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PRIVATE REGULATION IN THE GLOBAL ECONOMY

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Private Standards in the Climate Regime: The Greenhouse Gas Protocol

Jessica F. Green

Abstract

This paper seeks to explain the success of two NGOs in creating standards for calculating and reporting greenhouse gas (GHG) emissions at the level of an entire company. These emissions accounting standards, called the Greenhouse Gas Protocol, have been widely adopted by multinational firms, emissions reporting registries, and even an emissions trading scheme. The paper traces the widespread adoption of the standards, and then offers an explanation for this successful instance of private regulation. It presents a supply and demand model of private entrepreneurial authority—where private actors project authority without delegation by states. The two NGOs were successful rule-makers because they were able to meet a demand for three benefits to potential users of the standard: reduced transaction costs, first-mover advantage, and an opportunity to burnish their reputation as environmental leaders. The paper also explains the supply of private authority—that is, why we see entrepreneurial authority rather than delegation by states. The disagreement among developed countries on the appropriate role for emissions trading in the climate regime delayed action on developing firm-level accounting methodologies. Moreover, the relative weakness of the focal institution in the climate regime—the climate change Secretariat—meant that there was no obvious international organization to take up the task of creating new measurement tools.

KEYWORDS: private governance, regulation

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1. Introduction

Just as financial accounting measures the inflow and outflow of money, greenhouse gas accounting provides an inventory of gases that are put into and removed from the atmosphere. This paper traces the creation of the predominant greenhouse gas (GHG) accounting scheme, called the Greenhouse Gas Protocol. The Protocol was created by two non-governmental organizations (NGOs), namely the World Resources Institute (WRI) and the World Business Council on Sustainable Development (WBCSD), in extensive consultation with numerous firms, NGOs and government agencies. The net result of this process is the *Greenhouse Gas Protocol Corporate Accounting and Reporting Standard*, which has been widely adopted by emissions reporting schemes around the world. Virtually all GHG registries—which do not trade emissions, but simply require participants to report them—use some version of the Protocol.

This paper seeks to explain the success of WRI and WBCSD in creating *the* standard for GHG emissions accounting at the company level. Earlier work on financial accounting has shown that despite its technical nature, standard-setting is an inherently political process.¹ The creation of the Greenhouse Gas Protocol (or more simply, “the Protocol”) is similarly political, involving negotiation and conflict among myriad actors—including states. Although the Protocol is a case of *private* regulation, the paper shows that states played an important role in its creation: Their inability to come to an agreement about the related issue of emissions trading created a regulatory vacuum, which non-state actors filled through the creation of the GHG Protocol.

The paper contributes to the literature on private regulation in several ways. First, answering David Vogel’s call for more studies how and why “civil regulation” is established, this article contributes original research on a case of private rule-making not previously studied in depth.² My analysis of the greenhouse gas accounting regime, moreover, not only adds to our understanding of private regulation but also contributes to the literature on environmental politics. As the climate regime expands and the value of carbon markets grows, issues of GHG measurement and standards will only become more important. The findings of my analysis suggest that private actors will continue to play a key role in the global governance of environmental issues.

Second, I offer a conceptual and theoretical contribution to the literature on private regulation by introducing the notion of private *entrepreneurial authority* and analyzing the Protocol as an instance of such entrepreneurial authority. Building on previous work on private authority,³ I define private

¹ Mattli and Büthe 2003; 2005.

² Vogel 2008.

³ Cutler et al. 1999; Haufler 2001; Hall and Biersteker 2002.

entrepreneurial authority as: *a set of practices that governs the behavior of actors in world politics without explicit delegation of authority by states*. I use the case study of the Protocol to demonstrate a more general theory of private authority, which explains why these two NGOs were successful in attaining regulatory authority, and why firms and other actors decided to adopt their rules.

I argue that the Protocol emerged as the standard for corporate-level greenhouse gas emissions accounting, because its creators were able to deliver three benefits to what Büthe calls the “targets of private regulation”⁴—reduced transaction costs, first-mover advantage, and enhanced reputation—not offered by other actors. Standardized “off the shelf” reporting procedures created by the Protocol made it relatively easy for individual firms interested in adopting voluntary reporting measures to do so. In addition, the Protocol provided technical support and ensured a consistent standard across actors. Adopting the Protocol also helped users prepare for international regulation of GHG emissions, potentially giving them a competitive advantage with respect to other firms. Although the Kyoto Protocol had yet to enter into force when the GHG Protocol was published in 2001, many firms believed that some form of climate regulation was likely; implementing GHG accounting was viewed as a way to begin to prepare for such an event. Finally, although primarily motivated by the threat of regulation, firms adopting the Protocol could also burnish their reputations as corporate citizens. Firms that adopted the GHG Protocol could position themselves as climate leaders (indeed, one program that adopted the GHG Protocol was called “Climate Savers”).

The paper also explains the *supply* or form of private authority—that is, why we see entrepreneurship by NGOs, rather than delegation by states. Here, I argue that the inability of public authorities (governments or international organizations) to address an issue, combined with regulatory uncertainty (disliked by most targets) forecloses the delegation of regulatory authority and also creates an opening for entrepreneurial private authority. In the case of the climate regime, the most powerful states—EU and the so-called “JUSSCANNZ” negotiating bloc—had vastly different views on the appropriate role for emissions trading.⁵ Dissent among these states about the role of emissions trading, and thus, the possible *uses* of GHG emissions accounting standards took the issue of accounting methodologies off the agenda for inter-governmental cooperation and deprived the Secretariat of the UN Framework Convention on Climate Change (UNFCCC), the international public actor most likely to take on such a role, of any political mandate to do so. The UNFCCC Secretariat also did not have the

⁴ Büthe 2010.

⁵ The JUSSCANNZ negotiating bloc is comprised of Japan, the United States, Switzerland, Canada, Australia, Norway and New Zealand.

human resources to work on this issue. At the same time, many firms, including in JUSSCANNZ countries, expected that climate change regulation would surely be enacted sooner or later. For these companies, the uncertainty, created by governmental deadlock, about the form of such “inevitable” future regulation was undesirable. For them, the complete lack of public regulation meant continued uncertainty about the level of exposure, the risk of higher costs if large changes would have to be made quickly, and uncertainty about baselines, with the risk that undertaking voluntary efforts to lower their GHG emissions would put them at a competitive disadvantage rather than provide them with an opportunity to get financial as well as reputational credit for such efforts. Regulatory uncertainty thus provided a window of opportunity for the two NGOs, who were willing to supply (or more precisely, provide an institutional structure to foster) private regulation out of a genuine desire to reduce GHG emissions, even if in part only for reputational benefit. As a result, the WRI and the WBCSD were able to provide a set of benefits that were valued by various stakeholders, and thus induce deference from the variety of actors who adopted the Protocol.

The paper proceeds in four parts. First, I present a primer on greenhouse gas (GHG) accounting. Since I cannot expect readers to be familiar with the GHG Protocol, I next provide an empirical account of the emergence of the Protocol. The third section maps my primary dependent variable—deference to private actors by states and non-state actors—by examining the uptake of the Protocol. In the fourth section, I return to the theoretical discussion above. I show that the emergence of the Protocol is consistent with a “supply and demand” model of private authority. Because of the divergent preferences of states, and the relative weakness of the likely focal institution, entrepreneurial NGOs were able to meet a demand for benefits that other actors were not. As a result, public and private actors around the world chose to defer to these rules, and adopted the Protocol to measure greenhouse gas emissions.

2. Primer on GHG Accounting and the GHG Protocol

2.1 GHG Accounting

Greenhouse gas accounting provides a detailed and replicable report of the GHG emissions generated by a specific site or actor. The technical and scientific aspects of GHG accounting are complex, but two concepts must be introduced before discussing the specifics of the Protocol. First, like financial accounting, GHG accounting can be conducted either for voluntary or regulatory purposes. Firms may be required to file financial accounting reports with the government, but they also create them for purposes of planning and management. Similarly, GHG accounting can be voluntary or linked to a regulatory regime. Some firms

choose to track their emissions in order to be transparent to their shareholders, or to reduce energy consumption. Others, like large power producers in the EU, are required by law to report their emissions levels, so governments can evaluate whether or not they are in compliance with regulations. The general term “GHG program” refers to both voluntary initiatives and regulatory programs that measure and report GHG emissions.⁶ Although many GHG programs are voluntary, they are widely viewed as the logical precursor to emissions trading. One cannot buy or sell emissions without first quantifying them; in this sense, many firms view GHG accounting as the first step in preparing for mandatory emissions trading.⁷

Second, just as financial accounts can be kept at the level of a project, firm or country, so can GHG accounting occur on multiple levels. GHGs are generally measured and reported at one of four different levels: national, corporate (or firm), facility or project. The Greenhouse Gas Protocol Initiative has developed two accounting standards, one at the corporate level and one at the project level. Corporate level accounting measures the emissions generated by the activities of a given firm, whereas project level accounting is used for calculating the emissions reductions generated by carbon offset projects, such as reforestation, wind farms or methane capture. This article focuses exclusively on the *corporate* standard, which was released in 2001, and has become the “gold standard” for corporate level reporting.⁸ The project standard, by contrast, was not released until 2005 and is generally believed to be less widely used.

Any private firm, government agency or NGO that wishes to track its emissions uses a corporate accounting scheme. Corporate-level accounting requires deciding how to draw organizational boundaries. For firms with joint operations or subsidiaries, corporate accounting requires deciding how these sources will be measured.⁹ Moreover, corporate accounting also calls for the calculation of “indirect emissions” from purchased electricity use, as well as emissions generated from purchased materials, waste disposal, travel, etc.¹⁰ The key point here is that calculating and reporting at the corporate level is more complex than simply summing the emissions of projects or individual facilities.

⁶ WRI and WBCSD 2004, 98.

⁷ This view is expressed not only in the document that constitutes the GHG Protocol, but also by a number of its users.

⁸ Author's interview with Rebecca Eaton, former Manager of World Wildlife Fund's Climate Savers Program, Washington DC, 21 May 2009.

⁹ Choosing organizational boundaries involves deciding whether these boundaries will be drawn on the basis of equity share or control (either financial or operational) in a given operation.

¹⁰ At this point, methodologies for measuring indirect emissions beyond electricity use are still nascent. These so-called “scope 3” emissions could potentially include any activity that generates GHGs beyond those included in the direct and electricity categories.

(Facility-level accounting measures emissions from a specific entity—such as a power plant, a paper mill or cement factory.) The Protocol does draw on earlier accounting methodologies at other levels—notably the Intergovernmental Panel on Climate Change Guidelines for National GHG Inventories (1996)—but it has also made a number of original contributions to the field of GHG accounting.

2.2 *What is the WRI/WBCSD Protocol?*

The Protocol is a multi-faceted institution. It is at once a consultative standard-setting process, a conceptual framework, and a set of standards. I explain each of these aspects of the institution for two purposes. First, for conceptual clarity, I wish to acquaint the reader with the different functions of the Protocol. Second, for the analysis of the adoption of the Protocol in section 3, I need to be able to distinguish between its different components.

The GHG Protocol Initiative is, first and foremost, a standard-setting process. It describes itself as “a multi-stakeholder partnership of businesses, non-governmental organizations, governments, and others convened by the World Resources Institute and the World Business Council for Sustainable Development.”¹¹ These two organizations convened hundreds of experts from business, government, and NGOs to create a methodologically rigorous standard. The process has dedicated staff at WRI and WBCSD, as well as partner institutions and public and private funders.

The Protocol is also a framework for thinking about how to measure emissions. As one of the co-creators of the Protocol explains, “[t]he *GHG Protocol* corporate accounting and reporting standard is intended to be a ‘GHG GAAP’—the GHG equivalent of generally accepted accounting practices for financial reporting.”¹² To this end, it has created a number of conceptual tools. For instance, the Protocol provides concepts for dividing up emissions into different “scopes.” Scope 1 emissions are those that come from sources owned or controlled by the company. Scope 2 includes those emissions that come from purchased electricity. Scope 3 subsumes all other indirect emissions (such as transportation or extraction of purchased materials). The concept of scopes has become pervasive in the language and practice of GHG programs. Another of the key conceptual contributions of the GHG Protocol has been to provide conceptual frameworks for thinking about how to decide which emissions to include or exclude in the accounting (known as equity vs. control boundaries), an all-important issue for accounting at the corporate level.

¹¹ WRI and WBCSD 2004, 2

¹² Sundin and Ranganathan 2002, 141f.

Third, the Protocol is a set of rules, comprised of three components: standards, guidelines and calculation tools. In order for a firm to state that it has conducted its accounting in accordance with the Protocol, there are a minimum number of requirements that it must meet.¹³ The authors of the Protocol signal that they use “shall” to specify required activities. In this sense, it is similar to treaty language that distinguishes between should and shall—activities that are recommended versus those that are required. However, the Protocol also suggests certain practices without requiring them. These guidelines range from recommendations about general principles to a specific how-to on gathering data and calculating emissions. One main author of the Protocol identified the “how-to” guidance as a key contribution, walking new users through the process of creating a GHG inventory.¹⁴ Finally, the Protocol offers specific tools and formulae for calculating actual emissions. These include how to calculate emissions from activities such as combustion or energy use (applicable to all entities that use the Protocol) to “sector-specific” tools for aluminum, iron and steel, oil and gas, and other sectors. These calculation tools are peer-reviewed in the sense that they were developed collaboratively with expertise from the requisite sector.

3. The Emergence of the GHG Protocol

WRI, WBCSD and the other organizations involved in the creation and vetting of the Protocol were not the first to develop procedures for measuring greenhouse gases. Indeed, as the discussion below illustrates, states and international organizations were early actors in the creation of national and project-level measurement tools. However, efforts to develop a corporate-level tool did not advance until private actors became involved. In this section, I briefly review earlier efforts to measure and report GHG emissions and offsets, showing that the GHG Protocol was one of the earliest efforts to develop a firm-level accounting tool, and was certainly the most transparent.¹⁵ The expertise concentrated within the Protocol process is a key factor in understanding its uptake. The Protocol process was, quite simply, the first effort to bring together actors with experience

¹³ Note that the Protocol is voluntary, so there is no monitoring of compliance, nor sanction for non-compliance. Some organizations choose to have their GHG reporting independently audited, but this is not required by the Protocol.

¹⁴ Author's interview with Michael Gillenwater, former EPA official, Washington DC, 21 May 2009.

¹⁵ I use “firm-level” and “corporate-level” interchangeably for standards that seek to provide measures of GHG emissions at the level of aggregation of a firm, whether or not it is legally a corporation. Offsets are activities that remove GHGs from the atmosphere. As mentioned above, these are specific projects such as reforestation activities or installation of solar panels which require a separate set of measurement tools than those aimed at firm-level accounting.

and knowledge about corporate-level GHG accounting. As the discussion below illustrates, the little pre-existing knowledge about corporate level accounting was scattered across numerous firms, governments and other organizations. WRI and WBCSD were the first to pool the resources of these actors through a multi-stakeholder consultative process.

Early GHG measurement efforts began in 1995, when the Intergovernmental Panel on Climate Change released GHG inventory guidelines. The Framework Convention on Climate Change (FCCC) requires Annex I countries—those with binding targets under the Kyoto Protocol—to report annually on their emissions in six sectors: energy, industrial processes, solvents, agriculture, land use and land use change, and waste.¹⁶ The IPCC guidelines are to be used by Annex I countries when calculating their national level emissions. These guidelines are widely used for calculating emissions within a national territory.¹⁷

The same year, the Parties to the FCCC agreed to undertake a pilot program called “Activities Implemented Jointly” (AIJ), whereby states could experiment with carbon offset projects.¹⁸ Although it was agreed that states could not earn credits for these pilot projects, the prospect of project-based credits raised awareness about the need for measuring the amount of carbon removed in different types of offset activities. As experiments with offset projects began, so did work on measuring them. In 1997, a working paper drafted by the Lawrence Berkeley Laboratory in the US cited seven existing protocols and guidelines, created by governments, IOs, NGOs, and private firms.¹⁹ These protocols and guidelines represented various attempts to measure and report on different types of offset projects. Most of them were rudimentary at best. The Uniform Reporting Format created by the UNFCCC was little more than a two page questionnaire to describe the activities of the offset project. The key event of that year was the signing of the Kyoto Protocol, which institutionalized the practice of carbon offset projects, making the need for well-developed measurement tools quite urgent.

Thus, by 1997, there was considerable activity surrounding GHG measurement. However, almost all of it was related to intergovernmental agreements, with states as the primary actors. Moreover, these efforts were focused almost exclusively on the national and project-levels, and developed only very basic tools. The only evidence of comparable efforts to develop comparable methodologies GHG measurement comes from BP.

¹⁶ UNFCCC 2006.

¹⁷ IPCC 1996.

¹⁸ UNFCCC 1995.

¹⁹ Vine and Sathaye 1997, 8-16.

The first efforts to undertake GHG accounting at the corporate level began in 1997, when BP announced an ambitious plan to create an internal emissions trading program. The goal was to reduce BP's emissions by 10% below 1990 levels by 2010. However, before trading could begin, BP had to develop a system for measuring and reporting. Victor and House describe these initial steps:

Until the decision to pursue the ETS, the company had no uniform standard for reporting greenhouse gas emissions. BP developed a CO₂ reporting protocol within months of Browne's speech [announcing BP's new initiative], and by the end of 1997 had inventoried GHG emissions for 1990, 1994, 1995, and 1996...*The lack of reliable inventories was normal in the industry at the time.*²⁰

Thus, the BP experiment was not only the first in corporate-level emissions *trading*; it was necessarily one of the first in corporate-level emissions *measurement*.

As BP was implementing its pilot trading scheme, other organizations began to recognize the need for a corporate level emissions reporting scheme. Shortly after BP announced its plans, four would-be members of the future WRI/WBCSD Protocol called businesses to action for the same purpose.²¹ BP, along with Monsanto, General Motors and the World Resources Institute (WRI) published "Safe Climate, Sound Business: An Action Agenda" in October 1998. The document challenges businesses to address their contributions to climate change and "[to] measure, track, and openly report greenhouse gas emissions from their operations."²² Moreover, the signatories to the document pledge to cooperate to "develop a joint protocol for measuring and reporting greenhouse gas emissions and the eco-efficiency of our global operations."²³

The steps for action set forth in "Safe Climate, Sound Business" laid the foundations for the Greenhouse Gas Protocol. NGOs and firms alike had identified the need for such a tool, and the existing expertise was minimal. Only a few forward-looking firms and NGOs had any experience with measuring GHGs at the firm level, and even these efforts were fairly new. Since existing experience on corporate-level accounting was minimal, early movers had an opportunity to shape measurement rules and practices. Although there was no guarantee that such rules would become binding, many firms felt that a proactive stance was a way to avoid undesirable regulatory outcomes. One former representative of the WBCSD who was involved in the early stages of the

²⁰ Victor and House 2006, 2102, emphasis added.

²¹ Monsanto was not involved in the consultations and drafting of the GHG Protocol.

²² The Climate Protection Initiative 1998, 6.

²³ The Climate Protection Initiative 1998, 16.

Protocol noted that their input at the early stages of developing a measurement tool was a much easier way to shape future rules. He noted, “If you [i.e. the business community] don’t do anything and just leave it to the regulators, you’re stuck with whatever comes out.”²⁴ By contrast, he noted, it is “much easier to influence regulation at the early stages [than to] undo something that’s already been presented.”²⁵

To follow up on the pledge laid out in “Safe Climate, Sound Business,” WRI began talking to leaders in business, as well as NGOs and government actors. It did not want to present a measurement protocol as a *fait accompli*, but rather wanted to create a consultative multi-stakeholder process both to produce a rigorous product, and to cultivate future users of the Protocol. It soon discovered that the WBCSD had a similar initiative in mind. After some discussion, each organization realized that “two different efforts [were] tantamount to a distandard.”²⁶ Each side realized that the other had something to bring to the table. WRI provided a considerable amount of technical expertise; WBCSD had extensive reach into the business world via its membership. These members were potential users of the Protocol. Moreover, each side realized that the legitimacy and credibility of any measurement scheme would be greatly enhanced by having both NGOs and industry groups involved. One representative of the WBCSD noted that there was suspicion on both sides at the outset, but there was also agreement on the need for a “quality product”²⁷ as well as something that was “implementable.”²⁸ Both of these goals could be achieved through a rigorous, transparent and participatory rule-making process.

The cooperation between WRI and WBCSD did not occur seamlessly. Despite initial wariness, there were three factors that facilitated their collaboration. First, all major participants in the process stressed the importance of the deliberative process. This commitment to deliberation and revision addressed the concern that some views might not be adequately considered, and that the end product would favor one group of interests over another.²⁹ Because participants felt that all points of view were seriously discussed, there was less reason for one group to “take their ball and go home” by starting a competing

²⁴ Author's interview with Dave Moorcroft, former Director, Climate and Energy Programme, WBCSD, 17 November 2009.

²⁵ Author's interview with Moorcroft.

²⁶ Janet Ranganathan, World Resources Institute. Interview by author, Washington DC, 19 May 2009.

²⁷ Author's interview with Moorcroft.

²⁸ Author's interview with Antonia Gawel, WBCSD, 8 November 2008.

²⁹ Author's interview with Ranaganathan; Pankaj Bhatia, Director, GHG Protocol (Washington DC, 11 November 2008) and with Rob Frederick, former Manager of Corporate Social Responsibility, Ford Motor Companies, 8 May 2009.

standard. Second, particularly at the early stages of the process, the participants—including those from the private sector—were largely leaders (or aspiring leaders) on climate change. This self-selecting group was committed to creating a meaningful outcome—a workable standard—rather than creating a lowest common denominator standard. To promote good-faith negotiation, members of the Protocol participated in their individual capacity. As a result, people did not simply negotiate on behalf of their organization, but rather focused on contributing their expert knowledge to the process³⁰. This is not to say that the discussions were not without contention, but that they were governed by good-faith negotiation to create a rigorous methodology rather than one that would favor certain groups. Third and finally, the vision for the final corporate standard was to create a framework for GHG accounting, in which individual users could use only the parts they wanted, or that suited their objectives. In other words, the Protocol was not designed to be an “all or nothing” standard. While basic elements are required to maintain the intent of the standard, there was some degree of flexibility in its application. Understandably, this lowered the stakes for many groups; if certain non-essential parts of the standard were objectionable, they could simply choose not to implement them.

With this common ground in mind, WRI and WBCSD agreed to join forces rather than create competing standards. Since WBCSD had a large member base of multinational firms, one of its key contributions was to ensure participation and support from the private sector. These efforts were important in two ways. First, many WBCSD members expressed interest in the process, and a number were willing to contribute funds and/or staff time to developing the project. Second, by bringing these corporate actors into the fold, and encouraging their input and buy-in, WBCSD helped prevent the creation of a competing standard promulgated solely by business interests.

Another important development in consolidating the authority of the WRI-WBCSD collaboration occurred in 2001, when the EPA became a major funder and participant.³¹ Given the uncertainty surrounding US regulatory responses to climate change, the EPA’s involvement served to reassure firms that the Protocol’s rules would be taken seriously by the US government. This further reinforced the perceived legitimacy and potential high level of future usefulness of the Protocol to business groups, lowering the payoff of creating a competing standard. Importantly, the EPA also pledged to use the Protocol in its own voluntary reporting program—again demonstrating recognition of the Protocol by the government. Moreover, a number of other core advisors to the Protocol were heavily involved with separate efforts to create trading schemes and/or measurement protocols. The process convened by WRI and the WBCSD

³⁰ Author's interview with Ranganathan.

³¹ Author's interview with Cynthia Cummis, former EPA official, Washington DC, 19 May 2009.

provided a natural focal point for these various efforts. Other funders of the Protocol include: the Alcoa Foundation, British Petroleum, the US Agency for International Development and a number of charitable foundations.³²

WRI and WBCSD also fostered commitment to the new standards by setting up the creation of the Protocol as an extensive multi-stakeholder process. One member of the project management team described it as “a big tent initiative,” where anyone who was interested could participate. When the first edition of the Protocol was published in September 2001, it listed over 300 contributors from some 200 organizations.³³ Through the drafting process, many participants became invested in the implementation of the Protocol. As one member of the WRI project team put it, “it [the GHG Protocol] became theirs too.”³⁴ In short, the multi-stakeholder process was a key strategy for building constituencies for the Protocol.³⁵ WRI and WBCSD also employed other strategies to build these constituencies and commit future users to the Protocol. After the first draft was completed, a number of firms agreed to “road-test” the Protocol, to see what worked and what did not.³⁶ Their experiences not only resulted in improving the final product, but also in creating more users. Preliminary drafts were also peer reviewed by accounting firms and KPMG, to ensure consistency and replicability.³⁷ Similarly, WRI and WBCSD worked with a number of industry associations, to help tailor the Protocol to specific sectors such as aluminum, cement, wood products, etc. There are now a dozen such tools, many of which have become standard for the industry. These iterative reviews had three beneficial effects: they improved the quality of the standard, increased the legitimacy of the process, and created buy-in among participants. All of these efforts helped prevent the creation of a competing standard. However, success is not merely measured by the absence of competition; we must also look at the breadth of the Protocol's adoption. It is to this task that we now turn.

4. Mapping the Dependent Variable: Deference to the Process and the Standard

The definition of private authority provided earlier is purposefully broad about which actors in world politics must defer to private actors in order to create

³² GHG Protocol Initiative 2010.

³³ World Resources Institute and World Business Council on Sustainable Development 2001.

³⁴ Author's interview with Ranganathan.

³⁵ This is consistent with Bernstein and Cashore (2007), who describe a support-building phase for non-state market driven governance systems.

³⁶ For a similar phenomenon in financial accounting standards, see Mattli and Büthe 2005.

³⁷ GHG Protocol Initiative 2001.

private authority. *Any actor* who defers to privately-created rules or standards without coercion creates an instance of private authority. Whereas delegated private authority requires that states transfer authority to private actors, the same does not hold for entrepreneurial authority. When one set of actors defers to private actors who seek recognition as rule-makers, entrepreneurial private authority is created. Entrepreneurs may only persuade a few like-minded actors to defer, or the uptake of their rules and practices may be very widespread. In this section, I show that deference to the Protocol's standards has been widespread: Numerous GHG registries have adopted the Protocol, as have pilot programs, industry organizations and even one emissions trading scheme.

One might argue that the widespread deference to the Protocol does not demonstrate private regulatory authority, but is simply "business as usual" for those who adopt it. I submit that adoption of the Protocol is evidence of power as defined by Dahl: WRI and WBCSD convinced other actors to do something that they would not have otherwise done.³⁸ I maintain that adopting the Protocol involves real, measurable costs. Implementation requires purposeful and sustained action: choosing organizational boundaries, setting a baseline to compare emissions over time, identifying and calculating emissions, gathering company-wide data, and assessing the accuracy of the data collected. In other words, we can be confident that adopting the Protocol requires meaningful and costly changes in the behavior and practices of those who defer.

The Protocol has induced deference in various sets of actors in different ways. I operationalize deference in three ways. First, I trace the adoption of the GHG Protocol by examining which reporting registries and emissions trading schemes have adopted some or all of the Protocol in their measurement and reporting methodologies.³⁹ I chose to examine all extant trading schemes and four of the largest reporting schemes and evaluate the extent to which they adopt various components of the Protocol.⁴⁰ Second, to provide a fuller picture of the deference to the WRI/WBCSD-led process, I supply additional evidence

³⁸ Dahl 1957, 202f.

³⁹ Figuring out who has adopted the Protocol is a difficult matter. The GHG Protocol website lists those users who either use the Protocol or whose own measurement scheme is compatible with the Protocol. However, it does not distinguish between these two. I have tried to triangulate, by consulting not only with the GHG Protocol staff, but also with staff at relevant reporting schemes to ask them about the extent to which they rely on the WRI/WBCSD Protocol for their own reporting requirements. Because of the timing of the creation of the registries—they were all created after the publication of the Protocol—I can be fairly confident that this is not simply retroactively identifying registries as Protocol-compatible.

⁴⁰ The trading schemes were selected on the basis of trade volume as listed in Capoor and Ambrosi 2008. The voluntary reporting schemes were selected on the basis of the number of participating firms and the geographical breadth of participants, as well as information gleaned from interviews about which reporting programs are most widely used.

illustrating its influence over other actors. I examine the involvement of the GHG Protocol as an institution in discussions surrounding the creation and design of other accounting and trading programs. Third and finally, I provide anecdotal evidence showing that participants in the Protocol process were able to influence the position of previously resistant actors, to adopt the Protocol as well as a proactive strategy toward GHG measurement.

Before turning to the specific programs that have adopted the Protocol, some discussion of the universe of cases is in order. Unfortunately, it is infeasible to generate a complete list of all firms that measure and report their emissions, and then calculate the percentage that have adopted the Protocol. However, a review of the corporate users (as listed on the GHG Protocol's website) shows that 18% of US Fortune 100 companies have adopted the Protocol, as have and 12% of the Global Fortune 100. Moreover, the Carbon Disclosure Project (see below) reports that in 2007, 77% of FT500 companies report their carbon emissions.⁴¹ Over half of the firms reporting through the Carbon Disclosure Project use the Protocol.⁴² This is a rough measure, but it provides a sense that the adoption of these rules is not limited to a few firms on the margins of the private sector.

Estimating the proportion of GHG registries that use the Protocol (or are based on the Protocol) is more challenging since there is no established list of all extant registries. To define the universe of cases, I began with the list of Protocol users listed on the GHG Protocol website.⁴³ I supplemented this list with web searches and references to other registries in the literature and in websites about carbon accounting. In sum, I tried to establish as complete a list as possible using multiple sources.

Virtually every registry in the set of cases I compiled has either adopted the Protocol; created its own methodology based in whole or in part on the Protocol; recommends using the Protocol (or another methodology based on it); or states that its method for measuring GHG emissions is "consistent" with the Protocol. There were a number of programs that are merely "compatible with" the Protocol; these were excluded from the list of adopters (see Table 1 below). I also excluded programs that focus primarily on one type of energy provision or

⁴¹ Riddell and Chamberlin 2007.

⁴² The 50% figure was provided by Joanna Lee, Carbon Disclosure Project, via email communication.

⁴³ This list is available at <http://www.ghgprotocol.org/standards/corporate-standard/users-of-the-corporate-standard>. Accessed 24 November 2009. I recognize that beginning with the list generated by the GHG Protocol introduces the possibility of overestimating the number of registries using the Protocol. However, this is the most comprehensive list in existence, thus I would be remiss to exclude it. I have tried to correct for any potential bias by triangulating with other sources, and by setting a stringent standard for what constitutes adoption, as described on the following page.

carbon offset projects. In other words, to calculate the share of registries that have adopted the Protocol, I have focused only on registries (as opposed to other types of carbon management or abatement methodologies), and I set a stringent standard for those that I designate as Protocol-adopters.

Despite using these strict criteria, I found a high level of uptake of the Protocol. From these findings, one can infer that the Greenhouse Gas Protocol is *the* standard for corporate-level measurement. Currently, there are no truly competing standards. The one other corporate-level GHG accounting standard that exists was created by the UN Environment Program in 2000.⁴⁴ The UNEP GHG Indicator and the Protocol had considerable overlap in their timing. The UNEP GHG Indicator was first conceptualized in 1997, and released in 2000; the Protocol began in 1998 and was released in 2001. The UNEP GHG Indicator was not intended to serve as a substitute nor a complement to the Protocol, but rather was to be a “stand-alone” tool for users that might not have the capacity to implement the more complex Protocol.⁴⁵ The intended users were small and medium-sized enterprises with a preference for an internal management tool, rather than an external reporting standard. However, according to one of its creators, it was never widely publicized, and UNEP only takes minimal steps to update it.

Evaluating the universe of cases of emissions trading schemes is much more straightforward; of the seven functional schemes, one uses the Protocol (see Table 2). As I discuss below, only one emissions trading scheme decided to measure emissions at the corporate level. Given that the decision about the level of aggregation (corporate, facility or national) is prior to the selection of the measurement standard, the conclusions to be drawn from this fact are mixed. In sum, the distribution of uptake of the standard is varied, with the highest concentration by far taking place in voluntary registries. I turn now to the specifics of adoption rates in GHG registries and emissions trading schemes.

⁴⁴ See <http://www.uneptie.org/energy/information/tools/ghg/>.

⁴⁵ Author's interview with Mark Radka, UNEP Division of Technology, Industry and Economics, 14 April 2009. Although one of its creators states that the intended targets of the UNEP GHG Indicator were different than those of the Protocol, one cannot help but notice that the former has had little traction with users. If the creators truly aimed to provide a simpler tool to a different audience, it is unclear why the Protocol would have prevented them from doing so. The fact that the GHG Protocol was successful while the Indicator was not suggests that the Indicator was, in reality, an unsuccessful attempt at creating a new standard.

4.1 Adoption of the Protocol in GHG Registries

GHG registries are related to, but distinct from, emissions trading schemes in that they are not a requirement by domestic or international regulation, and generally are not linked to the purchase or sale of emissions allowances. Most are used for the purposes of voluntary reporting. Although some have government participants, almost all are run by private actors. More importantly, unlike emissions trading schemes, which tend to focus at the facility level, the majority of registries use corporate-level reporting. Space constraints preclude a detailed discussion of all of the GHG reporting programs that have adopted the Protocol as (or as part of) their emissions accounting methodologies, but Table 1 provides an overview of the main programs by sector. Importantly, some 25 major reporting programs worldwide use the Protocol, including four key programs: the standard promulgated by the International Organization for Standardization (ISO), the Carbon Disclosure Project, the North American-focused Climate Registry, and the US-based Climate Leaders program. In the remainder of this section, I briefly describe these, two of which are global and two of which operate in the US.

By far the biggest success of the Protocol has been its wholesale adoption by ISO. ISO is a network of national standards institutes which creates standards for a vast range of products and processes. After the release of the GHG Protocol in 2001, ISO proposed developing its own methodology. Despite the fact that a number of firms, NGOs and reporting programs were beginning to use the Protocol, ISO was still determined to create its own measurement standard. Those involved in the negotiations with ISO have differing explanations of its desire to create its own scheme. Two participants in the process attributed ISO's insistence on a separate standard to the active participation of the oil and gas industry, which was generally opposed to action on climate change, let alone the adoption of a measurement scheme created without their input.⁴⁶ Another key participant attributed ISO's reluctance to adopt the Protocol to their "mind set [and] mental model" as well as the "defensive behavior of the ISO organization."⁴⁷

In an effort to prevent the creation of a competing scheme, participants of the GHG Protocol sought out the ISO and tried to persuade them to adopt the extant standard as their own. A protracted set of discussions between ISO and the main authors of the Protocol followed. Unfortunately, because the documents from ISO meetings are not available, a detailed account of the negotiations is not feasible. However, it is clear that members of the Protocol steering group were very active in the ISO negotiations throughout the process of creating the ISO

⁴⁶ Author's interviews with Ranganathan and Bhatia.

⁴⁷ Author's interview with Moorcroft.

standard. There was considerable resistance by ISO members to the Protocol.⁴⁸ This suggests that members of the Protocol worked to maintain the integrity of the standard that they had created, and did not simply turn over their work to the ISO to use as it pleased. In a newsletter to Protocol participants, WRI announced that the Protocol would be used as the core document from which the ISO standard was created.⁴⁹ The bargaining between WRI, WBCSD and the ISO about how much of the Protocol would be used in the ISO standard suggests that the departure point for the negotiations differed considerably from what would have occurred had the ISO created its own standard from scratch.

The Protocol used its support from WBCSD and the business community to persuade ISO that establishing a competing standard would be a disservice to all.⁵⁰ Many of those involved in the process of drafting the Protocol became vocal supporters, and thus, persuasive ambassadors to skeptics within the ISO. After approximately five years of negotiation, ISO finally adopted a standard for GHG measurement and reporting that is almost identical to the Protocol, called ISO-14064, Part 1.⁵¹ At the same time, it signed a Memorandum of Understanding with WRI and WBCSD, with each organization pledging to promote the standards created by the other.⁵² Thus, the ISO has deferred to the methods set forth in the Protocol, and has re-packaged them as their own. Given the ISO's broad reach and high level of legitimacy among business and industry, its decision to adopt the Protocol has translated to a much wider reach to these communities.

A second global user of the Protocol is the Carbon Disclosure Project (CDP). An independent non-profit organization, the CDP collects data on GHG emissions on behalf of institutional investors. CDP is organized on the principle that investors are in a better position to evaluate the risks and potential areas for improvement of the companies they invest in if they know their emissions and exposure to future regulation. In 2008, 1550 companies provided GHG emissions data to the CDP, representing US\$57 trillion in investor assets.⁵³ The Carbon Disclosure Project relies on participating companies to report their emissions in a manner that is transparent, rigorous, and compatible with its program. Although it does not require a particular GHG accounting methodology, it strongly recommends that participants use the Protocol created by WRI and WBCSD. One interviewee at CDP reported that over 50% use the Protocol in responding to the survey. She added that the Protocol was chosen because "it has international

⁴⁸ Author's interviews with Bhatia, Moorcroft, and Ranganathan.

⁴⁹ GHG Protocol Initiative 2003.

⁵⁰ Both WRI and WBCSD were, and continue to be, recognized as "organizations in liaison" with Technical Committee 207, the ISO committee responsible for drafting ISO-14064 Part 1. See http://www.iso.org/iso/iso_technical_committee?commid=54808. Accessed 7 July 2010.

⁵¹ The primary difference is that ISO requires third party verification, which the Protocol does not.

⁵² See <http://www.iso.org/iso/pressrelease.htm?refid=Ref1093>.

⁵³ Carbon Disclosure Project 2008.

recognition as being thorough and robust, and we believe it to be the most appropriate.”⁵⁴

There are two key adopters of the Protocol in the US that also demonstrate the breadth of deference. The first is the US EPA’s voluntary reporting program, called Climate Leaders. Climate Leaders was created in 2001 to help participating companies to measure and reduce their GHG emissions. Like ISO-14064, Climate Leaders adopted the Protocol in its entirety. It became involved in the early consultations about creating the Protocol, and decided to fund the initiative as well as to use the newly-created standard in its own program.⁵⁵ The EPA had three motivations for using the Protocol. First, existing voluntary reporting protocols developed by the US Department of Energy (DoE) did not provide a useful model, since they were focused on project-level, rather than corporate-level reporting.⁵⁶ Thus, at the time, there were no other models to draw upon—save for the process emerging from WRI and WBCSD. Second, the international reach of the standards was appealing. Because multinational corporations were the primary target market for Climate Leaders, using an international standard such as GHG Protocol assured compatibility with other users, and facilitated consistent accounting practices across world-wide operations of a given company. Third and finally, the transparency and inclusiveness of the GHG Protocol process bolstered the legitimacy of the standards and helped to ensure buy-in from a broad range of stakeholders.

Climate Leaders has waned in importance since its creation in 2001, and as US climate policy has moved toward compliance-based policies such as the Regional Greenhouse Gas Initiative. However, Climate Leaders’ use of the Protocol was a significant contribution to its widespread uptake. The EPA’s funding and adoption of the Protocol lent legitimacy to the efforts of WRI and WBCSD: Given the active support of future regulators, potential users of the Protocol saw the value of getting a seat at the table.

⁵⁴ Joanna Lee, email communication, 14 April 2009.

⁵⁵ Author's interview with Cummis.

⁵⁶ Author's interview with Cummis.

Table 1: GHG Programs using the Protocol

Voluntary Governmental Initiatives	Industry Associations and National Industry Initiatives	Non-Governmental Initiatives	Other Initiatives
US EPA Climate Leaders Program	International Aluminum Institute	WWF Climate Savers	ISO 14064-Part I
The California Climate Action Registry	International Council for Forest and Paper Association	Carbon Disclosure Program	United Nations GHG Calculator
The Climate Registry	WBCSD Sustainable Cement Initiative	Carbon Trust Standard	
Mexico GHG Program	World Economic Forum Global GHG Register	Business Leaders Initiative on Climate Change	
China Corporate Energy Conservation and GHG Management Program	International Petroleum Industry Environmental Conservation Association	Climate Neutral Network	
Brazil GHG Protocol Program	New Zealand Business Council for Sustainable Development		
India GHG Inventory Program	Taiwan Business Council for Sustainable Development		
Philippine Greenhouse Gas Accounting and Reporting Program	Association des entreprises pour la réduction des gaz à effet de serre		
Australian National Greenhouse and Energy Reporting Guidelines			
Canadian GHG Challenge Registry			
New Mexico GHG Emissions Reporting ⁵⁷			

⁵⁸ Unlike the other initiatives in this column, the New Mexico initiative is mandatory for large emitters (i.e. <25MW), oil refineries and cement manufacturers. Reporting from other emitters is voluntary. Certain participants in the New Mexico program may use the Climate Registry or the California Climate Action Registry, both of which are very similar to and drawn from the WRI/WBCSD Protocol. See http://www.nmenv.state.nm.us/aqb/ghg/documents/FAQ_GHG_Emissions_Reporting.pdf for more information.

Finally, the Climate Registry is a voluntary GHG program used by organizations in 40 US states, 6 Mexican states and 11 Canadian provinces and territories, as well as four Native Sovereign Nations. It is a non-profit organization whose goal is to promote the use of a single set of measurement tools to calculate, report and verify GHG emissions and to establish a common data infrastructure for reporting.⁵⁸ Its members include firms, NGOs, local and state governments and public utilities. The Climate Registry states that it draws on four sources in the creation of its own measurement protocol: the WRI/WBCSD GHG Protocol, ISO-14064, US EPA Climate Leaders and the California Climate Action Registry. Since the California Climate Action Registry has also adopted the Protocol, all of the methodologies that contributed to the Climate Registry's methodology are products of the Protocol. The geographic breadth of the Climate Registry, as well as its position that any federal GHG regulation should use its accounting and calculation methodologies shows the broad uptake of the Protocol, and the potential for even more expansion.

4.2 Adoption of the Protocol in Emissions Trading Schemes

Currently, there are seven emissions trading schemes in their operation phase, as defined by Betsill and Hoffman's extensive work on the universe of emissions trading schemes.⁵⁹ Table 2 lists them in the order of their size, as measured by the volume of 2008 trades.⁶⁰ A first glance at the table suggests that the adoption rate of the Protocol is low—only one in seven. However, such a conclusion presupposes that each trading scheme makes the choice about the level of aggregation (national, facility, corporate) *simultaneously* with the choice of measurement standard. In fact, this is not the case. Rather, the first choice in designing such an international institution is the level of aggregation, followed by the choice of measurement standard *for the chosen level of aggregation*. Put another way, only one emissions trading scheme has opted to conduct trading

⁵⁷ More information on The Climate Registry, including a detailed list of members, is available at <http://www.theclimateregistry.org/>.

⁵⁹ Betsill and Hoffman 2009. According to their work, there are 26 additional schemes that are either now defunct or are in the preliminary planning stages. I exclude the former because many were created before the Protocol was published, and thus are not plausible candidates for adopting it. I exclude the latter because they have yet to create specific rules about accounting and reporting. The universe of cases for my analysis is thus comprised of seven cap and trade schemes.

⁶⁰ Capoor and Ambrosi (2009). Very little has been written on the Japan Voluntary Emissions Trading Scheme, which includes only a handful of electricity generators. Japan is currently transitioning to a larger pilot program, which is also voluntary.

among firms (rather than say, nation states or facilities); once it did so, it selected the Protocol as its measurement standard.

Table 2: Emissions Trading Schemes, by trade volume

Trading scheme	Volume of CO ₂ e traded (millions of tons)	Level of reporting
European Union Emissions Trading Scheme	3,093	Facility
Clean Development Mechanism ^a	463	Project
Chicago Climate Exchange	69	Corporate
Regional Greenhouse Gas Initiative	65	Facility
New South Wales	31	Facility
Japan Voluntary Emissions Trading Scheme	Data not available	Facility
New Zealand	Data not available	Facility

a. Primary market transactions only, includes Activities Implemented Jointly and voluntary transactions.

The Chicago Climate Exchange (CCX) is a voluntary, but legally-binding program to reduce and trade greenhouse gas emissions among North American firms. Credits are earned through abatement projects and then can be traded among its members. In Phase II, which runs from 2007-2010, members commit to reduce emissions 6% below a baseline level. The baseline can be either the average of annual emissions between 1998 and 2001 or the single year 2000. Allowances are allotted to each member equal to the emissions reduction target. Members that do not meet their annual target are required to buy allowances equal to the amount of the overage. The CCX has been growing rapidly; between 2006 and 2007, its trading volume increased by more than 100%, and the value of permits traded almost doubled. By the end of 2008, the market was valued at US\$309 million—more than a four-fold increase from the previous year.⁶¹

The paucity of trading schemes at the corporate level raises a broader question about the applicability of the Protocol to compliance-based trading. The general perception is that corporate-level reporting is not well-suited for compliance-based trading.⁶² Because judgments are required to decide which emissions should be included and excluded for a given organization's report, possibilities of double-counting arise. As the Protocol notes: "whether or not double counting occurs depends on how consistently direct and indirect emissions are reported."⁶³ The possibility of double-counting raises two challenges for GHG markets. First, the overall amount of emissions may be inflated due to inaccurate

⁶¹ Capoor and Ambrosi 2009, 1.

⁶² Several interviewees confirmed that this is a widely-held view, though it was not necessarily clear when discussions about corporate based accounting first began.

⁶³ WRI and WBCSD 2001, 21.

counting. Second, two companies could potentially claim ownership of the same “piece” of emissions. Both problems would impede the proper functioning of a trading market. For this reason, “compliance regimes are more likely to focus on the ‘point of release’ of emissions”—that is, when a given ton of GHG can be physically tied to its producer at the facility level.⁶⁴ Since the Chicago Climate Exchange is a voluntary market, which has no mandate to account for all emissions, issues surrounding double-counting are less pertinent.

However, this observation does not render corporate accounting entirely irrelevant for regulation; indeed, the US EPA has recently signed a rule requiring large emitters to report their GHG emissions.⁶⁵ Some of these would be required to report at the corporate level; the same is true in the state of New Mexico. In the EU, the accounting methods for cement production are consistent with the sector-based tool developed by cement firms and the GHG Protocol.⁶⁶ Moreover, as the EU moves forward with its trading scheme, it has been relying upon the existing cement sector tool to establish benchmarks for future allowances. In a word, there have been some regulatory applications of the Protocol. Nonetheless, as the following section will illustrate, the majority of actors that have adopted the Protocol do so for voluntary GHG registries.

4.3 The Broad Authority of the Protocol

As stated earlier, tracing the number and size of the organizations that have adopted the Protocol gives an incomplete picture of the authority of the Protocol as an institution. In addition to persuading others to adopt the rules it created, the Protocol as an institution helped shape other discussions of GHG measurement and reporting in three ways.

First, GHG Protocol senior staff served as technical advisors to a number of GHG programs as they were being created.⁶⁷ Although in many cases, new registries intended to adopt large parts of the Protocol, many also sought to have requirements that departed from the Protocol in various ways.⁶⁸ Thus, staff at WRI and WBCSD worked closely with the California Climate Action Registry

⁶⁴ WRI and WBCSD 2001, 21.

⁶⁵ US Environmental Protection Agency 2009.

⁶⁶ Author's interview with Bruno Vanderborgh, Senior Vice President of Climate Protection, Holcim Industries, 26 November 2009.

⁶⁷ Information on the ongoing interactions between the GHG Protocol and these various other programs and trading schemes is documented in regular updates of the Protocol's newsletter. These details are drawn from seven years of newsletter updates, available at <http://www.ghgprotocol.org/newsletter/newsletter-archives>.

⁶⁸ For example, the Climate Registry adopts much of the reporting requirements and standards set forth in the Protocol, but also requires certain facilities to report their emissions—a measurement standard not included in the Protocol.

(now part of the Climate Registry) and the ISO, as each worked to create a reporting methodology based on the WRI/WBCSD Protocol, to make sure that additions or amendments did not impede the functioning of the adopted parts of the Protocol.

Staff from the Protocol has also been involved in the discussions around the Regional Greenhouse Gas Initiative (RGGI), the only government-sanctioned compliance-based emissions trading scheme in the US. It has played a similar role in the Western Climate Initiative, which is in the process of creating an emissions trading scheme in the Western US and Canada, and in early discussions of the governors in Midwestern states in the US to reduce GHG emissions. Neither RGGI nor the Western Climate Initiative could adopt the Protocol wholesale, since both have chosen to conduct reporting at the facility, rather than the corporate level. However, Protocol staff worked closely with RGGI on a sector-based tool for stationary combustion, as well as on verification and software issues. Protocol staff at WRI and WBCSD have also provided technical expertise to the US Department of Energy's voluntary GHG reporting program as it sought to revise its guidelines; the new version is now consistent with the Protocol. Protocol staff also consulted on discussions of monitoring and reporting requirements during the design phase of the EU-ETS. Like RGGI, the EU-ETS requires measurement and reporting at the facility level; the Protocol is therefore of limited applicability. However, in the case of the now-defunct UK-ETS, methods for estimating emissions from electricity use and joint ventures relied heavily on the Protocol.⁶⁹ Thus, in each of these cases, registries and trading schemes developing measurement standards sought out and deferred to the expertise of staff at the GHG Protocol.

Second, the Protocol helped facilitate a shift from no action on climate change to various efforts to measure GHG in two previously resistant groups of actors—energy-intensive industries and large developing nations. Both the production of cement and many of the production processes used in the chemical industry⁷⁰ are extremely energy intensive, and thus produce considerable GHG emissions. Many cement firms have mobilized against domestic legislation on GHG emissions because of the heavy costs that the industry would incur. One firm—Holcim—has been decidedly ahead of the curve. It began considering the possibility of monitoring its GHG emissions in 1999.⁷¹ A quick internal survey of Holcim holdings revealed seven different methodologies for measuring emissions, each of which yielded widely varied calculations for the same activities. Upon discovering the work of the Protocol, and seeing the large gap between Holcim's work and the emerging Protocol, Holcim opted to work with WRI and WBCSD,

⁶⁹ Author's interview with Ranganathan.

⁷⁰ I thank an anonymous reviewer for pointing this out.

⁷¹ Author's interview with Vanderborght.

both because of their reputations, and “to facilitate further acceptance by other cement companies and other organizations.”⁷² The early work undertaken by Holcim was thus incorporated into the standards developed through the Protocol process.

The involvement of Holcim as one of the core advisors in the GHG Protocol, and its commitment to implementing the standard resulted in two important outcomes. First, the Protocol created a sector-based tool (released in 2002), tailored specifically to the needs of the cement industry. Second, Holcim spent considerable time and energy refining the tool, and then promoting it within the industry. In 2002, eleven cement firms agreed to “road test” the tool, and revisions were made based on their experiences. In addition, Holcim was involved in the creation of the Cement Sustainability Initiative, which requires signatories to use the Protocol. It has also conducted an extensive capacity building campaign in developing nations to help firms implement the measurement and reporting standard. The result of all of these activities is that the cement sector version of the Protocol is used in nearly 100% of cement production in the US and EU, and 65% in Latin America. Globally, the adoption rate is estimated to be near 65%, not including China.⁷³

These efforts have not been without objections. Bruno Vanderborght, Senior Vice President of Climate Protection at Holcim, was a core advisor to the first draft of the Protocol. He noted that a number of firms in Asia have resisted adopting the Protocol, in part because measurement systems already in place worked differently. Their eventual adoption of the Protocol can be attributed to continued discussion, and peer pressure from industry leaders such as Holcim.⁷⁴

The Protocol has also established small GHG programs in a number of developing countries, in an effort to promote the idea of GHG measurement and build the capacity to do so. To date, it has established programs in Mexico, China, Brazil, India and the Philippines. In these instances, WRI, WBCSD and other participants in the creation of the standard have been successful in inducing others to adopt the Protocol. Perhaps more importantly, the Protocol has also started a broader conversation about the need to monitor GHG emissions. Developing countries have in general been resistant to such efforts because they are not required to reduce their emissions under the Kyoto Protocol.

These examples show that the Protocol was able to provide a non-threatening way for a variety of actors to participate in technical (i.e. non-political) discussions about policy action. As one interviewee put it, the Protocol provided a venue and the technical expertise for actors who wanted to get

⁷² Author's email communication with Bruno Vanderborght, 2 December 2009.

⁷³ Author's interview with Vanderborght.

⁷⁴ Author's interview with Vanderborght.

involved in GHG measurement.⁷⁵ In short, the Protocol became a focal point for activity on corporate GHG standards where previously there had been none.

Third, and finally, the Protocol is now shaping GHG measurement practices without being actively involved in them. As demonstrated in this section, most GHG programs that function at the corporate level state that they are based on the WRI/WBCSD Corporate Protocol as well as the ISO-14064 standard. In other words, the Protocol either directly, or through its “progeny” has become the *de facto* standard on which almost all other corporate-level GHG accounting standards are based. This is well illustrated by the evolution of the Climate Registry, which is based on four different sources, all of which are derived from the Protocol.

5. Explaining the Emergence of the Protocol

The previous section illustrated that the Protocol has exerted real influence in GHG measurement practices around the world. It is now widely recognized as the “gold standard” in corporate-level emissions reporting. In this section, I turn to an explanation of why this entrepreneurial authority emerged. In the introduction, I briefly outlined a “supply and demand” model, which explains both the emergence and form (either delegated or entrepreneurial) of private authority.⁷⁶ The demand side of the model explains the emergence of private authority. As discussed in greater detail in the following section, it posits that private actors are able to project authority when they provide benefits to the targets of the rules, which states, international organizations or other actors are unable or unwilling to provide. These benefits, which correspond to different types of cooperation games, include reduced transaction costs, enhanced credibility of commitments, first-mover advantage, and improved reputation.⁷⁷ In coordination problems, such as battle of the sexes, private authority can reduce transaction costs, or create advantages for first movers. In collaboration problems where there is an incentive to free-ride, private authority can enhance the credibility of commitments. In suasion problems, actors have asymmetrical interests. Private actors who enjoy legitimacy therefore try to persuade others to cooperate, so they may improve their reputations. It is important to emphasize that these are not benefits that inhere in private actors; potentially, any actor in international politics could provide them. The task is to clarify the conditions under which private actors may be in a position to provide benefits that other actors cannot.

⁷⁵ Author's interview with Gillenwater.

⁷⁶ For a similar conceptualization of regulation as a function of supply and demand, see Mattli and Woods 2009.

⁷⁷ Martin 1992.

The supply side of the model, discussed in section 4.2, explains the form that private authority takes—either delegated or entrepreneurial. I refer to the Protocol as an instance of entrepreneurial authority because the standard-setters are *not* delegated authority ex-ante by states. The private entrepreneurial authority that emerged in the case of corporate accounting of GHG emissions can be explained by two independent variables: the divergent preferences of key powerful states in the climate regime, and the relatively weak capacity of the regime’s focal institution, the UNFCCC Secretariat. Because developed nations had divergent views about emissions trading, there was little incentive (or potential benefit) to build state or IO capacity to implement emissions trading, including accounting methodologies. At the same time, many private firms felt that greenhouse gas regulation was inevitable, and they wanted to be prepared. Implementing a measurement scheme seemed the logical first step toward this end. A measurement scheme was viewed as a general strategy for preparing for GHG regulation. Such efforts did not necessarily imply that participating firms thought that ET would be applied to the firm level. However, some firms saw this as a wise precautionary step—a way to establish baselines, put measurement systems in place and more generally, understand their degree of exposure. In addition, there was no focal institution equipped for the task. The UNFCCC Secretariat was understaffed and had no mandate to work on corporate accounting tools—in part, no doubt, because of the aforementioned disagreement among developed nations. As a focal institution in the climate regime, it was a likely candidate to undertake this task, yet without the resources or political mandate, it was unable to do so.

It is also important to note that there is a key scope condition for private authority: private expertise. Expertise is not only an important source of legitimacy, it enables private actors to provide benefits to the targets of private regulation.⁷⁸ Without existing expertise, private authority is unlikely, since all four of the benefits listed above require that the supplier possess expert knowledge at the time benefits are demanded. In order to lower transaction costs, the governed can use existing knowledge from private governors. To signal credibility of commitments, actors bind themselves to a third party who can render expert opinions. To secure first-mover advantage, actors seek those with experience to promulgate a solution before competing proposals are presented. To improve reputational standing, actors avoid sanction by adopting the practices of those with expert legitimacy. Thus, pre-existing private expertise is a necessary, but not sufficient condition for private authority. If there is no pre-existing private expertise, it is unlikely that private authority will emerge, unless there is political will among states to create it. As Jupille and Snidal suggest,

⁷⁸ Weber 1978, 215f.

creating a new institution as a response to a cooperation problem is costlier and riskier than other strategies, and is generally pursued only if other strategies are not available.⁷⁹

In the discussion that follows, I address the demand and supply sides of entrepreneurial authority in turn.

5.1 The Demand for Private Authority

There was clearly a demand for private entrepreneurial authority to create a corporate-level GHG accounting standard. The Protocol offered three key benefits to its users. First, it created the possibility for first mover advantage, in two distinct ways. First movers had an opportunity to shape the rules in ways that favored their interests. Moreover, firms that implemented GHG reporting would get a head start on managing emissions before national and intergovernmental rules were put in place. These early adopters would be better prepared for future regulation. They also could establish credible baselines to ensure that future emissions restrictions were not based on unrealistic expectations. Possibly, early adopters might even secure credits for early action.⁸⁰ Second, the Protocol reduced transaction costs in two ways. It provided companies who wanted to implement GHG accounting with a ready-made way to do so, complete with software, a how-to guide, and technical support. Moreover, as use of the Protocol expanded, it reduced the risk that companies would have to switch to a new standard in the future. Third, the Protocol provided an opportunity for firms who used it to promote themselves as responsible global citizens. In other words, it was a tool for improving their reputations. These benefits constitute a necessary, though not sufficient, condition for the emergence of private entrepreneurial authority. I address each in turn.

As carbon regulation became an increasingly likely outcome, many firms began to recognize that it was time to prepare for this eventuality. Key participants in the Protocol from the private sector acknowledged the potential advantages of early action through GHG reporting. One Protocol participant from Ford Motor Companies noted that the firm understood that carbon regulation was coming, and it wanted to be prepared.⁸¹ It viewed two advantages to early action on GHG measurement and reporting: the ability to reduce risk exposure preemptively, thus gaining an advantage over competing firms, and the ability to

⁷⁹ Jupille and Snidal 2006.

⁸⁰ Recall that although the Kyoto Protocol was signed in 1997, it did not enter into force until 2005; thus, any action that firms took on climate change when the Protocol was released in 2001 was *in anticipation* of binding Kyoto rules.

⁸¹ Author's interview with Rob Frederick, former Manager of Corporate Social Responsibility, Ford Motor Companies, 8 May 2009.

help shape the rules that might eventually become binding. Others who worked on the Protocol and related GHG registries acknowledged that, particularly in the US, there was frustration with the uncertainty surrounding future regulation. Adopting a credible measurement scheme was a way for firms to protect themselves and potentially, receive credit for reductions made before regulation was enacted.⁸² Indeed this is the stated reason for the creation of the California Climate Action registry (which is based on the Protocol). It describes itself as a response to the request of CEOs who began taking early action to combat climate change, and wanted “to protect their early actions to reduce emissions by having a credible and accurate record of their profiles and baselines.”⁸³

In addition to the promise of benefits through first mover action, the Protocol provided a second benefit—reduced transaction costs. As governments and businesses began to recognize the need for a credible and robust measurement scheme, they also realized the costs of creating one. The Protocol recognized this demand and states as one of its main objectives “to simplify and reduce the costs of compiling a GHG inventory.”⁸⁴ When the director of the US EPA Climate Leaders program began to move forward on program design, she quickly realized the time and effort needed to create a usable GHG measurement scheme. After talking with staff at WRI, she noted that “it just made sense” to use the Protocol. Not only would this address the costs of creating a new standard, it would ensure that the standard adopted by the EPA was internationally consistent.⁸⁵ The Protocol could reduce transaction costs in another way: to the extent that the standard became widely adopted, it would eliminate the need for (and the costs associated with) switching to another standard in the future.⁸⁶ Again, the Protocol was cognizant of this material benefit, and cited it as a reason to use the tool: “Both business and other stakeholders benefit from converging on a common standard.”⁸⁷ Moreover, the Protocol not only reduced transaction costs by providing a ready-made standard, it also furnished the tools for firms to find ways to save money through improved efficiency. By measuring the energy flows of the organization, Protocol users could identify sources of waste and areas for improvement—reducing the financial transaction costs of doing business.

Finally, the Protocol allowed adopters to publicize their good deeds, thereby burnishing their reputations as responsible corporate citizens. Using the Protocol was a way to join a “green club,” which offers excludable reputational

⁸² Author's interview with Eaton.

⁸³ Climate Action Registry, n.d.

⁸⁴ World Resources Institute and World Business Council on Sustainable Development 2004, 3.

⁸⁵ Author's interview with Cummis.

⁸⁶ Mattli and Büthe 2003.

⁸⁷ World Resources Institute and World Business Council on Sustainable Development 2004, 3.

benefits to members who have taken progressive action.⁸⁸ For firms that had suffered from bad publicity in the past, this was particularly attractive. For example, in the wake of bad publicity surrounding its operations in Nigeria and the sinking of the Brent Spar, Shell sought to incorporate social objectives into its strategy. As then-CEO Mark Moody-Stuart noted, “being seen as helping to deliver solutions that are common to society is also good for business.”⁸⁹ One interviewee noted that businesses wanted to reduce their emissions for two reasons: to get credits for early action or “for PR reasons”—in other words, to be able to say that they are doing their part.⁹⁰

The demand for private authority in the form of the Protocol is quite clear: participants stood to benefit materially and enhance their reputations. WRI and WBCSD recognized the opportunity to provide these benefits and stepped forward. However, explaining the emergence of entrepreneurial authority is incomplete without a discussion of why other actors did not step forward as suppliers of authority. In particular, why did states not cooperate to create a corporate accounting protocol? Alternatively, why was this type of tool not created by an international organization? To answer these questions, I now turn to the supply of private authority.

5.2 The Supply of Private Authority

When should we expect to see delegated or entrepreneurial authority? The demand for private authority only explains the emergence, not the form of private authority. In this section, I argue that the supply of private authority—which can also be understood as its form—is explained by the heterogeneous preferences of key states, and the lack of a strong focal institution. Because the key negotiating blocs of developed countries disagreed about the appropriate role for emissions trading in Kyoto, and because the UNFCCC had neither the staff nor the mandate to develop corporate accounting methodologies, private entrepreneurial authority emerged in the form of the GHG Protocol.

As stated earlier, greenhouse gas accounting can serve as a tool for transparency and management, but it can also serve as the basis for emissions trading. While developing accounting standards does not require plans to trade emissions, emissions trading requires such tools to measure what it to be traded. This created a feedback from the negotiations over emissions trading to plans for developing GHG accounting standards. Specifically, the states that negotiated the climate regime could not agree on the appropriate role for emissions trading under

⁸⁸ Prakash and Potosi 2006.

⁸⁹ Hamilton 1998.

⁹⁰ Author's interview with Vicki Arroyo, former Vice President, Policy Analysis and General Counsel, Pew Center on Climate Change, Washington DC, 12 November 2008.

the Kyoto Protocol.⁹¹ The resulting uncertainty paralyzed several efforts to develop emissions accounting schemes, as I discuss in the following paragraphs.

The most influential states in the Kyoto negotiations were the developed countries that faced binding targets and timetables under the new agreement. They were in deep disagreement about the role of emissions trading. In the run-up to Kyoto, the two key negotiating blocs of developed countries were the EU and the JUSSCANNZ group. The latter (now called the Umbrella Group) was comprised of Japan, the US, Canada, Norway, Australia, Switzerland and New Zealand.

The schism over emissions trading was evident from the beginning of the Kyoto negotiations. As early as 1990, the EU focused on regulatory action as mandated by the precautionary principle, which dictates that the absence of scientific certainty should not prevent states from taking precautionary action toward addressing environmental problems.⁹² It was skeptical about emissions trading, and as a key player on the global stage in climate change policy, objected to the possibility that developed countries could buy their way out of domestic reductions through trading.⁹³ One account of the EU's position on climate change states quite plainly, "[e]missions trading was not part of the EU negotiating position in the Kyoto negotiations."⁹⁴

Led by the US, JUSSCANNZ, by contrast, pushed hard for market mechanisms and opposed any cap on the extent to which reduction targets could be met via market mechanisms. In the wake of successful implementation of an emissions trading scheme for nitrogen and sulfur oxides in the Clean Air Act, the US was a particularly resolute advocate for emissions trading in Kyoto. It argued that emissions trading was an appropriate and feasible policy.⁹⁵ As Grubb *et al* note, the US "embarked upon strenuous diplomatic efforts" to promote emissions trading, which "found ready favor" with the other governments in the JUSSCANNZ group.⁹⁶

This division between the EU and JUSSCANNZ persisted through the Kyoto negotiations. JUSSCANNZ wanted maximum flexibility in the ways that each state could meet its targets; in other words, it continued to push for emissions trading. More broadly, it believed in a "leave it to the market

⁹¹ Even the final text in Article 17 of the Kyoto was very vague about how emissions trading would actually be implemented. The text simply notes, "The Conference of the Parties shall define the relevant principles, modalities, in particular for verification, reporting and accountability for emissions trading." (UNFCCC 1997).

⁹² The precautionary principle is a guiding principle of the Framework Convention on Climate Change (Article 3) and is referenced through the preambular text of the Kyoto Protocol.

⁹³ Oberthur and Ott 1996, 188f; Skjaereth and Wettestad 2008; Depledge 2006.

⁹⁴ Skjaereth and Wettestad 2008, 67.

⁹⁵ Schreurs 2004.

⁹⁶ Grubb *et al* 1999, 91.

approach,” and generally mistrusted the command and control approaches supported by the EU.⁹⁷ The EU, with no experience in trading, felt strongly that reductions should be made domestically, without the “back door” of trading.⁹⁸ In the end, the final text at Kyoto created trading mechanisms, but there was no agreement about how they would be used.⁹⁹ In other words, the divergence in preferences had yet to be resolved.

The political impasse on the role that emissions trading would play in the implementation of Kyoto was not resolved until 2001, when the EU shifted toward a more open attitude toward emissions trading.¹⁰⁰

The key point is that while WRI and WBCSD were drafting the Greenhouse Gas Protocol, the two largest negotiating blocs in the developed world were feuding over whether and how emissions trading would be part of an intergovernmental agreement on climate change. Thus, the preferences of key states were clearly heterogeneous, providing an important condition for the supply of entrepreneurial private authority.

The US withdrawal from the Kyoto process created another layer of divergent preferences: between the US and states that supported Kyoto. In the US, the decision not to move forward with ratification resulted in a slowing of federal activity on climate change and great uncertainty about future regulation. As noted above, many firms expected climate change regulation to be adopted eventually and were concerned that postponing action would make adjustment harder later on (and hurt their reputations internationally). Despite their concern, the US government failed to give them any guidance or help them overcome collective action problems. Uncertainty about the form that “inevitable” regulations would ultimately take, coupled with little action by the government, provided a window for private actors to fill the gap through private standards, and a compelling reason for firms to adopt those standards. As one interviewee noted, uncertainty was a key motivator for business involvement in the Protocol.¹⁰¹ Although the Protocol could not be a substitute for federal regulation, it served as a plausible and legitimate interim measure until government policy took shape. Moreover, private and voluntary standards were a way to circumvent government inaction. Indeed, an EPA official said that working with WRI “gave them cover”

⁹⁷ Oberthur and Ott (1999, 190) note that this was in part a cultural difference: the Anglo-American faith in markets versus the more traditional approach of “continental Europe.”

⁹⁸ There are numerous accounts of the history of the Kyoto negotiations. This summary draws on Schreurs 2004; Werksman 1998; and Yamin 2005, which focus particularly on the flexibility mechanisms.

⁹⁹ Kyoto Protocol, Articles 6, 12 and 17.

¹⁰⁰ See, for example, Zapfel and Vainio 2002. The reasons for the shift in the EU’s position and the trading scheme it developed between 1998 and 2003 are beyond the scope of the inquiry here, but see Lefevre 2005.

¹⁰¹ Author’s interview with Eaton.

to advance a policy agenda that was not consistent with the Bush administration's view.¹⁰² In this sense, the WRI-WBCSD initiative to develop the Protocol was in the right place at the right time, providing an opportunity for forward-looking firms and organizations to take some action toward preparing for future regulation.

The second independent variable that accounts for the form of private authority is the existence and capacity of a focal institution. I hypothesize that when there is a weak focal institution, or none exists, entrepreneurial private authority will emerge. Since the international organization most likely to deal with corporate-level standards, the UNFCCC Secretariat, was faced with resource constraints, the GHG Protocol was able to establish itself as a focal institution.

With respect to emissions trading, the focal institution, the UNFCCC Secretariat, had neither the capability nor the mandate to oversee a corporate-level GHG accounting system. The Protocol was created between 1998 and 2001. At that time, the UNFCCC Secretariat was focused on two types of GHG measurement: project-based accounting and national reporting. By the mid-1990s, states were beginning to design and implement carbon-offset projects in anticipation of the Clean Development Mechanism (at that time, the pilot efforts were called "Activities Implemented Jointly"). These activities focused on project-based emissions measurement: how much CO₂ would have been emitted without a given offsetting project? The Secretariat was also tasked with helping Parties measure and report national level emissions, as required under Article 12 of the Framework Convention. Quite simply, there was no political mandate for the Secretariat to develop measurement protocols for corporate-level emissions. This lack of mandate was in part attributable to the lack of consensus among states on the role of emissions trading in the future climate regime.

Even if the focal institution had wanted to work on corporate-level accounting "on the side", there were very few resources to do so. In the early stages of the Clean Development Mechanism, there were only two staff members assigned to that issue,¹⁰³ and as late as 2001, the Secretariat reported a total of 58 professional level staff employed in the entire organization.¹⁰⁴ The Greenhouse Gas Protocol, by contrast, had 22 staff serving on the project team, as well as *hundreds* of contributors involved in the drafting, peer review and revising of the first edition. Even with a political mandate, the Secretariat would have lacked in capacity—both in numbers and in expertise.

¹⁰² Author's not-for-attribution interview with EPA official, Washington DC, 10 November 2008.

¹⁰³ Author's interview with Christiana Figueres, member, Costa Rican delegation, 20 November 2008.

¹⁰⁴ UNFCCC (2001), p. 20.

6. Conclusion

This study of the GHG Protocol illustrates a successful case of entrepreneurial authority. The Protocol serves as the basis for the ISO standard on GHG reporting, as well as countless voluntary reporting registries. It has been adopted by numerous firms and large swaths of a few industries, and is being piloted in developing countries. In a word, the GHG accounting practices created by WRI, WBCSD and the participants in the Protocol process have become the standard of choice for corporate reporting of GHG emissions worldwide.

The success of the GHG Protocol is due in part due to its timing: it became the focal institution for corporate-level reporting simply because at the time, there was no organization—public or private—with the expertise to fulfill the same role. Although there had been considerable work on carbon accounting at the national and project levels, WRI and WBCSD were among the first to gather existing expertise on corporate level accounting. What little work had been done on the corporate level was fragmented across firms and governments that had developed pilot programs. The Protocol process was able to draw on these efforts, and bring the actors involved in them into one room.

But timing alone does not provide a complete account of the success of why WRI and WBCSD were successful in attaining regulatory authority, nor why targets of these privately-set standards chose to adopt them. The success of these two NGOs in jointly becoming *the* private regulator for corporate-level GHG accounting is further explained by several factors. First, the disagreement among the EU and JUSSCANNZ bloc on the appropriate role for emissions trading in the climate regime gave rise to a vacuum of government action.¹⁰⁵ As a result, there were few resources earmarked for the FCCC Secretariat (or other international organizations, for that matter) to pursue the development of policies to implement emissions trading, which may have included corporate-level standards; the overwhelming focus was on offsets. This provided a window of opportunity for private actors to create their own corporate standards without much opposition. Second, the transparency of the rule-making process and the willingness by WRI and WBCSD to include all interested parties endowed the process and, eventually, the rules with a high level of legitimacy. Indeed, a number of interviewees described the reputation and legitimacy of WRI, WBCSD and the Protocol process as reasons for adopting the Protocol standards. Third, the transparency also demonstrated the rigor and iterative nature of process: the rules were subject to peer-review, road-testing, and revision—all of which reinforced the notion that the rules produced were of high quality.

¹⁰⁵ Author's interview with Arroyo.

Since authority is a relational concept, an adequate explanation of the regulatory authority of the GHG Protocol must also account for why potential targets of this form of private regulation chose to comply. I have argued that the Protocol was able to provide both material and reputational benefits to its users. The Protocol was a way to reduce transaction costs by standardizing reporting practices and providing technical support to its users. It also helped early adopters get a head start on preparing for future regulation. Regulatory uncertainty surrounding emissions reporting and trading was clearly an important motivating factor for many firms. Early adopters could not only begin to measure and manage their emissions, they could also potentially receive credits for reductions made before regulation was implemented. At the same time, the Protocol allowed users to tout their environmental responsibility through the use of a rigorous and vetted reporting protocol. Finally, the involvement of many of the adopters in the rule-making process is also a key element in explaining why so many actors voluntarily chose to comply with these private standards. Involvement in the rule-making process had two beneficial influences. It allowed participants to shape the final outcomes (presumably, somewhat in accordance with their own preferences), and thereby created buy-in for those involved—a further incentive to use the standards. In sum, the case of the GHG Protocol supports Bütte's assertion that the supply of private rules often coincides with private political and economic benefits to those who adhere them.¹⁰⁶

Although there are many broader implications of this study, I will highlight two that merit further inquiry. First, it is clear that the Protocol began with “a coalition of the willing”—NGOs and firms interested in taking action on climate change both for altruistic and self-interested reasons. This self-selected group was critical to creating a core of “negotiators” willing to come to an agreement about rules without sacrificing their quality or content. Also important was the diversity of the group: drawn from both NGOs and industry, all were committed to producing quality standards. In other words, because of their interest in creating a meaningful set of accounting rules, the result was not regulatory capture, but rather, common interest regulation.¹⁰⁷ Future research should explore this testable proposition: is a diversity of interests among private rulemakers a necessary condition for publicly-minded regulation? Put another way, would a “coalition of the willing” comprised solely of NGOs or solely of private firms produce the same kind of regulation?

Second, the technical requirements for implementing the Protocol have meant that the developers and earliest users of the rules were from the developed world. Nonetheless, there is clearly a commitment among many users to promote adoption in the developing world, where technical capacity is generally lower.

¹⁰⁶ Bütte 2010.

¹⁰⁷ Mattli and Woods 2009, 4.

This has resulted in capacity building efforts to enhance knowledge and implementation rates across the developing world. This kind of extension of private regulation to developing countries raises interesting normative questions. Couched in the benevolent terms of capacity building, promoting technical ability in the developing world appears normatively desirable. But it can also be viewed as a private form of regulatory globalization, where private regulators extend their reach and power internationally under the guise of training.¹⁰⁸

References

- Betsill, Michele M. and Matthew J. Hoffman. 2009. "The Evolution of Emissions Trading Systems for Greenhouse Gases: Mapping the Cap and Trade Policy Domain." Paper presented at the 50th Annual Meeting of the International Studies Association, New York, NY, 15-18 February.
- Braithwaite, John, and Peter Drahos. 2000. *Global Business Regulation*. Cambridge: Cambridge University Press.
- Bernstein, Steven, and Benjamin Cashore. 2007. "Can Non-State Global Governance be Legitimate? An Analytical Framework." *Regulation and Governance* 1(1): 1-25.
- Büthe, Tim. 2010. "Private Regulation in the Global Economy: A Review of the Literature." *Business and Politics* 12 (3).
- Capoor, Karan and Philippe Ambrosi. 2009. *State and Trends of the Carbon Market 2008*. Washington DC: The World Bank.
- Carbon Disclosure Project. 2008. "Quick Facts" At <http://stage.cdproject.net/reports.asp> (last accessed August 24, 2010).
- Climate Action Registry. n.d. "About us." At <http://www.climateregistry.org/about.html> (last accessed August 24, 2010).
- Cutler, A. Claire, Virginia Haufler, and Tony Porter, eds. 1999. *Private Authority and International Affairs*. Albany: SUNY Press.
- Dahl, Robert A. 1957. "The Concept of Power." *Behavioral Science* 2: 201-216.
- Depledge, Joanna. 2006. "The Opposite of Learning: Ossification in the Climate Change Regime." *Global Environmental Politics* 6 (1): 1-22.
- GHG Protocol Initiative. "GHG Protocol Update, September 2001." At http://www.ghgprotocol.org/downloads/newsletter_archive/GHG_Protocol_Newsletter_Sept_2001.pdf (last accessed August 24, 2010).
- GHG Protocol Initiative. *Newsletter #7, April 2003*. At http://www.ghgprotocol.org/downloads/newsletter_archive/GHG_Protocol_Newsletter_No_7_2003.pdf (last accessed August 24, 2010).

¹⁰⁸ On regulatory globalization, see Braithwaite and Drahos 2000.

- GHG Protocol Initiative. n.d. "Fundlers." At <http://www.ghgprotocol.org/about-ghgp/funders> (last accessed August 24, 2010).
- Green, Jessica F. 2010. "A Theory of Private Authority." Unpublished manuscript.
- Hall, Rodney Bruce, and Thomas J. Biersteker, eds. 2002. *The Emergence of Private Authority in Global Governance*. New York: Cambridge University Press.
- Hamilton, Martha. 1998. "Shell's New Worldview; At Helm of Oil Titan, Moody-Stuart Sees Profit in Principles" *Washington Post* 2 August 1998. Section H, p. 1.
- Haufler, Virginia. 2001. *A Public Role for the Private Sector*. Washington, DC: Carnegie Endowment for International Peace.
- Intergovernmental Panel on Climate Change. 1996. *Revised Guidelines for National Greenhouse Gas Inventories*. IGES: Japan.
- Jupille, Joseph and Duncan Snidal. 2006. "The Choice of International Institutions: Cooperation, Alternatives and Strategies." Unpublished manuscript, available at: <http://ssrn.com/abstract=1008945>.
- Lefevre, Jurgen. 2005. "The EU Greenhouse Gas Emissions Allowance Trading Scheme." In *Climate Change and Carbon Markets: A Handbook of Emissions Reduction Mechanisms*, edited by F. Yamin. London: Earthscan.
- Martin, Lisa L. 1992. "Interests, Power and Multilateralism." *International Organization* 46 (4): 765-792.
- Mattli, Walter, and Ngaire Woods. 2009. "In Whose Benefit? Explaining Regulatory Change in Global Politics." In *The Politics of Global Regulation*, edited by W. Mattli and N. Woods. Princeton, NJ: Princeton University Press.
- Mattli, Walter, and Tim Büthe. 2003. "Setting International Standards: Technological Rationality or Primacy of Power?" *World Politics* 56 (1):1-42.
- Mattli, Walter, and Tim Büthe. 2005. "Global Private Governance: Lessons from a National Model of Setting Standards in Accounting." *Law and Contemporary Problems* 68 (3/4): 225-262.
- Prakash, Aseem, and Matthew Potoski. 2006. *The Voluntary Environmentalists: Green Clubs, ISO 14001, and Voluntary Environmental Regulations*. Cambridge: Cambridge University Press.
- Riddell, Zoe and Brittany Chamberlin. 2007. *Investor Research Project*. New York: Carbon Disclosure Project.

- Schreurs, Miranda. 2004. "The Climate Change Divide: The European Union, the United States and the Future of the Kyoto Protocol. In *Green Giants? Environmental Policies of the United States and the European Union*, edited by N. J. Vig and M. G. Faure. Cambridge, MA: MIT Press.
- Skjærseth, Jon Birger, and Jørgen Wettestad. 2008. *EU Emissions Trading*. Aldershot: Ashgate.
- Sundin, Heidi, and Janet Ranganathan. 2002. "Managing Business Greenhouse Gas Emissions: The Greenhouse Gas Protocol -- A Strategic and Operational Tool." *Corporate Environmental Strategy* 9 (2):137-144.
- The Climate Protection Initiative. 1998. *Safe Climate, Sound Business: An Action Agenda*. World Resources Institute, Washington DC.
- UNFCCC. 1995. *Report of the Conference of the Parties on its First Session, Held at Berlin from 28 March to 7 April 1995*. FCCC/CP/1995/7/Add.1. 6 June. Decision 5/CP.1.
- UNFCCC. 2001. *Administrative and Financial Matters*. FCCC/SBI/2001/16. 19 October.
- UNFCCC. 2002. *Report of the Conference of the Parties on its Seventh Session*. FCCC/CP/2001/13/Add.1-Add.4.
- UNFCCC. 2006. *Updated UNFCCC Reporting Guidelines on Annual Inventories Following Incorporation of the Provisions of Decision 14/CP.11*. FCCC/SBSTA/2006/9. 18 August 2006.
- United States Environmental Protection Agency. 2009. *Final Mandatory GHG Reporting Rule*. Accessed at <http://www.epa.gov/climatechange/emissions/ghgrulemaking.html>. 23 October 2009.
- Victor, David, and Joshua House. 2006. "BP's emissions trading system." *Energy Policy* 34: 2100–2112.
- Vine, Edward and Jayant Sathaye. 1997. *The Monitoring, Evaluation, Reporting and Verification of Climate Change Mitigation Projects: Discussion of Issues and Methodologies and Review of Existing Protocols and Guidelines*. Lawrence Berkeley National Laboratory, Berkeley, CA.
- Vogel, David. 2008. "Private Global Business Regulation." *Annual Review of Political Science* 11: 261-282.
- Weber, Max. 1978. *Economy and Society: An Outline of Interpretive Sociology*. Translation of *Wirtschaft und Gesellschaft*, based on the 4th German ed. Edited by Guenther Roth and Claus Wittich. Berkeley: University of California Press.
- Werksman, Jacob. 1998. "The Clean Development Mechanism: Unwrapping the Kyoto Surprise." *Review of European Community and International Environmental Law* 7 (2): 147-158.

- World Resources Institute and the World Business Council on Sustainable Development. 2001. *The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard*. First edition. Washington DC: World Resources Institute.
- World Resources Institute and the World Business Council on Sustainable Development. 2004. *The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard*. Revised edition. Washington DC: World Resources Institute, Washington DC.
- Yamin, Farhana, ed. 2005. *Climate Change and Carbon Markets: A Handbook of Emission Reduction Mechanisms*. London: Earthscan.
- Zapfel, Peter, and Matti Vainio. 2002. *Pathways to European Greenhouse Gas Emissions Trading: History and Misconceptions*. Milan: Fondazione Eni Enrico Mattei.