Strengthening the Kyoto Protocol: Accountability, Monitoring, and Enforcement

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Introduction

Global climate change is one of the greatest threats facing the world today. There is international scientific agreement that if atmospheric greenhouse gas levels continue to rise unchecked, there will be catastrophic environmental changes around the world, including: rising global surface temperatures, ocean acidity levels, and sea levels, and significant loss of biodiversity. The short-term costs of mitigation and adaptation will be substantial, but they pale in comparison to the long-term costs of inaction. Nonetheless, few countries will be willing to risk the political and economic capital necessary to mitigate climate change without an effective and enforceable international agreement.

The Kyoto Protocol to the United Nations Framework Convention on Climate Change (UNFCCC) has created an international forum for addressing climate change, but it has thus far failed to have a significant impact on global greenhouse gas emissions. As the Kyoto Protocol reaches the end of its first commitment period in 2012, there is an opportunity for the Parties to the Protocol (Parties) to reassess and redefine the agreement. This paper proposes a strategic approach to strengthening accountability under the Kyoto Protocol through the establishment of effective emissions reductions targets and timelines, an enhanced system of monitoring and enforcement, and a more inclusive approach to strategic problem solving within the Protocol. These proposed changes would help to create a stronger and more effective structure within which climate change policies and regulations can be developed and implemented.

Accountability & Framing

The UNFCCC provides the conceptual and practical framework upon which the Kyoto Protocol is built. Article 3, paragraph 1 of the UNFCCC states: “The Parties should protect the climate system for the benefit of present and future generations of humankind, on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities.” While general, this statement identifies the basic principles of accountability upon which the Protocol is built — it holds Parties accountable to the global community as well as their own domestic populations, for both present and future generations. This broad definition should be relied upon as a conceptual foundation for the Protocol’s emissions reduction targets and system of enforcement.

The focus of most discussions on the Kyoto Protocol revolve around the costs of mitigation and the possible negative economic impacts of compliance on development goals. Individual nations are hesitant to bear the high costs of mitigation without assurance that other countries will act as well. An increased focus on accountability and enforcement can protect against this concern and encourage engagement by all Parties. By focusing on the responsibilities of the Parties to protect states, industries, and individuals from the harmful effects of climate change, a clear understanding of accountability can
help to frame the Kyoto Protocol as a tool for positive change rather than an obstacle to development. The guiding principles in the UNFCCC help to frame the Protocol as a call to action for protecting the global community rather than a series of commitments and restraints on nation states.

**Targets and Timelines**

The first commitment period (2008-2012) of the Kyoto Protocol established five-year emissions reduction targets for Annex I countries. The reduction targets were based upon political concerns rather than scientific analysis and have been critiqued as being both overly stringent and not ambitious enough. According to economist Robert Stavins, the Kyoto targets do "too little, too fast." This paper proposes an alternative system for establishing emissions reductions commitments under the Kyoto Protocol that takes into account both scientific analysis and the political realities of the negotiating process.

The first step that negotiators must take when determining the next set of emissions reduction targets for the post-2012 Kyoto Protocol is to establish a long-term global goal. The short-term scope of previous negotiations has made it difficult to separate current economic positions from the long-term interests of the global community. In order to force negotiators to look beyond their immediate positions and work towards achieving shared interests, the negotiations must define the ultimate goals of the Protocol before assigning specific national targets and timelines.

**80% by 2050**

The Parties to the Kyoto Protocol should look to current scientific analysis to define the reductions necessary to address the problem of climate change. Scientists estimate that atmospheric carbon dioxide concentrations of 450 parts per million (ppm) is the upper limit of what current ecosystems will be able to withstand without irreversible changes to the global environment. Research and climate modeling has projected that in order to stabilize atmospheric concentrations at 450 ppm there must be a reduction in global greenhouse gas emissions of 80% by 2050 based on 2000 emissions levels. Establishing a definitive goal of an 80% reduction by 2050 would provide a stable long-term agenda for the Kyoto Protocol. It would allow decision makers to frame mitigation strategies that may have high short-term costs within the context of the long-term benefits of global mitigation efforts. Businesses and governments would thus be able to engage in long-term planning efforts in the most efficient manner possible.

Given the possibility of new scientific discoveries or assessments, Kyoto Protocol emissions reduction targets should allow for a reassessment of long-term goals based upon new scientific findings. A reassessment of the targets should not be undertaken lightly as it could disrupt the stability created by the long-term perspective of the 2050 goals. However, recognizing that over time there may be significant findings that could demand a change in the 2050 targets would help to ensure that the Protocol is sufficiently equipped to address the problem of climate change. It could also help to encourage agreement on long-term goals among members with concerns about the veracity of current scientific evidence.

The Montreal Protocol provides an example of a treaty that successfully renegotiated its targets after scientific evidence showed that the problem was more extensive than originally believed. Although there are a number of significant differences between the two Protocols, this example shows that such changes can be made to improve the impact of a treaty without major disruptions to the process of implementation. With that in mind, the Parties to the Kyoto Protocol should include a clause allowing for a revision of the 80% goal in the event of significant scientific evidence, supported by the Intergovernmental Panel on Climate Change (IPCC), that the 80% target is not appropriate to address the concerns of climate change. This caveat would allow for changes in either direction, allowing for flexibility while still protecting the Protocol from frequent changes to the target based off of political or economic motivations.

The establishment of a target for 2050 would require strong leadership within the Parties to the Kyoto Protocol. Although it has not yet ratified the agreement, the United States would be a good candidate for this leadership role. President Barack Obama has called for significant changes in United States climate change policy. In June 2009 the United States House of Representatives passed the American Clean Energy and Security Act, which mandates emissions caps for aggregate greenhouse gas emissions in the United States. The Act calls for covered entities to reduce their emissions to 3% below their 2005 levels in 2012, 17% below 2005 levels in 2020, 42% below 2005 levels in 2030, and 83% below 2005 levels in 2050. While, as of July 2009, the United States Senate has not yet passed the bill, it represents a significant change in climate change policy in the United States. If the goal of an 80% global reduction in emissions by 2050 were introduced in the 2009 round of Kyoto Protocol negotiations by the United States, the strength of this leadership could provide the momentum necessary to establish this goal as a binding target under the Kyoto Protocol. In addition, the promise of a global agreement to meet these goals, including long-term commitments from developing countries, could provide the leverage necessary to push the U.S. Senate to ratify the Protocol.

**Short-term Targets**

The establishment of a global emissions reductions goal for 2050 should be the first step in a series of negotiations required to define clear targets and timelines on a country-by-country basis. By creating agreement first on general, long-term goals before moving on to increasingly more specific, short- and medium-term targets, the negotiators would be able to limit the possible options for each successively more specific negotiations. While specific national targets and timelines would require extensive negotiations and technical expertise, a basic framework for the structure of these negotiations and the principles upon which they should be based are outlined below.

Member states should determine the country specific reductions necessary to reach the goal of a global emissions reduction of 80% by 2050. Different levels of development among member states will require varying national targets. On one extreme, some members may be allowed slight increases from their current levels by 2050, while others would be required to reach their goals through contributing to reductions in other countries. However, regardless of the level of development, all member countries must commit to specific emissions targets for 2050. This is in keeping not only with the commitment in the UNFCCC to "common but differentiated responsibilities," but also with a practical recognition of different levels of development among members.
Enforcement: Reframing Membership

A critical aspect of accountability in any international treaty is enforcement. International environmental treaties are known for having generally weak and ineffective enforcement mechanisms and the Kyoto Protocol is no exception. Without effective enforcement mechanisms, parties to a treaty are unable to hold another accountable for failures to meet treaty commitments. Enforcement can also actively help to strengthen a treaty beyond implementation measures. Effective enforcement can help to "affirm the existence and primacy of a common normative community to which all treaty parties belong, including the violator." In contrast, weak enforcement mechanisms not only fail to encourage accountability, but they also weaken the image and the normative foundations of the treaty itself.

Lack of strong enforcement mechanisms make international environmental treaties vulnerable to the problem of free riders—nations that do not follow through on commitments but are still able to benefit from the positive impact of the efforts of other parties. Free riders not only force other parties to bear disproportionate percentages of the costs, but they discourage other parties from taking action to avoid being taken advantage of by the free riders.

Free-riding . . . enables a country to avoid costly abatement, with only minor detrimental effects on global environmental quality. According to the theory of public goods, the result may be under-provision of abatement. An extreme scenario is that no country will act to reduce emissions, but a more likely scenario is that only a few wealthy countries act, resulting in sub-optimal provision.

The collective action problem faced by the member countries is exacerbated by lack of strong enforcement. Stronger enforcement mechanisms can help to avoid the problem of free riders and encourage more decisive action from all Parties.

Current Enforcement Mechanisms

The Kyoto Protocol currently has a Compliance Committee that consists of a facilitative branch and an enforcement branch. These two branches address compliance from complimentary perspectives: the facilitative branch provides resources to help members comply with treaty obligations while the enforcement branch determines when a party is not in compliance with its obligations and what the consequences of a breach will be. While this structure has promise, it lacks compelling enforcement mechanisms to engender compliance. According to the UNFCCC website:

"Where the enforcement branch has determined that the emissions of a Party have exceeded its assigned amount, it must declare that that Party is in non-compliance and require the Party to make up the difference between its emissions and its assigned amount during the second commitment period, plus an additional deduction of 30%".

If a member fails to meet its emissions requirements, there is little to suggest that a penalty of greater reductions will induce compliance. The enforcement branch is only able to use the tools available within the Protocol, and although the punishment of additional deductions to emissions may make a strong statement on the significance of a breach, it is unlikely to be powerful encouragement for compliance. While this structure has not proven to be effective in encouraging compliance thus far, it does provide a basic framework within which the enforcement mechanism of the Protocol can be strengthened.

New Enforcement Mechanisms

In order to be effective, an enforcement mechanism for a multilateral treaty must provide compelling reasons for nations to refrain from breaking their treaty commitments and to correct behavior that is found to be out of compliance. The World Trade Organization's (WTO) Dispute Settlement Body (DSB) is often identified as an effective system of enforcement in a multilateral agreement. Membership in the WTO provides benefits that members value, and the threat of losing these benefits provides the DSB with a source of leverage over noncompliant members. "When membership comes with valuable benefits . . . sanctions can be a credible deterrent." Thus, the DSB is able to effectively sanction members who are out of compliance by allowing injured parties to deny the noncompliant members the benefits of liberalized tariffs. This model provides insight into what elements are necessary to strengthen the enforcement branch of the Kyoto Protocol.

A revised enforcement mechanism for the Kyoto Protocol can be built within the current enforcement branch of the Compliance Committee. In order to strengthen enforcement, the Kyoto Protocol needs to create benefits of membership beyond climate change mitigation. New benefits would assist the Protocol in two ways: First, they would help to encourage countries to join the Protocol by providing an immediate and tangible benefit for member countries, as opposed to the long-term benefits of avoiding the catastrophic impacts of climate change. This could move the focus from the costs of compliance to the benefits, a conceptual shift that could help to refocus popular perceptions of the Protocol. The second way that added membership benefits would help the Kyoto Protocol would be by creating a set of valued benefits over which the Parties to the Protocol have control. These benefits could be removed in whole or in part as a form of sanction for noncompliance with treaty obligations and could help make membership a tangible, valuable commodity that can be lost.

Membership Benefits

To create a compelling system of enforcement, a network of benefits must be created within the Protocol that appeal to the wide variety of interests involved in the process. In order to reach this goal,
there would need to be several primary benefits, as well as a constellation of lesser benefits that can collectively appeal to the myriad needs of the different Parties to the Protocol. The following list outlines several proposals for key benefits to be included. While this list is by no means exhaustive, it does provide a framework for the types of benefits that may be effective. Although funding mechanisms will not be addressed in this paper, it is important to note that several of the proposed benefits will require funding from the Secretariat. While current funding is limited, the establishment of improved enforcement mechanisms may provide an avenue through which additional fundraising mechanisms can be developed.

Kyoto Protocol Brain Trust

A primary membership benefit for Parties to the Kyoto Protocol could come from a "brain trust" built out of the expertise of the IPCC. This brain trust would consist of a group of experts in fields such as alternative energy, engineering, and biotechnology. The trust would be a resource for member countries to use to support clean technology, green industries, environmental policy initiatives and other projects related to the goals of the Kyoto Protocol.

The brain trust would provide expert advice on technical issues surrounding clean development and green technologies. While access to the trust would be through member governments, the trust would supply support not only to government-sponsored programs, but also to a limited number of private initiatives, provided they are recommended to the trust by their governments. Each member to the Protocol would have unlimited access to the trust for government-sponsored projects as well as limited access for an agreed upon number of private interests.

As part of its role in supporting Parties to the Protocol, the brain trust would also engage in research in areas of clean development that are not currently being addressed. Any information or inventions that result from this research would be patented and made accessible only to member countries. Although research is unlikely to produce immediate benefits, the possible value of any patents arising from this group of international experts could be significant.

International Business Investment

Another substantial membership benefit could be built through the creation of an international business coalition. A coalition of international businesses that agreed only to invest and grow their operations in countries that are parties to the Kyoto Protocol could provide a strong incentive for nations to join the Protocol as well as an incentive for Parties to comply with obligations. Investment funding and revenue streams from transnational businesses provide a significant source of income for many countries. According to the United Nations Conference on Trade and Development's 2008 World Investment Report, foreign direct investment in 2007 was equal to 27.9% of gross domestic product (GDP) in developed economies and 29.8% of GDP in developing economies. To be effective, the business coalition would need to have the support of major transnational corporations. The membership of smaller businesses would benefit the coalition, but would not be essential. As long as the major players in any given industry agreed to take part, the devotion of smaller businesses would not pose significant competitive threats to the major corporations. The creation of this coalition would be dependent on the United States ratifying the Protocol, as it is unlikely that major corpora-

tions would agree to take part in a coalition that put an immediate, indefinite hold on all investment in the United States.

Although creating a businesses coalition would be a significant undertaking, many businesses have already expressed interest in helping to push for stricter global greenhouse gas emissions targets. CEOs of 39 large international companies, including BP, DuPont and Credit Suisse, have made a joint public statement to the G8 requesting clear regulations of greenhouse gases: "the CEOs request a clear goal for reducing global greenhouse gas emissions (suggesting cuts of at least 50% by 2050), and a "paradigm shift to a low-carbon economy" that would use the marketplace to stimulate the value of carbon reductions and clean technology." These companies recognize that a reduction of greenhouse gas emissions is necessary to prevent global warming and they are asking governments to produce clear targets and timelines for these reductions.

In addition to clear regulations, the coalition would provide strong public relations benefits for businesses that took part. As an incentive, businesses would be allowed to use their participation in the Kyoto Protocol coalition as a marketing tool in publications, advertising, and labeling. The growth in corporate social responsibility programs, as well as press campaigns to label companies as "green," shows that corporations recognize the value that consumers place on eco-friendly practices. The Kyoto Protocol coalition would provide businesses' green marketing programs with legitimacy through their connection with a recognized international effort to fight climate change. As the labeling of companies as part of the Kyoto Protocol became well known among the public, the lack of membership in the coalition could hurt businesses and would allow activists groups to easily identify companies to target in campaigns to encourage green practices. Thus, as it grows, the coalition would build a momentum of its own in the business community. To help to start this momentum, the Parties to the Protocol could provide special benefits to the foundering corporations of the coalition. Such incentives could include extra carbon credits for the initial years of implementation.

Access to Adaptation Funds

Adaptation funding for Kyoto Protocol members could be used as an additional membership benefit. Providing members to the Protocol with preferential access to funding for adaptation related activities would provide many developing countries with much needed resources. This benefit would be contingent on the establishment of clear guidelines for adaptation related activities. Adaptation related activities should include not only activities to respond to imminent threats, such as building sea walls, but also activities that provide assistance to the new economic and social problems that climate change will create. Such projects may include promoting drought or flood resistant crops, creating new jobs for workers whose occupations were destroyed by climatic changes, and improving social services for workers with less stable sources of income and food.

Support for Green Jobs and Green Industry

The creation of a strategic planning resource to provide support to green industry could be another valuable membership benefit for Parties to the Kyoto Protocol. Green industry offers opportunities for economic growth. The Parties to the Protocol should create a strategic planning resource, similar in many ways to the research brain trust, which would provide expert advice to governments and busi-
necessities in member countries interested in promoting a green economy. By providing member countries with economic, strategic, and policy assistance in creating or encouraging the growth of green industries and green jobs, the Protocol could give member countries a competitive advantage. This resource would be created by IPCC experts meeting twice annually to review and provide feedback on questions and proposals. In addition, there would be a small, permanent staff that could provide parties with access to information and research in between the expert review sessions. As in the brain trust, each member to the Protocol would have unlimited access to the trust for government-sponsored projects as well as limited access for an agreed upon number of private interests.

**Extra Benefits**

In addition to the benefits of membership, creating a benefit structure to reward members who exceed their obligations would create a positive incentive for deeper engagement of the Parties. Such additional benefits could include:

- Increased flexibility in the fulfillment of future obligations (a good faith agreement based off a member’s proven track record);
- Increased access to assistance funding;
- An increase in the percentage of obligations that can be fulfilled through the Clean Development Mechanism;
- A committee leadership position in the next Conference of the Parties.

These benefits would reward commitment to the goals of the Protocol and provide incentives and increased flexibility to those members that prove their engagement with the issues and their ability to meet and exceed their required greenhouse gas reductions.

**Monitoring**

Enforcement mechanisms rely upon an effective process for determining when a Party is out of compliance with their Kyoto Protocol commitments. To strengthen the current monitoring system in the Kyoto Protocol, independent third party organizations should play a role in monitoring and reporting on compliance and emissions levels in member countries. Such organizations would include non-governmental organizations (NGOs) and other civil society groups. Currently, the Protocol calls for Annex I Parties to have “a national system for the estimation of anthropogenic emissions by sources and removals by sinks of all greenhouse gases not controlled by the Montreal Protocol.” This system requires Annex I Parties to submit reports on their greenhouse gas emissions. Expert panels review these reports, but it is the responsibility of the Parties to monitor and report on their emissions.

While there are clear benefits to internal monitoring and reporting mechanisms, (including strengthening internal reporting systems, encouraging member engagement with emissions monitoring, and distribution of costs across member countries) the current system has substantial problems. A 2003 report examining Annex I country reports of greenhouse gas emissions related to waste management showed that current emissions reporting systems are generally inaccurate and poorly structured. There was found to be no global standard for measurement or reporting and many of the calculations and figures used by countries were inaccurate or misleading. In fact, out of 27 submitted reports on methane emissions, the study found that only four of these reports had figures that matched the study group’s emissions audit. The creation of an outside monitoring system, made up of independent organizations from around the world, could help to address many of the problems found in the current reporting structure. This system would be created by inviting independent organizations to participate in a voluntarily monitoring and reporting group. The monitoring group would be charged with providing an objective assessment of the compliance of various Parties. It would be authorized to report on any party at any time and to publicize its findings. To ensure standardization, the monitoring group would have to submit to the UNFCCC Secretariat the standards and methodologies used in its monitoring and assessment.

An independent monitoring group would not be constrained by requirements to monitor all parties. Instead, it would have the flexibility to monitor sectors or countries of particular concern. Independent organizations may have access to information sources beyond the scope of government information systems, giving a more well-rounded assessment of the reality of mitigation strategies in member countries. They may also be able to work more quickly than many government bureaucracies that are burdened by heavy regulation and slow bureaucratic procedures. The monitoring group would be in the position of using the information they gather to put public pressure on members to comply with their Kyoto commitments. “Naming and shaming” is not only an effective means of exposing treaty violations; it can also help deter non-compliance. The influence of naming and shaming campaigns, or the threat thereof, can be seen in a number of international campaigns, including initiatives to address the problem of conflict diamonds and anti-corruption efforts.

A monitoring body consisting of civil society groups could expect to encounter resistance from some governments and businesses around the world. Such resistance could be lessened through official sanction from the Protocol Secretariat and by encouraging a mutually beneficial relationship between civil society and governments. It could also be addressed through the creation of clear and transparent regulations for the monitoring group and its member organizations. Independent organizations taking part in the monitoring group should play a role in providing assistance to countries as they set up their monitoring systems. This would not only help countries with scarce resources and encourage the creation of consistent monitoring standards, but it would also help to build working relationships between these different sectors.

**Wider sense of Accountability: Involving other players**

Nation states are the primary actors in the Kyoto Protocol and as such bear the responsibility for ensuring that the goals of the Protocol are met. However, it is also important to recognize the stake that other actors have in the outcome of the Protocol and the role that they can and do play in achieving its goals. Given the enormous impact of climate change, the argument can be made that all actors, from individuals to regional associations of nations, have a role to play in addressing the problem. Cities from around the world have recognized their responsibility and formed the C40, a group of international cities collaborating on programs to address climate change. State and regional efforts in the United States are another example of the engagement of governments and organizations on
many different levels. Programs such as these should be encouraged and incorporated into national plans as member countries work to meet their Kyoto obligations.

Outside of government, the two primary actors in climate change mitigation are NGOs and businesses. Both groups have a lot at stake in the Protocol negotiations and both will play important roles in the grassroots implementation of mitigation efforts. The Kyoto process is controlled by sovereign states, and members are often hesitant to include outside groups directly in the negotiation process. However, the influence of outside groups is unavoidable. NGOs and private sector interests already impact the Kyoto negotiations through advocacy and lobbying efforts. By providing information, money, or influence, they impact the positions of different member countries. Rather than attempt to shut out the voices of NGOs and business groups, the interests of the Protocol would be better served by including these groups in the process in a more structured manner. Including NGOs and business groups in the Kyoto Process would give them a greater stake in a successful outcome. Instead of acting as potential spoilers from the outside, these groups could help to contribute time and resources towards shaping an effective solution with the Protocol structure.

**Roundtables**

One way to directly incorporate NGO and private sector interests in the Kyoto Protocol would be to create a series of roundtable discussion groups based on different problems that Parties to the Protocol are working to solve. Each roundtable would be given a specific topic to address, depending on the negotiation or implementation issues being negotiated by the Parties to the Protocol. A roundtable would be tasked with recommending a solution to its assigned issue, including recommendations for specific guidelines and implementations.

The recommendations of each roundtable would be presented to the Parties for consideration. If a roundtable recommendation was accepted by the relevant authority within the Protocol structure, the roundtable participants would be included in the subsequent negotiation and implementation processes for their recommendations. The roundtable participants would not have a vote in final decisions, but they would be given a seat at the table for all follow-up discussions, be allowed to participate fully in discussions, and be given full access to information and resources associated with the process. This would not only help to ensure that the process and decision take into account the diverse interests at stake, but it would also provide resources for member countries on complicated and often very technical issues.

Roundtable participants would be chosen specifically based on the topic to be addressed. Participants should represent the primary interests involved in an issue, from different backgrounds and perspectives. The goal of the roundtables would be to bring together the groups with interests at stake in a decision and task them with finding a realistic solution to the problem within the guidelines of the Protocol. If the roundtables do not create viable solutions, then the Parties to the Protocol would be in the same position they would have been in if no roundtable had been created, except that they would have access to the added resources compiled during the roundtable.

The inclusion of conflicting interests would be a critical component of the roundtable process. The issues on the table for the Kyoto Protocol are complex and many different groups have valid concerns and perspectives. Incorporating these interests into the process would not only give them an opportunity to help craft a solution, but would also provide them with a better understanding of the interests of other groups and the constraints within which solutions must be created. The fact that participants would have to rely on their group in order to play a role in the Kyoto process may help to engender trust among participants and create added incentive for participants to engage in discussions of shared interests rather than individual positions.

A final benefit of the roundtable working groups would be to increase transparency, both within the Kyoto Protocol and in the private sector. The participation of businesses and NGOs in the negotiation process would provide added incentive for member countries to follow through on their commitments. Business interests and NGOs participation in negotiations would give them a clearer understanding of the goals and commitments of different countries, thus allowing them to better hold nations accountable to those commitments. Encouraging private sector groups to participate in roundtables may also help to encourage transparency and accountability among business interests. Open and honest discussions of interests and concerns may encourage businesses to be more transparent regarding the challenges they face in climate change mitigation. This transparency could help to facilitate the creation of policies, regulations, and implementation strategies that are more responsive to the barriers faced by mitigation efforts.

**Conclusion**

The proposals made in this paper seek to strengthen the fundamental mechanisms of the Kyoto Protocol. Clarifying the long-term goals of the Protocol and the roles and responsibilities of the Parties to the Protocol lays the basic groundwork upon which subsequent regulations and policies can be built. Building membership benefits into the Protocol not only helps to frame membership in a positive light, it also provides a means through which an effective system of enforcement can be created. Clear and reliable enforcement mechanisms deter noncompliance and strengthen the normative values upon which the Protocol is built. Improved monitoring systems ensure that commitments are being met and help to encourage standardization of a global emissions accounting system. Finally, providing increased opportunities for involvement of outside groups can bring new perspectives and resources to the Protocol's negotiation process.

In order to effectively address the problem of global climate change, action must be taken at all levels of government, from local to international. Changes must be made in individual lifestyles, business practices, market mechanisms, and government policies. The Kyoto Protocol is an important component of this change. It not only influences government policy on climate change, but it also makes clear that climate change is a global problem for which all nations must be held accountable. The Protocol provides a medium through which countries can hold one another accountable to clear and enforceable standards. The proposals above seek to strengthen the Kyoto Protocol to help it to successfully fulfill its role as a global agreement to combat climate change.
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Notes


4 The UNFCCC website defines Annex I Parties as follows: "Annex I Parties are the industrialized countries listed in this annex to the Convention which were committed return their greenhouse-gas emissions to 1990 levels by the year 2000 as per Article 4.2 (a) and (b). They have also accepted emissions targets for the period 2008-12 as per Article 3 and Annex B of the Kyoto Protocol. They include the 24 original OECD members, the European Union, and 14 countries with economies in transition. (Croatia, Liechtenstein, Monaco, and Slovenia joined Annex I at COP-3, and the Czech Republic and Slovakia replaced Czechoslovakia.) United Nations Framework Convention on Climate Change, Glossary of climate change acronyms (accessed on December 6, 2008); available from http://unfccc.int/essential_background/glossary/items/5666.php.

5 Robert Stavins lecture at Tufts University Fletcher School on November 18, 2008.

6 William Moonaw, "The 3% Solution", Tufts Magazine, Winter 2008 (accessed on December 6, 2008); available from http://www.tufts.edu/alumni/magazine/winter2008/features/co2_3percent.html. Although "The 3% Solution" does not cite a baseline year, the baseline of 2000 was chosen based off personal communication with the author.


8 Barack Obama, Recorded Speech for the Governors' Global Climate Summit, November 18th, 2008 (accessed on December 6, 2008); available from http://www.whitehouse.gov/speeches/2008/12/20081218公告-121808.html.


