course of action is the right thing to do. That said, politicians are politicians, and even if they put themselves on the line out of conscience, they want to know they will be praised.

Where promises alone are enough to reap prestige gains, decision-makers can make them and not suffer the consequences for failure to implement. However, when other states, non-state actors, and domestic publics can monitor compliance, then rhetorical promises made by leaders can become binding. Trapped by their earlier words (or those of their predecessors), leaders risk being shamed publicly for their hypocrisy. Opposition politicians or international rivals can seize upon these failures and use them to diminish a leaders’ political standing.⁴² In other words, domestic or international publics can impose audience costs on leaders for making but not keeping commitments (Fearon 1994; Fearon 1997; Schultz 1998; Tomz 2007). These symbolic costs can be thought of as an extension of reputation costs. The costs of actually implementing the Kyoto Protocol may be so expensive that countries like Japan and Canada ultimately feel they have no choice but to defect, but they may find it politically costly to repudiate their commitments.

Europe

US withdrawal contributed to (if not precipitated) the EU’s support for an ambitious emissions trading program, in part because the American response called into question Europe’s seriousness about the issue. This result in turn potentially affected the EU’s broader international standing and its nascent efforts to forge a common foreign and security policy. After George W. Bush’s repudiation of the Kyoto Protocol, European leaders became more determined to ratify the Kyoto Protocol as soon as possible. If the Bush Administration’s aim was to undermine European support for Kyoto, it backfired.

The US withdrawal in 2001 from the Kyoto process shifted the issue to a higher level of political engagement, pushing the Europeans to move forward on its climate commitments. Most important of those was the EU ETS, which secured final passage in October 2003. The EU ETS is important because it represents relatively costly action on the part of the EU, demonstrating a level of seriousness that ratification on its own does not connote. Passage of the EU ETS and ratification of the Kyoto Protocol also represented an important step forward in terms of EU collective decision-making in a quasi-foreign policy arena. The EU has a history of fractious decision-making on climate policy, a reflection of the somewhat unclear division of responsibility between the Commission, the European Council, and the European Parliament; variation in the leadership capacity of the rotating heads of the EU presidency; and disagreements between sovereign governments (Van Shaik and Egenhofer 2003; Busby 2004). While other developments with the EU Constitution later undermined the integrationist momentum, the Commission and Union enthusiasts took advantage of the opportunity afforded by US withdrawal to extend the EU's institutional scope. While each country's emissions targets are governed by national governments, the Commission did in some cases send the draft plans back for revision.

One interesting counterfactual is to imagine what would have happened to the ratification process and the emissions trading scheme if the Bush Administration had not brusquely rejected Kyoto. Are Europeans simply responding to what they consider a genuine threat to their prosperity and quality of life? Is it possible that they would have taken these actions without Kyoto?⁴³ The evidence is mixed.

Michael Grubb, one of the UK's leading scholars on climate change, suggested Bush's rejection was significant for emissions trading to get a firm political footing in Europe: "I believe US repudiation raised the stakes in Europe to a point where normal internal political obstacles to getting something through the system were swept away" (Grubb 2006). Other leading climate officials in Europe were more circumspect. Peter Zapfel, a staff member of the Climate Change Unit in the Environment Directorate-General of the European Commission said that Bush's rejection was more important for ratification. In his view, "European minds were set" already on the EU ETS (in part a recognition that it would be a helpful way to "pull the US back into a multilateral climate policy regime"). Zapfel said that Bush's move in March 2001 may have "speeded up the ratification of Kyoto in Europe and beyond" (Zapfel 2006). Karsten Sach, one of leading figures on climate change in the German Environment Ministry, added: "It is right that the repudiation of the Kyoto Protocol has to a certain extent strengthened EU unity. However, if the US would have been on board it would have been much easier for us to introduce emissions trading within the EU" (Sach 2006).

US withdrawal forced the issue and made it impossible or difficult for Europe to grandstand without incurring domestic audience costs. In game theoretic terms, US action set in motion a separating equilibrium that forced the

Table 4.1 Distinction between costly moral action and grandstanding

	<i>Costly</i>	<i>Cheap action</i>
<i>Policy action</i>	Costly moral action	Grandstanding
<i>Climate change examples</i>	Emissions trading scheme Carbon tax Large investment in alternative energy Expenditure on adaptation	Treaty ratification Speeches Minor investment in alternative technology

Europeans to reveal their type (Fearon 1994; Morrow 1994). In another work, I distinguish between cheap moral action—what I call "grandstanding"—from true "moral stands," which are costly. In Table 4.1, I differentiate between costly actions on climate change (such as carbon taxes) and cheaper, more symbolic measures (like public statements) (see Busby 2006c).

The Europeans had to step up and ratify the Protocol, but in order for their effort to be seen (particularly by the United States) as more than mere grandstanding they also had to incur some costs. With electoral systems that allow environmentally-minded voters to express their preferences in minority parties, backing away from climate commitments in Europe could have electoral consequences. Moreover, failure over Kyoto could have further undermined collective action at the EU level. The Europeans want to be seen as global leaders, commensurate with their collective economic power. Kyoto thus took on broader significance, providing the Europeans an opportunity to stand up to the Americans at a time when the US was acting unilaterally in a number of different policy domains. However, if the European commitment and perception of threat was as strong as suggested, then EU members should have established stricter emissions targets in the first phase of the EU ETS and not vacillate in the second and later phases.

Japan

Since World War II, the Japanese have sought to be good international citizens. In part, this was a rational strategy meant to reassure nervous states in the region about their intentions (Midford 2002). It has since taken on more normative significance.⁴⁴ When pressed in the 1970s and 1980s to play a more constructive role internationally, the Japanese sought to do so within the constraints of the pacific role mandated by their constitution. In addition to foreign aid, the environmental field has been an important arena for the Japanese to play this role of good international citizens.⁴⁵ As Japan's former Global Environmental Ambassador, Nobutoshi Akao, said: "The global environmental issue was 'tailor-made' for Japan" (Ohta 1995, 42).

What explains the Japanese decision to ratify Kyoto? Perhaps the most basic reason, more important than international pressure, for Japanese ratification

was national honor: “the Kyoto Protocol was the *Kyoto* Protocol.” As Kameyama noted, ratification became a priority for the same reasons why the Kyoto negotiations had to succeed. If the treaty did not enter into force, this would make Japan look like an unskilled diplomatic player (Kameyama 2003, 148). Moreover, reputational concerns are important because “the Kyoto Protocol is the only international treaty that bears the name of a Japanese city” (Kameyama 2001; Kawashima 2001, 178). Similarly, Yutaka Nakao, former First Secretary of the Environment at the Embassy of Japan to the United States, noted that public support was a main factor driving ratification, “partly because the COP-3 was held in Japan.”⁴⁶

Yasuhiro Shimizu, head of the Climate Change Policy Division in the Ministry of the Environment, said:

We hosted COP-3 in 1997. The Japanese media covered very intensively that event. The Japanese people regard COP-3 as a national event, an occasion in which Japan exercised leadership in the international field. Most people think the conclusion of the Kyoto Protocol at COP-3 was something they were very proud of.

(Shimizu 2004)

When asked what would have happened if the Kyoto Protocol not been negotiated in Japan, Shimizu said that though his Ministry would have still pushed for ratification, the situation would have been “very different. The Japanese public was not so greatly concerned with the international regime. Not to have the Japanese town’s name, the Japanese situation would be very different” (Shimizu 2004).

How have the Japanese reconciled their support for the Kyoto Protocol with the opposition of the United States? The Japanese have consistently sought a way to bring the United States back in to the climate negotiations process and were willing to undercut the Kyoto process in 2005 by signing on to the Asia Pacific Partnership on Clean Development and Climate.

Even though it was difficult for Japan to implement more extensive reforms at home, the country nonetheless found itself bound to live up to the commitments made in its ancient capital city. In 2008, Japan sought to meet its Kyoto commitments by buying excess emissions from the Czech Republic, Ukraine, Hungary, and Poland (Sato and Nakayama 2008). Japan would need to spend roughly \$3.7 billion between 2008 and 2012 to buy 100 million metric tons of credits to meet its Kyoto obligations (Reuters 2008).

Canada

Canada’s decision to ratify the Kyoto Protocol appears to be driven largely by the decision by the Liberal Democrats leader, Jean Chrétien, who was personally concerned about climate change. In the Canadian parliamentary system, much as in Britain, treaty ratification requires little legislative

oversight.⁴⁷ Thus, if the Prime Minister is supportive and there is not overwhelming public opposition, then he or she can usually get their way. Even though the Liberal Democrats had done little to restrain the pace of greenhouse gas emissions during their tenure in government, the measure was politically popular with much of the public (though industry and a number of provinces, including oil-rich Alberta, mounted spirited opposition). Perhaps more importantly, the Kyoto Protocol was personally meaningful to the Prime Minister, important enough to him that he made the symbolic vote in the House of Commons over ratification a vote of confidence in his government (Bueckert 2002). Ratification was seen as part of the Prime Minister’s legacy as he prepared to retire from politics.⁴⁸

In his statement announcing his decision to ratify the Kyoto Protocol, Chrétien spoke in terms consistent with the country’s self-image and its perception of its appropriate role on the world stage: “You say to them, Canada is a good citizen of the world.” The prime minister elaborated the basis of Canada’s support: “Because we believe in international institutions, we believed that we could play a positive role” (Canadian Press 2002). Chrétien defended his action, explicitly evoking his country’s international reputation: “[A potential successor] has no choice because it’s an international obligation we have. Canada is a country with a great reputation, that when we are involved internationally, we respect our word. It’s not a political gesture. It’s extremely important for future generations” (Toulin 2002).

A Canadian polling firm echoed these sentiments in its report of Canadian public opinion on the Kyoto Protocol in advance of ratification: “A majority of Canadians say that Canada should live up to our international commitments even if there are associated economic costs.” The firm concluded, “our research clearly shows that multilateralism and the environment are core values of Canadians.”⁴⁹ US efforts, as they did in Europe, functioned to steel independent-minded Canadians to support the Kyoto Protocol, even though Canada’s emissions had grown sharply, much like the United States.

Collective action, public goods and leadership post-2012⁵⁰

While prestige and reputational concerns were important drivers of the decision by the early leaders on climate change to ratify the Kyoto Protocol and, in the case of the Europeans, to enact emissions trading, their ability to sustain leadership on climate change hinges on the participation of other states, principally the United States, China, and India. Given the nature of the problem, non-hegemonic leadership on climate change is potentially fleeting.

The challenge of moving to a post-carbon economy is perhaps the most difficult collective action problem in the world, despite statements by some advocates that it is possible to wean ourselves off of carbon-based technologies at relatively low cost (Lovins 2004: 6). We have a set of technologies in transport, electricity, and home heating that are heavily dependent on fossil fuels, central to all of the economies on the planet, and for which affordable

substitutes are yet found wanting.⁵¹ As Victor has noted: "To understand the magnitude of the task, imagine your day without fossil fuels. No car; no electricity in most of the country; no air travel; no gas for cooking and heating" (Victor 2004: 105). Thus, despite European (and to a lesser extent Japanese and Canadian) leadership on this issue, the nature of the issue complicates the potential that these efforts can achieve long-term success.

Climate protection is a global public good with properties of non-rival and non-excludable benefits. Together, these attributes encourage free riding behavior and collective under-provision since states know that they can reap benefits of climate mitigation by waiting for others to act (Sandler 1997; 2004). Since the concentration of greenhouse gases is what matter, emissions reductions by any country benefit all countries. That said, the effects of climate change are asymmetric, and some countries stand to gain more from emissions reductions. While many developing countries are expected to be worse off as a result of more variable rains and extreme weather events, some nations like Russia are expected to gain from warmer temperatures and better conditions for agriculture. Asymmetries give those less affected bargaining power. It also gives leverage to those responsible for the problem, particularly if they are too powerful to be coerced to cooperate (Mitchell and Keilbach 2001). This has given major emitters veto power in the climate regime since advocates know their participation is needed and enforcement mechanisms are weak (Raustiala 2005: 599).

Some goods may be impure public goods (either somewhat excludable or somewhat rival) or are club goods (partially rival and excludable), which may alleviate collective action problems. Club goods lend themselves to private provision since members can exclude non-members and control crowding through tolls or fees (Sandler 2004: 52). The European emissions trading system in a sense represents a club good, creating a fixed quantity of emissions credits that only Kyoto members can exchange. Thus, some features of the current climate regime may be resilient.

Like the ozone hole, climate change appears to be an issue characterized by being a pure public good which makes collective action more difficult (Sandler 2004: 60–68). Despite sharing these characteristics, the ozone hole proved to be much easier to address. CFCs, the chemical responsible for thinning of the ozone layer, were important in refrigeration and aerosols but not as central to modern economies. Indeed, CFC production was highly concentrated with a single firm, Dupont, having a large share of the global market. Unlike petroleum, substitutes were soon ready for CFCs. Perhaps the most important difference, the benefit–cost ratio of dealing with the ozone problem was thought to be more favorable. While the costs of controlling CFC emissions were manageable, the benefits of avoided skin cancers and damages to fisheries and agricultures were so large that major CFC producers like the United States had a unilateral incentive to reduce their emissions (Barrett 2003: 228, 379; Sandler 2004: 224). Aside from differences in the perceived benefits of emissions reductions, climate mitigation would also impose concentrated

costs on carbon-intensive sectors of the economy while providing diffuse public benefits, giving the fossil fuel industry a strong incentive to defend their interests and the public only modest incentives to organize.⁵²

One problem that frequently undermines effective collective action is the number of players involved, which may reflect both the nature of the problem as well as the institutional response. This finding dates back to Mancur Olson's original studies of collective action in the 1960s (Olson 1965). As Sandler argues, a few important holdouts can undermine effective action: "Large-numbers externalities are more complicated to correct than small-number externalities, because a greater number of interdependencies must be identified, valued, and compensated" (Sandler 1997: 42). In one sense, larger numbers can potentially facilitate agreement by making it easier to find compensatory concessions one can make across issues.⁵³ However, as Koremenos and her co-authors note: "Large numbers raise questions about how to share both the costs and the benefits of cooperation, especially when some actors are richer, bigger, or more powerful than others" (Koremenos, Lipson, and Snidal 2001: 765). Victor, House, and Joy note the effect of large numbers in the climate arena: "Global agreements are also vulnerable to exit when commitments become inconvenient (such as when the United States abandoned the Kyoto process)" (Victor, House, and Joy 2005). Because it is costly to punish defectors, enforcement itself is a public goods problem (Sandler 1997: 32. See also Guzman 2002: 1869). As a result, it is very difficult to create a self-enforcing international environment agreement when there are large number of players and large gains from cooperation (Barrett 2003: 294).

Certainly all nations produce greenhouse gases and contribute, albeit unequally, to the problem. The framework convention—the UNFCCC—and the more exclusive Kyoto Protocol have large numbers of parties: 192 and 182 respectively. Decision rules are typically by consensus, though some decisions may be subject to supra-majority decisions. With such large numbers of players involved, there is a tendency for the negotiations to be driven to the lowest common denominator. This creates what Barrett terms a tension between breadth and depth: "Countries can reach a consensus around a weak agreement, or they can negotiate a more potent but incomplete agreement" (Barrett 2003: 292). Non-participation by the US and Australia and the lack of commitments for countries like China and India is an intermediate form, a regime of commitments for the few and voice opportunities for the many. However, the regime may be both overly and insufficiently inclusive, too many bit players and not enough main characters.

As a consequence, hegemonic leadership by the Europeans may be unstable. If other states increase their emissions while Kyoto members' engage in self-abnegating behavior, the regime will contribute little to amelioration of the problem. Moreover, there is a broader concern of trade leakage (Barrett 2003: 310), where industries of Kyoto countries might suffer such competitiveness losses that they will consider relocating to the free-riders (Pew Center on

Global Climate Change 2005b: 17–18). These concerns may become more salient as countries like Germany grapple with low economic growth, high labor costs, and persistent unemployment.⁵⁴ That said, the European-wide emissions trading system may survive because the EU market is sufficiently large to have market power. Unlike the security arena, the economic arena is more bipolar (and, with the rise of China, increasingly multipolar).⁵⁵

As long as the private sector thinks the political commitment to the trading system is strong, the new currency of carbon credits will retain value and multinationals with European operations will have to conform to EU standards. However, the experience with the national allocation plans and carbon market prices in 2006 undermined confidence in the scheme. By the time this piece is published, we should know more about whether or not the Europeans went ahead with more credible allocation plans or succumbed to short-run competitiveness concerns.

The steadiness of the Europeans' commitment to the EU ETS is perhaps the most the important way their leadership can be sustained. While the Japanese have stepped up the pace of their use of Clean Development Mechanism (CDM) flexibility mechanisms (see note 17: Masaki 2006), only the Europeans have established a more durable first-mover advantage through the emissions trading program. Because the scope and scale of the EU ETS is sufficiently large, non-Kyoto big emitters will have to engage the already existing EU ETS architecture and the emergent rules for how credits and trades from outside the EU are regarded. To the extent that Americans and others want their actions to be recognized in Europe, this gives the Europeans some leverage.

However, as Tony Blair found in the lead-up to the G8 Summit at Gleneagles, the Europeans possess limited power over most other aspects of US climate policy. On their own, they are also unlikely to sway China or India. Unless US domestic political dynamics change, the US will not succumb to European pressure, nor will the Chinese and Indians be willing to embrace more vigorous implementation of cleaner energy policies. Big emitters like the US, China, and India ultimately have bargaining leverage because their participation is needed for the problem to be addressed. Thus, they possess considerable scope to set the terms for the post-2012 era.

In 2005, Canada hosted the eleventh Conference of Parties and first Meeting of the Parties of the Kyoto Protocol since it entered into force. COP-11/MOP-1 produced desultory results. The agenda was to discuss what to do after the first Kyoto commitment period ends in 2012. After much debate, countries agreed to formal talks on the second commitment period under the Kyoto Protocol, and at the insistence of the United States, a separate set of informal talks under the UNFCCC to discuss non-binding measures for long-term cooperative action (Pew Center on Global Climate Change 2005a). While defenders of Kyoto held the former as proof that the process lives, the refusal of the US and other major emitters like Australia, China, and India to

participate in a meaningful way will in time shake the faith of markets and governments in Kyoto countries.

What then, in the best of worlds, could realistically be achieved for the post-2012 era? Climate politics in the United States, despite the Bush Administration's opposition to the Kyoto Protocol, have become more favorable to some sort of action on climate. The impact of Hurricane Katrina, the possible designation of the polar bear as a threatened species, the continued stories of ice melt in the Arctic, among other events in the natural world, have created a public impression of greater urgency. Al Gore's movie *An Inconvenient Truth* brought attention to the issue in an accessible way. The evangelical community increasingly embraced climate change as a concern. With the mid-term elections of 2006, the power dynamic in the US Congress changed, replacing climate nay-sayers like Senator James Inhofe of Oklahoma as chair of the Senate Environment and Public Works Committee with Democrats anxious to work on the issue. Together, these and other developments suggest US politics are primed for change (Barringer and Revkin 2007).

Many climate experts recognize the contours of the climate deal that needs to be made. While some aspects of the problem can be addressed in universal fora like the UNFCCC, the main conversation needs to be among the big emitters.⁵⁶ A handful of countries have the most impact on the climate problem. Just ten countries plus the European Union were responsible for more than 73 percent of all global greenhouse gas emissions in 2000.⁵⁷ Getting agreement among those players will go a long way towards addressing the problem. At the same time, such a process will not be unencumbered by the collective action problems of nearly 200 countries.

The contours of the agreement are reasonably clear. It includes technology transfer to India and China. India and China are currently building hundreds of new coal-burning power plants. They need to be rewarded with loans and grants to facilitate their acquisition of clean energy technology, including combined cycle coal gasification plants with the possibility of carbon sequestration and potentially civilian nuclear power technology. Western companies that produce those technologies need to have some way to profit from the sale of those technologies without their intellectual property being completely copied. At the same time, the United States must adopt a mandatory program, probably one of tradable permits, that puts a price on carbon and has the possibility of mapping up with the EU ETS and Kyoto flexibility mechanisms. Domestic policy change in the US may precede a broader deal on technology transfer.

In addition, rich countries must support an enhanced commitment to support adaptation measures in the poorest, most vulnerable countries so they can minimize the effects of climate change that are already, at this point, inevitable. Finally, governments must support investment in alternative energy technologies to hasten the transition to a post-carbon economy. Among the most promising are biofuels derived from cellulosic ethanol, carbon sequestration, and light, super-strong carbon fiber automobile frames.⁵⁸

It is unclear if any country in the world is prepared to invest the necessary amounts to mitigate and adapt to climate change in any meaningful way.⁵⁹ While the Europeans have gone further than any other political actor to address the problem, they have capped the costs they have been willing to incur more than their emissions. While European efforts to sustain the credibility of the emissions trading regime in 2007 are important, the next moves are likely to lie with the United States, whose actions are sadly indispensable given the nature of the problem.

Conclusion

European leadership on climate change is possible because there is no hegemony in the economic sphere. While the world is militarily unipolar, the economic arena is more bipolar. The European Union has sufficient economic capacity to set rules that a significant proportion of the multinational private sector has to obey. In the short run, given uncertainty about potential policy change in the United States, these policies are reasonably robust to competitive pressures. The EU can impose rules on firms without much risk of "trade leakage" or firm relocation to countries with cheaper costs of production.

However, given that the climate problem is a global public good in which non-Kyoto Parties are responsible for nearly a majority of world greenhouse gas emissions, this leadership position is tenuous and will only be durable if the United States, China, and India ultimately join whatever succeeds the Kyoto Protocol. Thus, while constructivist insights about prestige and reputation can provide great insight into the motivations of early leaders to ratify the Kyoto Protocol and adopt some climate policies, rationalist insights on public goods problems demonstrate how difficult it is to sustain non-hegemonic leadership for a problem that demands the participation of the world's dominant power and, until overtaken by China, the largest emitter of greenhouse gases.

Notes

- 1 Though knowledge of the potential for human-inspired climate change was recognized in the 1950s (and even as far back as 1898), the issue did not really begin to capture the attention of the scientific community or policymakers until the late-1970s (Morrissey 1998).
- 2 The "greenhouse effect" is a natural phenomenon that warms the earth to be sufficiently habitable for life. The greenhouse effect refers to the atmospheric gas conditions around the earth, which are transparent to incoming ultraviolet radiation but absorb large amounts of outgoing infrared radiation (heat), thereby trapping it in the atmosphere and raising ambient temperatures. Global warming refers to an enhanced warming effect resulting from increased concentrations of greenhouse gases (GHGs) that, in turn, keep more heat in the atmosphere (Schneider 1997: 55). Global surface temperature data show a 0.5°C increase over the last 100 years and a 30 percent increase in GHG in the past 200 years (Shogren and Toman 2000, 5).

- 3 The most influential of the many research efforts on climate change has been the Intergovernmental Panel on Climate Change (IPCC) established in November 1988. The IPCC is composed of more than 2500 scientists who, rather than conduct independent research of their own, operate through assessment of published and peer-reviewed studies. It has published four influential assessments (1990, 1996, 2001 and 2007) that have successively sharpened their assessment of the human role in climate change (www.ipcc.ch). For a detailed review of the history of scientific inquiry on climate change, see Morrissey 2000, 42.
- 4 The UNFCCC was signed by 154 nations at Rio and later ratified by 192 parties. It came into force in March 1994 (Sarewitz and Pielke 2000). On September 8, 1992, President Bush transmitted the UNFCCC to the Senate for advice and consent and the full Senate consented to ratification on October 7, 1992, with a two-thirds majority vote (Justus and Fletcher 2001).
- 5 Though emissions reductions pledges at Rio were non-binding, 1990 emissions levels were established as the base year to which countries should seek to stabilize emissions.
- 6 The IPCC published their second report in 1996, which concluded there was a "discernible human influence on global climate" (IPCC 1996, quoted in Shogren and Toman 2000, 7). Average surface temperatures were projected to rise by between 1°C and 3°C by 2100 over 1990 levels. To stabilize emissions at twice pre-industrial levels, the report concluded that global emissions needed to be 50 percent below then current levels. Climate modeling is a complex business involving poorly understood feedback mechanisms between land masses, bodies of water and the atmosphere. Estimates of impact are further complicated because warming effects on human populations and ecosystems are not uniformly distributed; some areas may gain from higher temperatures and more rainfall while others will suffer from drought, increased incidents of pests and disease vectors, species extinction and, in the case of small island nations, submersion as a result of higher sea levels (Morrissey 1996).
- 7 There have now been thirteen negotiating rounds or Conference of Parties (COP) meetings of the UNFCCC since 1995: COP-1 Berlin (Spring 1995); COP-2 Geneva (July 1996); COP-3 Kyoto (December 1997); COP-4 Buenos Aires (November 1998); COP-5 Bonn (October–November 1999); COP-6 The Hague (November 2000); COP-7 Marrakesh (October–November 2001); COP-8 New Delhi (October–November 2002); COP-9 Milan (December 2003); COP-10 Buenos Aires (December 2004); COP-11 Montreal (December 2005), COP-12 Nairobi (November 2006), and COP-13 in Bali (December 2007). COP-14 will take place in December 2008 in Poznan, Poland, with an all-important COP-15 to define the post-Kyoto Protocol rules taking place in Copenhagen, Denmark, in 2009. COP-11 represented the first Meeting of Parties (MOP-1) since Kyoto entered into force.
- 8 JUSSCANNZ consisted of Japan, the United States, Switzerland, Canada, Australia, Norway, and New Zealand. Later, this group came to be known as the "Umbrella Group" (Oberthür and Ott 1999, 17–18).
- 9 Oberthür and Ott 1999, 117. This meant that Japan's 5 percent reduction would have been 2.5 percent, Germany's 3.7 percent, etc.
- 10 Annex I countries, named after an annex in the Framework Convention ["Appendix B" countries in the Kyoto Protocol], are the thirty-eight industrialized countries plus the European Union. For a full list, see UNFCCC undated.
- 11 The six gases included CO₂; methane (CH₄); nitrous oxide (N₂O); hydrofluorocarbons; perfluorocarbons, and sulphur hexafluoride (SF₆) (Fletcher 2001).
- 12 In 1990, US carbon emissions were estimated to be 1,337 millions of metric tons. A 1998 Business Roundtable estimated US emissions would rise to 1,803mmt

- without a change in consumption patterns. The 7 percent reduction would have required a reduction to 1,243mmt, 41.9 percent lower emissions than the 2010 projection (Yandle 1999, 24). Projections of CO₂ emissions by other studies suggested reductions necessary to meet the Kyoto Agreement vary from 21 percent to over 30 percent from "business as usual" 2010 emission levels. The 7 percent reduction based on the 1990 base year was for CO₂, methane, and nitrous oxide. A 1995 base year was used to calculate reductions for other greenhouse gases, hydrofluorocarbons (HFCs), perfluoro-carbons (PFCs), and sulfur hexafluoride (SF₆) (Parker and Blodgett 1998).
- 13 Moreover, as noted above, the Kyoto reduction moved forward the base year from 1990 to 1995 for emissions reductions for three greenhouse gases. Because emissions for those gases had risen, this change reduced the US obligation still further, perhaps to 3 percent (Ott 1998).
 - 14 The US Energy Information Agency projects that China and India's emissions will increase by 136 percent and 103 percent respectively between 2000 and 2025 to reach 1,844MtC (million tons of carbon) and 506MtC, 17.8 percent and 4.8 percent of the world's total (WRI 2004).
 - 15 Fletcher 2001. The resolution also suggested the US should not be signatory to any global warming treaty that did "serious harm" to the US economy (Reiner 2001). See also the text of the S. Res. 98 at thomas.loc.gov under the 105th Congress.
 - 16 The idea behind emissions trading is that it may be more expensive for different firms and different countries to comply with Kyoto reductions targets. Thus, where it is cheap for one firm (or country) to reduce emissions and expensive for another, then emissions reductions should occur where it is cheapest to do so. Through trading, the firm (or country) for whom emissions reductions is expensive can purchase emissions credits from the other and thereby reduce total abatement costs (Weiner 1997).
 - 17 The two other flexibility mechanisms elaborated at Kyoto included joint implementation (JI) and the clean development mechanism (CDM). JI, launched with the Framework Convention, is "project-based activity in which one country can receive emission reduction credit when it funds a project in another country where the emissions are actually reduced" (Fletcher 2001). Whereas JI was restricted to developed countries, CDM provisions in Article 12 of Kyoto allowed for developing country emissions reductions to apply to developed country emission reduction targets (Toman and Cazorla 1998).
 - 18 After the COP-5 meeting in Buenos Aires, in which both Argentina and Kazakhstan announced their decision to agree to voluntary emissions reductions, Clinton signed the Kyoto Protocol (Depledge 1999).
 - 19 Guegle, Huttunen and Ritter 2003, 12. The Germans and British were willing to accept such steep reduction targets in part because structural changes in their economies (reunification in the former and fuel switching from coal to gas) radically reduced their emissions of greenhouse gases in the early 1990s.
 - 20 The US initially asked for 320 million tons of carbon (MtC) credits and then subsequently reduced its demand to 125MtC and then 75MtC during the negotiations. The US delegation, led by Frank Loy, reportedly went even lower to 40 or 50MtC (Haimson 2000; Kerr 2000; Müller 2000).
 - 21 Washington Post 2001. Whitman had publicly stated the Administration's serious consideration that it would honor the Bush campaign pledge to regulate power plant emissions of CO₂. In his speech "A Comprehensive National Energy Policy" delivered on September 29, 2000 in Saginaw, Michigan, then candidate Bush said: "we will require all power plants to meet clean air standards in order to reduce emissions of sulfur dioxide, nitrogen oxide, mercury, and carbon dioxide within a reasonable period of time . . ." (Bush 2000).
 - 22 Pianin 2001a. Among the changes were provisions allowing for market mechanisms (emissions trading provisions) as well as carbon sinks (forest reserves) as ways to meet CO₂ reduction commitments. In addition, penalties for failure to comply were also negotiated. The agreement salvaged the Kyoto framework for the moment. There were fears that Japan would drop out since it takes many of its cues on climate change from the United States. Pianin 2001d. The Bonn agreement allowed Annex I countries to receive credits for forests, the Canadians receiving a cap of 12 millions tons per year, Japan 13 millions tons, and Russia no more than 17.63 millions tons. At Marrakech, the Russians successfully pushed to have their credits for forest reserves doubled (Dessai 2001). Those credits were worth about 10 percent of Canada's base year emissions and 4 percent of Japan's base year emissions (Pew Center on Global Climate Change 2001a; 2001b).
 - 23 In 1990, the Russian Federation's CO₂ emissions accounted for 17.4 percent of Annex I country emissions (UNFCCC undated).
 - 24 As of December 2006, 169 countries had ratified the Kyoto Protocol.
 - 25 A review in 2005 was initiated to examine which additional sectors would be covered; Aviation is likely to be included in the third phase. Other gases potentially may be included.
 - 26 Out of twenty-five countries, only the UK and Germany asked their industries to reduce their emissions below historic levels (typically base years 2000–2002). The other member states' allocations allowed for increases in emissions (Climate Action Network Europe 2006, 5).
 - 27 The mild winter which depressed energy demand also contributed to a slight drop in prices at year's end. The price per ton was €5.48 in January 2007 (Budapest Business Journal 2007).
 - 28 The Commission demanded that the allowances on average be 7 percent below what the provisional NAP's proposed (EDIE 2006).
 - 29 The third phase of the EU ETS will take effect in 2013. The emissions reductions criteria are expected to be strengthened to include more sectors (Aviation is already slated to be covered under the ETS beginning in 2012) and with extensive auctioning (up to 60 percent) of permits. However, France and Germany have increasingly become concerned that the scheme will lead to carbon leakage, i.e. diversion of industry operations and investment to out of the EU area, and seeking exemptions for heavy industry (EurActiv.com 2008).
 - 30 This refers to the fifteen EU countries that initially ratified the Kyoto Protocol before the EU expansion to twenty-five countries in 2004.
 - 31 After Kyoto was ratified, the plan Japan had in place to reduce its emissions envisioned that 4.4 of the 6 percent reduction in emissions would occur through domestic efforts. Nearly 90 percent of that total was projected to come from carbon sinks. The remaining 1.6 percent would come from Kyoto mechanisms either by buying emissions credits from abroad or by accruing credits from financing JI or CDM emissions-reducing projects overseas. Japan's export-import bank was financing a number of these projects in 2006 in China as the Japanese sought to meet its Kyoto commitments (Japan Times 2002; Masaki 2006).
 - 32 The other members are Australia, China, India, and South Korea.
 - 33 For rationalist arguments on climate change and the Kyoto Protocol, see Cass 2002; von Stein 2005b.
 - 34 A December 2005 PIPA poll found that 76 percent of Americans regarded climate change as a serious problem compared to 90 percent of Canadians; 98 percent of Japanese; 94 percent of French and Italians; 93 percent of Germans; 92 percent of Poles; 91 percent of Brits; and 89 percent of Finns (Program on International Policy Attitudes [PIPA] 2006). In 2006, 56 percent of Europeans and 46 percent of Americans regarded "global warming" as an "extremely important

- threat" in the next ten years. Another 34 percent and 36 percent respectively viewed it as an "important" threat. Thus, more than 80 percent of the public in both Europe and the United States see global warming as an important threat. That said, 16 percent of Americans said global warming was not a threat at all, while only 7 percent of Europeans said that (German Marshall Fund 2006). The European data reflected twelve countries: Germany; France; Great Britain; Italy; the Netherlands; Poland; Portugal; Slovakia; Spain; Turkey; Bulgaria, and Romania. A 2006 Pew survey found a broader gap between the US, some Europeans, and the Japanese on their personal concerns about climate change (Pew Research Center 2006). Elsewhere, I have explored the degree to which US publics have similar views on climate change than their European allies (Busby 2003; Busby and Ochs 2004).
- 35 On national role conceptions, see Holsti 1987; Krotz 2001.
- 36 Prestige can be thought of as consistent with its dictionary definition: "the level of respect at which one is regarded by others; standing." See *The American Heritage Dictionary*, www.thefreedictionary.com.
- 37 The hosts rotate. In 2008, Japan played host; Germany in 2007, Russia in 2006, the UK in 2005, the US in 2004; France in 2003; Canada 2002; Italy 2001; Japan in 2000, and Germany in 1999, and so on.
- 38 Sandalow 2003. Sandalow also served jointly as Senior Director for Environmental Affairs, National Security Council, and Associate Director for the Global Environment, White House Council on Environmental Quality (Purvis 2003).
- 39 See the statement by the Environmental Defense Fund press statement "commending" the Vice President and the protocol as a "good start." See also the statements from the Natural Resources Defense Council, the Union of Concerned Scientists, and the World Resources Institute. Reproduced in Taalab 1998: 109, 135, 153, 156.
- 40 See statement of CAN, Greenpeace, and the World Wide Fund for Nature included in Taalab 1998: 107, 129, 158, 164.
- 41 I thank Andrew Moravcsik for pointing out the potential similarities between my argument and James Morrow's. See Morrow 1994; 1999.
- 42 On shaming and rhetorical entrapment, see Keck and Sikkink 1998; Schimmelfennig 2001; Schimmelfennig 2003. Rhetorical entrapment is similar to the mechanisms of imperial overstretch and blowback described by Snyder 1991.
- 43 I thank Kendall Stiles for this formulation.
- 44 One scholar described the search for an appropriate international role as something of a "national obsession" in the 1980s (Ohta 1995: 247). Similar dynamics are discussed by Tamamoto 1999.
- 45 Lincoln 1993; Ohta 1995. This section builds on Busby 2004; Busby 2005.
- 46 Nakao 2004. The importance of domestic public pressure was highlighted also by Sugiyama 2003.
- 47 While the Canadian Parliament voted in December 2002 by a margin of 195–77 to support ratification of the Kyoto Protocol, the decision was ultimately Chrétien's (BBC 2002a).
- 48 BBC 2002a. The announcement to ratify was twinned with an expansion of the country's national parks.
- 49 Globescan (formerly Environics International) 2002. The poll found the percentage of Canadians who would disapprove of US-like withdrawal from Kyoto fell from 70 percent to 59 percent between May and November 2002. Anti-ratification forces, particularly in western rural provinces, had succeeded in shifting some segments of Canadian public opinion but not enough to have a majority.
- 50 This section draws from material in Busby 2006a.
- 51 Carbon-based fuels provides more than 80 percent of global energy needs in 2004 (International Energy Agency 2006).
- 52 On concentrated costs, see Wilson 1980. On the asymmetries of power and mobilization by large and small groups, see Olson 1965: 127–8.
- 53 This is known as "issue linkage" or "side payments" (Keohane 1984: 91).
- 54 Euro-pessimists suggest low growth, high unemployment, and a rapidly aging population are bad omens for the European economy. The average growth rate of European Union between 2002 and 2006 was 1.76 percent, compared to 4.14 percent worldwide, 3.06 percent in the United States, and 8.9 percent in China (IMF 2005).
- 55 In purchasing power terms, the GDP of the European Union in 2006 was 20.37 percent of the world's total, the United States was 20.58 percent, and China's was 14 percent (IMF 2005).
- 56 Bodansky 2001; Pew Center on Global Climate Change 2003; Stewart and Wiener 2003; Victor 2006; Benedick 2007. Baumert and Kete make a similar claim but focus on those historically responsible for greenhouse gas emissions rather than new emitters like China and India (Baumert and Kete 2001).
- 57 This is based on 2000 data for six greenhouse gases, excluding land-use changes. The US was responsible for 20.38 percent of global emissions; China 14.72 percent; EU-25 14.07 percent; Russia 5.68 percent; India 5.60 percent; Japan 4.01 percent; Brazil 2.52 percent; Canada 2.03 percent; Mexico 1.56 percent; Korea 1.54 percent, and Indonesia 1.50 percent (WRI 2006).
- 58 Lugar and Woolsey 1999; Lovins 2004, 6. Benedick suggests that a tax of \$8 per ton on carbon (equivalent to \$.02 cents per gallon of gas) would generate \$12 billion per year in revenue for such an investment program. That would be six times the amount the US federal government spent on energy R&D (Benedick 2007, 39).
- 59 The Stern Report to the UK government estimated that the annual costs by 2050 of stabilizing emissions concentrations between 500 and 550 parts per million will be 1 percent of world GDP. The risks of doing nothing, the report concluded, would be like losing 5 percent of GDP now and forever and potentially much worse (HM Treasury 2006). Economist Richard Nordhaus, however, has criticized the report for failure to keep with conventions on discounting of time. The result of that modeling choice of a near zero discount is to grossly magnify the present effects of climate change that are, in fact, projected to occur in the distant future. Nordhaus favors action on climate change but suggests it ramp up over time rather than encourage draconian steps now, as the Stern Report suggests (Nordhaus 2006).

References

- Barrett, S. (2003) *Environment and Statecraft: the Strategy of Environmental Treaty-making*. Oxford and New York: Oxford University Press.
- Barringer, F. and Revkin, A. (2007) "Bills on climate move to spotlight in new Congress," *New York Times*. January 18.
- Baumert, K. and Kete, N. (2001) *The US, Developing Countries, and Climate Protection: Leadership or Stalemate?* Washington, DC, World Resources Institute. Available at: <http://pdf.wri.org/usdcs.pdf>.
- BBC (2002a) *Canadian Parliament Backs Kyoto Protocol*. Available at: <http://news.bbc.co.uk/1/hi/world/americas/2564723.stm>.
- (2002b) *Japan Ratifies Kyoto Pact*, BBC News. Available at: <http://news.bbc.co.uk/1/hi/world/asia-pacific/2024265.stm>.
- (2007) *EU plans industrial revolution*. Available at: <http://news.bbc.co.uk/1/hi/sci/tech/6247199.stm>.

- Benedick, R. (2007) "Avoiding gridlock on climate change," *Issues in Science and Technology*, 23, 2: 37–40.
- Betsill, M. (2000) "Greens in the greenhouse: environmental NGOs, norms and the politics of global climate change." Unpublished PhD dissertation, Boulder, CO, University of Colorado.
- Bodansky, D. (2001) "Bonn voyage: Kyoto's uncertain revival," *The National Interest* (Fall): 45–55.
- Budapest Business Journal (2007) *Emission Permits Fall to Record as Surplus Sold, Gas Declines*. Available at: www.bbjonline.hu/index.php?id=20990
- Bueckert, D. (2002) "Kyoto vote declared a matter of confidence," *Niagara Falls Review*. December 9.
- Busby, J. (2003) "Climate change blues: why the US and Europe just can't get along." *Current History*. March: 113–118.
- (2004) *New Troubles for the West: Debt Relief, Climate Change, and Comparative Foreign Policy in the post-Cold War Era*. Washington DC, Government Department, Georgetown.
- (2005) "Good states: prestige and reputational concerns of major powers under unipolarity." American Political Science Association, Washington DC.
- (2006a) "Climate change and collective action: troubles in the transition to a post-oil economy." *Saint Antony's International Review*, 1, 2: 35–55.
- (2006b) "Memo on reputation." Workshop on Rationality and Reputation, Princeton University, Woodrow Wilson School for Public and International Affairs.
- (2006c) "On moral stands and grandstands: relations among the rich over poor country problems." International Studies Association, San Diego.
- and Ochs, A. (2004) "Mars, Venus down to Earth: understanding the transatlantic climate divide," in *Beyond Kyoto: Meeting the Long-Term Challenge of Global Climate Change*. David Michel. Washington: Center for Transatlantic Relations, Johns Hopkins University (SAIS).
- Bush, G.W. (2000) *Comprehensive National Energy Policy*, Saginaw, Michigan. Available at: www.web.archive.org/web/20060630031920/www.bcse.org/climateact2.htm
- Canadian Press (2002) "Chrétien officially inks Kyoto: takes shot at opponents of plan." *Sault Star (Sault Saint Marie Ontario)*. December 17.
- Cass, L. (2002) "The dilemmas of international climate commitments and energy reform in Germany, the UK, and the US." International Studies Association, New Orleans.
- CBC (2002) *Canada's Kyoto Documents Delivered to UN*, CBC News. Available at: www.cbc.ca/world/story/2002/12/17/kyoto_delivered021216.html
- CBC (2007) *Cabinet shuffle taps Baird for contentious environment file*, CBC News. www.cbc.ca/canada/story/2007/01/04/cabinet-shuffle.html
- Climate Action Network Europe (2006) *National Allocation Plans 2005–7: Do They Deliver?* Available at: www.climnet.org/EUenergy/ET/NAPsReport_Summary0306.pdf
- Clinton, W.J. (1997) *President Clinton Announces the United States Climate Policy*. Washington, DC: The White House. Available at: www.web.archive.org/web/19981203092708/www.whitehouse.gov/Initiatives/Climate/19971022-6127.html
- Depledge, J. (1999) "Coming of age at Buenos Aires: the climate change regime after Kyoto." *Environment*, 41, 7: 15–19.

- De Souza, M. (2006) *Japan's Proposal Could Weaken Kyoto Pact*, CanWest News Service. Available at: www.canada.com/vancouvernews/story.html?id=b4727f65-f4d7-4dac-a2d2-67b933674fe4.
- Dessai, S. (2001) *The Climate Regime from The Hague to Marrakech: Saving or Sinking the Kyoto Protocol?* Tyndall Centre for Climate Change Research. Available at: www.tyndall.ac.uk/publications/working_papers/wp12.pdf.
- Downs, G. and Jones, M.A. (2002) "Reputation, compliance, and international law." *Journal of Legal Studies*. XXXI: S95–S114.
- , Locke, D.M., and Barsom, P.N. (1996) "Is the good news about compliance good news about cooperation?" *International Organization*, 50, 3: 379–406.
- Drozdiak, W. (2000) "Global warming talks collapse." *Washington Post*.
- EDIE (2006) *New Round of Carbon Trading Seeks to Introduce Scarcity to Market*. Available at: www.edie.net/news/news_story.asp?id=12346.
- Energy Business Review Online (2006) *EU Emissions Trading Failing in Current Climate*. Available at: www.energy-business-review.com/article_feature.asp?guid=7820D2C8-9C77-42F6-A9B5-D66CC822232A.
- EurActiv. (2008) *EU Emissions Trading Scheme*. Available at: www.euractiv.com/en/climate-change/eu-emissions-trading-scheme/article-133629
- European Commission (2001) *Commission Reacts to US Statements on the Kyoto Protocol*. Available at: www.delcan.ec.europa.eu/en/press_and_information/press_releases/2001/01PR004.shtml
- European Environment Agency (2006) *Greenhouse Gas Emissions Trends and Projects in Europe 2006*. Available at: www.reports.eea.europa.eu/eea_report_2006_9/en
- Farrell, J. and Rabin, M. (1996) "Cheap talk." *The Journal of Economic Perspectives*, 10, 3: 103–118.
- Fearon, J. (1994) "Domestic political audiences and the escalation of international disputes." *American Political Science Review*, 88, 3: 577–592.
- (1997) "Signaling foreign policy interests." *Journal of Conflict Resolution*, 41, 1: 68–90.
- Fekete, J. (2006) *Harper Hints at Ditching Kyoto Accord*. *Calgary Herald*. Available at: www.canada.com/calgaryherald/news/story.html?id=b0480bad-6377-441e-94d6-757316019aea.
- Fletcher, S. (2001) *RL30692: Global Climate Change: The Kyoto Protocol*. Congressional Research Service. Available at: www.cnire.org/nle/CRSreports/climate/clim-25.cfm
- German Marshall Fund (2006) *Transatlantic Trends 2006*. Available at: www.transatlantictrends.org/trends/doc/2006_TT_Topline%20Report%20FINAL.pdf
- Globescan (formerly Environics International) (2002) *Independent Poll Shows Drop in Kyoto Support but Little Trust in Proponents of Alternatives*. Available at: www.globescan.com/news_archives/EIL_Kyoto_PR-Fin_Nov_22.pdf.
- Goldsmith, J.L. and Posner, E.A. (2003–2004) "International agreements: a rational choice approach." *Virginia Journal of International Law*, 44, 3113: 113–143.
- (2005) *The Limits of International Law*. Oxford and New York: Oxford University Press.
- Grubb, M. (2006) Personal communication. March 15.
- , with Vrolijk, C. and Brack, B. (1999) *The Kyoto Protocol: A Guide and Assessment*. London: Royal Institute of International Affairs.

- Gugele, B., Huttunen, K. and Ritter, R. (2003) *Annual European Community Greenhouse Gas Inventory 1990–2001 and Inventory Report 2003*. European Environment Agency. Available at: www.reports.eea.europa.eu/technical_report_2003_95/en
- Guzman, A.T. (2002) "A compliance-based theory of international law." *California Law Review*, 90: 1823–1887.
- (2005) "The design of international agreements," *The European Journal of International Law*, 16, 4: 579–612.
- Haigh, N. (1996) "Climate change policies and politics in the European Community," *Politics of Climate Change: A European Perspective*. Timothy O'Riordan and Jill Jager. London: Routledge, pp. 155–185.
- Haimson, L. (2000) "This just in," *Grist Magazine*.
- HM Treasury (2006) *Stern Review of the Economics of Climate Change*. Available at: www.hm-treasury.gov.uk/independent_reviews/stern_review_economics_climate_change/stern_review_report.cfm
- Holsti, K.J. (1987) "Toward a theory of foreign policy: making the case for role analysis," *Role Theory and Foreign Policy Analysis*. Stephen G. Walker. Durham [N.C.]: Duke University Press, pp. 5–43.
- IMF (2005) *World Economic Outlook*. Available at: www.imf.org/external/pubs/ft/weo/2005/01/data/index.htm
- International Energy Agency (2006) *Key World Energy Statistics 2006*. Available at: www.iea.org/textbase/nppdf/free/2006/key2006.pdf.
- IPCC (2007) *Climate Change 2007: The Physical Science Basis—Summary for Policymakers*, Contribution of Working Group I to the Fourth Assessment Report of the IPCC. New York: Cambridge University Press. Available at: www.ipcc-wg1.ucar.edu/wg1/wg1-report.html
- Japan Times (2002) *Toothless Global-Warming Bill*. Available at: <http://search.japantimes.co.jp/cgi-bin/ed20020501a1.html>.
- Justus, J.R. and Fletcher, S.R. (2001) *IB89005: Global Climate Change*, CRS Issue Brief for Congress. Available at: www.ncseonline.org/NLE/CRSreports/Climate/clim-2.cfm?CFID=12157640&CFTOKEN=35944970.
- Kameyama, Y. (2001) "Japan: struggling to achieve 6 percent." *German Foreign Policy in Dialogue* (6): 19–22.
- (2003) "Climate change as Japanese foreign policy: from reactive to proactive." *Global Warming and East Asia*. Paul G. Harris. London: Routledge, pp. 135–151.
- Kawashima, Y. (2001) "Japan and Climate Change: Responses and Explanations." *Energy and Environment*, 12, 2/3: 167–179.
- Keck, M.E. and Sikkink, K. (1998) *Activists Beyond Borders: Advocacy in International Politics*. Ithaca: Cornell University Press.
- Keohane, R.O. (1982) "The demand for international regimes." *International Organization*, 36, 2: 332–355.
- (1984) *After Hegemony: Cooperation and Discord in the World Political Economy*. Princeton, NJ: Princeton University Press.
- (1986) "Reciprocity in International Relations." *International Organization*, 40, 1: 1–28.
- Kerr, R.A. (2000) "Too little, too late, at the climate talks," *Science*, 290, 5497: 1663.
- Kono, Y. (2001) *Statement by Mr. Yohei Kono, Minister for Foreign Affairs, on the Remarks of the US Government concerning the Framework Convention on Climate Change Talks*, Ministry of Foreign Affairs. Available at: www.mofa.go.jp/announce/announce/2001/3/0329.html.
- Koremenos, B., Lipson C. and Snidal D. (2001) "The rational design of international institutions," *International Organization*, 55, 4: 761–799.
- Krotz, U. (2001) *National Role Conceptions and Foreign Policies: France and Germany Compared*. Harvard University. Available at: www.people.fas.harvard.edu/~ces/publications/docs/pdfs/Krotz.pdf
- Larson, D.W. and Shevchenko, A. (2005) "Status and power in a unilateral world," *American Political Science Association*, Washington, DC.
- Lebow, R.N. (2005) "Fear, interest, and honor: a theory of international relations," *American Political Science Association*, Washington, DC.
- Legro, J.W. (2005) *Rethinking The World: Great Power Strategies And International Order*. Ithaca: Cornell University Press.
- Levy, M.A. (1993) "European acid rain: the power of tote-board diplomacy," *Institutions for the Earth: Sources of Effective International Environmental Protection*. Peter M. Haas et al. Cambridge, Mass.: MIT Press, pp. 75–132.
- Lincoln, E.W. (1993) *Japan's New Global Role*. Washington: The Brookings Institution.
- Lovins, A.B. (2004) *Winning the Oil Endgame: Innovation for Profits, Jobs and Security*. Snowmass, CO: Rocky Mountain Institute.
- Lugar, R.G. and Woolsey, R.J. (1999) "The new petroleum," *Foreign Affairs*. January/February 1999: XX.
- Lynch, C. (2002) "EU ratifies global warming treaty," *Washington Post*. June 1.
- Markey, D. (2000) *The Prestige Motive in International Relations*. Princeton, NJ: Department of Politics, Princeton University.
- Masaki, H. (2006) *JBIC Also Bankrolls Kyoto Projects*, Ohmy News. Available at: http://english.ohmynews.com/articleview/article_view.asp?no=336209&rel_no=1.
- Midford, P. (2002) "The logic of reassurance and Japan's grand strategy," *Security Studies*, 11, 3: 1–43.
- Mitchell, R. and Keilbach, P.M. (2001) "Situation structure and institutional design: reciprocity, coercion, and exchange," *International Organization*, 55, 4: 891–917.
- Morrissey, W.A. (1996) *Global Climate Change: Adequacy of Commitments Under the U.N. Framework Convention and the Berlin Mandate*. Congressional Research Service. Available at: www.cnire.org/NLE/CRSreports/climate/clim-14.cfm
- (1998) *Global Climate Change: A Concise History of Negotiations and Chronology of Major Activities Preceding the 1992 U.N. Framework Convention*. Available at: www.cnire.org/NLE/CRSreports/climate/clim-6.cfm
- (2000) *RL30522: Global Climate Change: A Survey of Scientific Research and Policy Reports*. Available at: www.cnire.org/NLE/CRSreports/climate/clim-24.cfm
- Morrow, J.D. (1994) *Game Theory for Political Scientists*. Princeton: Princeton University Press.
- (1999) "The strategic setting of choices: signaling, commitment, and negotiation in international politics," *Strategic Choice and International Relations*. David A. Lake and Robert Powell. Princeton: Princeton University Press, pp. 77–114.
- Müller, B. (2000) *The Hague Climate Conference: Impressions of the North American Press Coverage*. Available at: www.wolfson.ox.ac.uk/~mueller/hague.pdf.
- Nakao, Y. (2004) Personal communication. April 5.
- Nordhaus, W. (2006) *The Stern Review on the Economics of Climate Change*. Available at: www.nordhaus.econ.yale.edu/stern_050307.pdf
- Oberthür, S. and Ott, H.C. (1999) *The Kyoto Protocol: International Climate Policy for the 21st Century*. Berlin: Springer.

- Office of the Press Secretary, the White House (1997) *Press Conference Transcript*. Available at: <http://clinton2.nara.gov/Initiatives/Climate/19971212-6024.html>.
- Ohta, H. (1995) *Japan's Politics and Diplomacy of Climate Change*. New York, Graduate School of Arts and Sciences, Columbia University.
- Olson, M. (1965) *The Logic of Collective Action: Public Goods and the Theory of Groups*. Cambridge: Harvard University Press.
- Ott, H.E. (1998) "The Kyoto protocol: unfinished business," *Environment* (July–August).
- Parker, L. and Blodget, J. (1998) *Global Climate Change: Reducing Greenhouse Gases—How Much from What Baseline?* Congressional Research Service. Available at: www.cnre.org/NLE/CRSreports/climate/clim-13.cfm
- Pew Center on Global Climate Change (2001a) *Conference of the Parties 6 (COP 6) Bis Bonn, Germany*, Pew Center on Global Climate Change. Available at: www.pewclimate.org/what_s_being_done/in_the_world/cop_6_germany
- (2001b) *Conference of the Parties 7 (COP 7) Climate Talks in Marrakech, Morocco*, Pew Center on Global Climate Change. Available at: www.pewclimate.org/what_s_being_done/in_the_world/cop_7_morocco/.
- (2003) *Beyond Kyoto: Advancing the International Effort Against Climate Change*. Available at: www.pewclimate.org/global-warming-in-depth/all_reports/beyond_kyoto
- (2005a) *COP 11 and COP/MOP 1 Montreal*. Available at: www.pewclimate.org/what_s_being_done/in_the_world/cop11/.
- (2005b) *The European Union Emissions Trading Scheme (EU-ETS) Insights and Opportunities*. Washington, DC. Available at: www.pewclimate.org/docUploads/EU%20ETS%20White%20Paper%20.pdf
- Pew Research Center (2006) *Conflicting Views in A Divided World*. Available at: <http://pewglobal.org/reports/pdf/DividedWorld2006.pdf>.
- Pianin, E. (2001a) "160 nations agree to warming pact US was on sidelines in Morocco talks." *Washington Post*. November 10.
- (2001b) "EPA chief lobbied on warming before Bush's emissions switch: memo details Whitman's plea for presidential commitment." *Washington Post*. March 27.
- (2001c) "US aims to oul out of warming treaty." *Washington Post*. March 28.
- (2001d) "Warming pact a win for European leaders negotiators." *Washington Post*. November 11.
- and Goldstein, A. (2001) "Bush drops a call for emissions cuts." *Washington Post*. March 14.
- Pomerance, R. (1989) "The dangers from climate warming: a public awakening." *Challenge of Global Warming*. Dean E. Abrahamson. Washington, DC: Island Press, pp. 259–269.
- Prodi, R. (2001) "Europe will act on warming pact despite the US." *International Herald Tribune*. Available at: www.iht.com/articles/2001/04/06/edprodi_ed2_.php
- Program on International Policy Attitudes (PIPA) (2006) *30-Country Poll Finds Worldwide Consensus that Climate Change is a Serious Problem*. Available at: www.worldpublicopinion.org/pipa/articles/btenvironmentra/187.php?nid=&id=&pnt=187
- Purvis, N. (2003) Personal communication, The Brookings Institution. October 2.
- Raustiala, K. (2005) "Form and substance in international agreements," *The American Journal of International Law*, 99, 3: 581–614.
- Reiner, D.M. (2001) "Climate impasse: how the Hague negotiations failed." *Environment*, 43, 2: 36–43.
- Reuters (2008) *Japan to buy excess Czech emissions allowance*, September 23. Available at: www.guardian.co.uk/business/feedarticle/7819158
- Sach, K. (2006) Personal communication. March 15.
- Sandalow, D. (2003) Personal communication, The Brookings Institution. October 10.
- Sandler, T. (1997) *Global Challenges: an Approach to Environmental, Political, and Economic Problems*. Cambridge and New York, NY: Cambridge University Press.
- (2004) *Global Collective Action*. Cambridge and New York: Cambridge University Press.
- Sarewitz, D. and Pielke, R. (2000) "Breaking the global-warming gridlock," *Atlantic Monthly*, July. Available at: www.theatlantic.com/issues/2000/07/sarewitz.htm.
- Schimmelfennig, F. (2001) "The community trap: liberal norms, rhetorical action, and the eastern enlargement of the European Union." *International Organization*, 51, 1: 47–80.
- (2003) *The EU, NATO, and the Integration of Europe: Rules and Rhetoric*. Cambridge: Cambridge University Press.
- Schneider, S. (1997) *Laboratory Earth*. New York: Basic Books.
- Schultz, K. (1998) "Domestic opposition and signaling in international crises." *American Political Science Review*, 92, 4: 829–844.
- Shigeru, S. and M. Nakayama. (2008) *Japan to Buy Emissions Credits from Czech Republic*, Bloomberg News. Available at: www.bloomberg.com/apps/news?pid=20601081&sid=a7s4z4qAsHzE&refer=australia
- Shimizu, Y. (2004) Personal communication. April 27.
- Shogren, J. and Toman, M. (2000) *Climate Change Policy*. Resources for the Future. Available at: www.rff.org/Documents/RFF-DP-00-22.pdf
- Simmons, B.A. (1998) "Compliance with international agreements." *Annual Review of Political Science*, 1, 1: 75–93.
- (2000) "International law and state behavior: commitment and compliance in international monetary affairs." *American Political Science Review*, 94, 4: 819–835.
- and Hopkins, D.J. (2005) "The constraining power of international treaties: theory and methods." *American Political Science Review*, 99, 4: 623–631.
- Snyder, J. (1991) *Myths of Empire: Domestic Politics and International Ambition*. Ithaca: Cornell University Press.
- Stewart, R.B. and Wiener, J.B. (2003) *Reconstructing Climate Policy*. Washington, DC: 2003.
- Sugiyama, T. (2003) *Climate Policy in Japan*. Brussels, CEPS. Available at: <http://ceps01.link.be/files/1>.
- Taalab, A. (1998) *Rising Voices against Global Warming*. Osaka, Global Development Research Center. First part available at: www.gdrc.org/ngo/azza/english/Part-I.pdf. Second part available at: www.gdrc.org/ngo/azza/english/Part-II.pdf.
- Tamamoto, M. (1999) "The uncertainty of the self: Japan at century's end." *World Policy Journal*, 2 (Summer): 119–128.
- Toman, M. and Cazorla, M. (1998) *The Clean Development Mechanism: A Primer*, Resources for the Future. Available at: www.weathervane.rff.org/solutions_and_actions/Developing_Countries/CDM_Primer.cfm
- Tomz, M. (2007) "Domestic Audience Costs in International Relations: An Experimental Approach." *International Organization* 61 (Fall): 821–840.
- Toulin, A. (2002) "New Democrats, Bloc help Grits pass Kyoto: 'Incredibly stupid'." *National Post*. December 11.

- UNFCCC (undated) *Kyoto Protocol*, UNFCCC. Available at: www.unfccc.int/kyoto_protocol/items/2830.php
- Victor, D.G. (2004) *Climate Change: Debating America's Policy Options*. New York, NY: Council on Foreign Relations.
- (2006) "Toward effective international cooperation on climate change: numbers, interests and institutions." *Global Environmental Politics*, 6, 3: 90–103.
- , House, J.C., and Joy, S. (2005) "A Madisonian approach to climate policy." *Science*, 309, 5472: 1820–1821.
- Van Shaik, L. and Egenhofer, C. (2003) *Reform Of The EU Institutions: Implications For The EU's Performance In Climate Negotiations*. Brussels: CEPS. Available at: www.ceps.be/index3.php.
- von Stein, J. (2005a) "Do treaties constrain or screen? Selection bias and treaty compliance," *American Political Science Review*, 99, 4: 611–622.
- (2005b) "Saving the environment? Ratification and compliance in the international climate change regime." *American Political Science Association*, Washington, DC.
- Washington Post (2001) "The warming debate." March 9.
- Weaver, A., McLean, G., and Lonergan, L. (2001) "Bush opens door for Canada," *The Leader-Post*. April 10.
- Weiner, J. (1997) *Designing Markets for International Greenhouse Gas Control*, Resources for the Future. Available at: www.rff.org/rff/Documents/RFF-CCIB-06.pdf
- Wilson, J.Q. (1980) *American Government: Institutions and Policies*. Lexington, MA: D.C. Heath.
- Wirth, T. (1996) Speech at Second Conference of the Parties Framework Convention on Climate Change, Geneva, Switzerland.
- WRI (2004) *CAIT—Climate Analysis Indicators Tool*, World Resources Institute. Available at: <http://cait.wri.org/>.
- (2006) *CAIT—Climate Analysis Indicators Tool Version 4.0*. Washington DC, World Resources Institute. Available at: <http://cait.wri.org/>.
- Yandle, B. (1999) "After Kyoto: a global scramble for advantage," *The Independent Review*, 4, 1: 19–40.
- Zapfel, P. (2006) Personal communication. March 15.

5 The global politics of precaution

Explaining international cooperation on biosafety

Robert Falkner

Introduction¹

America's retreat from environmental leadership has dealt a major blow to global environmental politics. As the world's largest economy and most powerful nation, the United States inevitably plays a crucial role in environmental diplomacy. But whereas in the 1970s and 1980s it led international efforts to combat environmental degradation, most notably against ozone layer depletion, it has more recently objected to important new treaties on biodiversity protection and climate change. The United States is only one of a few countries not to have ratified the 1992 Convention on Biological Diversity (CBD), and in 2001 withdrew from the 1997 Kyoto Protocol to the UN Framework Convention on Climate Change. Hopes for international environmental leadership today rest on European rather than American shoulders (DeSombre 2005; Falkner 2005).

Given America's decisive turn against multilateral environmental policy since the early 1990s, it is somewhat surprising to find that new international treaties have come into existence and international environmental policy-making has continued even in areas where the United States is resistant to taking on new international commitments. The Kyoto Protocol, which entered into force in February 2005, is but one prominent example (see chapter 4 by Busby in this volume). The Cartagena Protocol on Biosafety—the subject of this chapter—is another case in which the United States unsuccessfully opposed the creation of a binding international regime. Despite its status as the world's undisputed hegemon, the United States has failed to prevent such international initiatives creating new, often legally binding, international environmental rules. This experience of non-hegemonic environmental institution-building calls into question conventional theories of hegemonic stability and raises the question of how we can explain instances of international cooperation that run counter to the hegemon's interests and even manage to overcome hegemonic resistance.

The contributions to this book seek answers to this question with the help of specific case studies ranging from small arms to the International