Removing the Kinks to Links: Developing a Framework For a Future Global Emissions Trading Regime

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EXECUTIVE SUMMARY

Emissions Trading Regimes (ETRs) have begun to form both in the United States and in Europe as public and private actors seek new mechanisms for encouraging greenhouse gas reductions at the lowest possible cost. Although these regimes share the overall goal of creating markets for emissions through trade, discrepancies between the market-structures of these regimes will likely limit trading, thereby preventing market growth, and reducing the potential cost benefits that could be reaped from a homogenous marketplace.

Developing strategies now for linking the different regimes is key to the future success of international emission trading. The negotiation process that took place during the formation of the Kyoto Protocol highlighted philosophical differences between the U.S. and the European Union over the importance and implementation of flexibility mechanisms such as emissions trading systems. U.S. withdrawal from the Kyoto Protocol raises many questions about how trans-Atlantic linkage can be achieved given the potential for non-recognition and perhaps competition between different trading systems.

If homogeneity results in greater market efficiency, the linking of trading regimes should be considered. The end result of linkage should be for all firms to meet emission reduction targets at the lowest possible cost. Technically, emission trading will not be difficult given a clear set of rules. By providing ownership of emissions and establishing a market for the commodity, trading simply puts a price tag on reduction efforts.

Governments, however, play a crucial role in this process because they will be the architects responsible for building efficient, effective, and equitable systems. How these systems are designed and interact with one another will determine their overall efficiency in reducing greenhouse gases. Without an internationally recognized body to advocate the benefits of linking regimes, it is likely that domestic programs will be designed in a manner that will discourage internationalization.

The objective of this paper is to develop a technical framework to be adopted by all regimes that will permit symmetry of design and thereby minimize obstacles that would preclude future successful negotiation of a global trading agreement. The framework embodies an underlying principle of maximum economic efficiency in light of potential political and environmental obstacles. Furthermore, mechanisms are developed for ensuring that these principles are integrated into each domestic program. Inherent assumptions are made as a matter of course as to the environment in which this model is being proposed. A key assumption is that, although global trading may involve issues of equity and environmental integrity, the potential benefits of a well-designed, enforceable global market exceed the potential costs and should be pursued. To be considered viable, the regime must
demonstrate environmental integrity, reduce costs beyond the reductions envisioned where regimes exist in parallel, and reduce as much as is feasible the inequity that international trading will create to ensure that political "buy-in" is achieved.

Evolving Models: Trending Towards Divergence

Major efforts are being made to develop or fine-tune domestic carbon emissions trading systems, with many countries, particularly in Europe, hoping to begin trading in 2005. In the U.S., the Chicago Climate Exchange recently opened for business, bringing together more than 35 private and public entities to participate in carbon trading. In Europe, efforts are being made to develop these markets with the express goal of permitting inter-European trading. These efforts can be attributed to several key factors, including the coordinating efforts of the European Commission, a large degree of political and economic integration, and philosophical agreements as to the overall commitment to environmental integrity.

Despite these developments, prospects for a global trading system remain uncertain. Domestic bias is an important barrier to linking ETRs. The EU will not allow for the trading of permits in non-Kyoto countries because of the perception that these systems lack the prerequisite stringency that will presumably be inherent in European regimes. This position is particularly strong in Germany, a country that has accepted a leadership position on environmental stewardship (World Wildlife Fund 2003). Within the United States, concern over the regulation-heavy system proposed under Kyoto helped contribute to its demise. It could be argued that philosophical differences over the fundamental purpose of an emissions program, as well as over the role of government in its creation and implementation, have led to the emergence of vastly different models in the U.S. and the European Union. The Kyoto-based guidelines attribute ultimate liability to the state and have focused on ensuring that the system of trading retains the environmental integrity reflected in the protocol’s original spirit. U.S. models, however, have focused on integrating the marketplace to fulfill the role of allocating the costs of GHG emissions. Assuming that these philosophies will continue to diverge and that they will continue to drive the development of their domestic trading schemes, it is likely that these schemes will differ fundamentally from one another in ways that will impede and possibly prohibit their eventual convergence.

Important mechanisms that will determine the future compatibility of these systems are now being developed, with little indication that a consensus exists for trans-Atlantic trading. Table One, which compares the key properties of both European and American trading systems illustrates this.

<table>
<thead>
<tr>
<th>Nature:</th>
<th>Cap and Trade</th>
<th>Baseline Reduction Schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participation:</td>
<td>Hybrid*</td>
<td>Voluntary</td>
</tr>
<tr>
<td>Links to External Systems:</td>
<td>Kyoto Countries Only</td>
<td>Non-Kyoto Countries</td>
</tr>
<tr>
<td>Targets:</td>
<td>8% by 2008-2012</td>
<td>4% by 2006</td>
</tr>
<tr>
<td>Liability Regime:</td>
<td>To Be Determined</td>
<td>Seller Liability</td>
</tr>
<tr>
<td>Compliance Penalties:</td>
<td>E40/E100</td>
<td>Unknown</td>
</tr>
</tbody>
</table>

*Model based on the Chicago Climate Exchange. **Participation is mandatory in most countries, voluntary but with strong incentives for participation in the United Kingdom.

Although the trading systems have yet to be fully developed, the discrepancies highlight an important lack of consensus about market structure. This can be partially attributed to the fact that few organizations have assumed a lead advocacy role on this issue. Several organizations, such as the International Emissions Trading Agency (IETA), the UN Commission on Trade and Development (UNCTAD), and the International Energy Agency (IEA) are currently working to promote global trading agendas. The constitutencies for these organizations range from private industry to academics and NGOs, yet they remain largely on the fringes of the debate, overwhelmed by constituencies who either oppose linkage on environmental grounds or because of distrust of the other country’s model.

Arguments for a Future Global Trading System

It is generally agreed that emissions trading will reduce a firm’s carbon dioxide (CO2) marginal cost of abatement by creating a fungible commodity that can be bought and sold in a diverse marketplace. However, estimating the potential benefits has been difficult given the complexity involved in determining both the size of the future market as well as the price at which CO2 will trade. Estimates will nevertheless be helpful to policy makers as one tool that can be used when weighing the economic benefits against the economic, political, and potential environmental costs.

In 2001, the Intergovernmental Panel on Climate Change (IPCC) published studies performed by several research groups attempting to measure the cost savings of a regional and global trading system. The studies attempted to determine the costs of meeting the Kyoto Protocol reduction targets under three scenarios: compliance without trading, compliance through trading with Annex B (developing) countries, and full global trading. Not surprisingly, all models showed significant cost reductions as the size of the trading market expanded. The differences for the U.S. in particular demonstrated compelling evidence for linking not only Annex B countries but also for creating a global trading system. The ICCP estimated that the U.S., for example, would achieve cost savings equal to roughly one percent of total GDP by trading with Annex B countries. By trading globally, the cost saving increased roughly by a factor of three. The study concludes that the economic benefits of global trading will be important mechanisms for achieving political buy-in in the battle against climate change.

The linkage of international systems also addresses some of the inherent benefits of systems standardization. In much the same way that the ISO 14001 standards have provided companies with uniform guidance on corporate responsibility, the act of linking systems presupposes that the key performance characteristics of all participants are in harmony, which reduces transaction costs, particularly in today’s world of multi-national corporations. Standardization also fosters the creation of sub-markets that are more likely to proliferate where markets are uniform. Industries that sell pollution abatement technologies, monitoring systems, and environmental financial products would likely benefit from a single marketplace, where systems can be mass-produced globally with reduced segmentation. Such activity would likely result in even larger cost reductions, all of which would reduce compliance costs and barriers to further emissions reductions.
THE FRAMEWORK MODEL

Domestic trading systems would be adapted to mesh with the unique political and economic structures of each country. While these systems would likely exhibit hundreds of idiosyncratic national characteristics, this paper identifies the three overriding precursors to each system that must be in place for linkage to work efficiently and equitably. When the various trading systems are finally implemented, these crucial design elements would likely prove to be the linchpins that would serve as the foundation for negotiating an international trading agreement.

The principal properties have been chosen based upon their demonstrated historical success, as well as their comparative political, economic, and environmental benefits over other models. The adoption of these recommendations would require extensive political capital, particularly among non-Kyoto participants. The goal is to establish a common platform upon which a global trading structure can be built. The implementation of this platform would ultimately make negotiating a global trading structure possible — certainly with a much higher degree of probability than if a common foundation were not to exist. To this point, no consensus currently exists for what such a foundation should consist of or how it should be implemented. This model builds an economic framework within the context of political realities and tacitly acknowledges likely obstacles to the future negotiation of a global emissions trading system. It assumes that arguments about GHG trading have moved beyond "whether or not" to "which is best." The question of which system is most appropriate for individual countries is largely ignored within the context of the paper. Instead, it offers an answer to the question of what fundamental precursors would need to be in place to negotiate a global trading agreement in the future and provides mechanisms that would help to ensure that this foundation would be built.

KEY SYSTEMS DESIGNS

Mandatory Participation

Mandatory participation by firms within their own domestic systems ensures maximum economic savings by creating the broadest possible market for GHG emissions. Without mandatory participation across industrial sectors, the economic incentives for creating global markets are weakened considerably. In Europe, this design element is strongly encouraged in the system being proposed under the auspices of the Kyoto Protocol, with guidelines being developed for each sector required to participate. (The most recent European directive is currently adopting standards for participation involved in upstream activities based upon IPCC guidelines for energy sectors, ferrous metal production, the mineral industry, and other energy intensive industries such as the pulp and timber sector.)

In the United States, the broadest current system, the Chicago Climate Exchange, is only voluntary because of the lack of political will to push through mandatory participation. Linking such systems not only fails to establish broad-based markets, but also distorts the true price by allowing self-selecting industries (most likely sellers) to participate without including those that would be more likely to have to buy emission allowances. This distortion leads to a lower price than would be reflected in a true market, which artificially reduces the benefits available to sellers residing within the mandatory program. Although cost saving are still achieved through linkage, the exclusion of the worst offenders means that total savings will be less than through full participation, reducing an important leverage point for proponents of global trading.

Possibly the most significant issue precluding linking mandatory and voluntary programs arises over issues of equity. By integrating the supply and demand of individual programs, the discrepancies created by combining two distinct pricing systems will create winners and losers. The winners will be buyers formally residing in the high-priced market and sellers formally in the low-priced markets, while the losers will be their counterparts in their respective markets. While this dynamic is inherent in linking any program, equity issues are likely to be stark and highly contested when one program is voluntary. Critics residing within the mandatory program, firms that are likely to be sellers, will see their profits dwindle as CO2 prices fall and will contend that they are being punished because larger polluters in the voluntary market are being self-exclusionary. Many would go one step further and point out that non-participating industries in the voluntary program are receiving unfair competitive advantages because they are not subjected to the same compliance costs as their peers. (European regulators have begun to consider imposing tariffs on American companies that have not demonstrated efforts to reduce their GHG emissions.) This further underscores the political reality that Europe will not consider linkage with any system that subjects its industries to competitive disadvantages. Without a mandatory American trading system, convergence with a more rigorous European standard is likely to be a "non-starter."

In addition to industrial disadvantages, mandatory and voluntary linkage raises environmental concerns that would likely derail global emissions trading. Foremost among these concerns is the issue of leakage. The potential for leakage — the shifting of emissions to a similar source without an emissions cap through deliberate action or market response — is likely to be widespread (Haites 2003: 52). An example of leakage might occur whereby a firm participating in a voluntary program decides to reduce its output, increasing its total allowances for sale on the market. Because the regime is voluntary, the reduced output would be offset by a non-participating firm, resulting in no net reduction in pollution, despite the increased profit of the firm.

Even beyond the issue of leakage, environmental organizations and Green political leadership, particularly in Germany, share a real concern that voluntary programs are an insufficient response to global warming and that linking with such a system only serves to dilute the integrity of a mandatory program. This undermines the fundamental differences between Europeans and Americans over the use of trading systems. Whereas American firms might desire access to the European emissions market to reduce costs, Europeans may be inclined to influence, if not dictate, the key terms of the agreement in order to increase the environmental integrity of the global trading system. To the extent that American businesses would derive financial benefit from such access, instituting a mandatory program would likely be the first key step in such a negotiation. With this system design already in place, negotiations could proceed to less contentious issues.
Cap-and-Trade Format

Designers of any future global trading agreement must ultimately craft systems that are likely to be the most comparatively successful across different domestic programs. Trading programs that fail to increase liquidity and reduce prices, as well as systems that provide less relative stability and predictability, are less likely to be considered for membership in any future global trading system. Negotiations will hinge on economics, politics, and the environment, and any efforts to link systems will be more readily considered where the parties have programs that are equally rated in these areas. Fortunately, empirical evidence exists within the United States that can be brought to bear on the merits of cap-and-trade systems versus baseline and credit systems. (Credit trading allows emission reductions above and beyond pre-specified legal requirements to be certified as tradable credits. Allowance trading, on the other hand, starts by defining an aggregate emissions cap. The emissions authorized by this cap are then allocated to eligible parties.)

According to the United Nations Commission on Trade and Development (UNCTAD), cap-and-trade systems have markedly outperformed their counterparts.

In general, programs that imposed emissions caps coupled with allowance trading have performed well, whereas credit systems have generally not met expectations. Credit trading systems have proved to be less secure environmentally and have created higher transaction costs and greater uncertainty and risk than allowance trading, leading to reduced trading (Tietenberg et al. 2003:8).

Furthermore, by their nature, baseline and credit systems require a greater degree of government oversight to ensure that firms perform as promised, resulting in higher transaction costs and reducing the commodity nature of the credits.

In weighing the cap-and-trade versus baseline and credit debate, it is important to consider the interests of the various actors in laying the groundwork for global trading. Where the concerns lie primarily around increasing economic efficiency and reducing government intervention, the actors will tend to support cap-and-trade systems. As such, it is likely that any future U.S. trading system will fall within this category. European countries are still considering both design elements even as the EU has proposed a community-wide cap-and-trade system (International Emissions Trading Agency 2003).

European preference for credit systems seem to largely flow from the Kyoto Protocol, in which flexibility mechanisms such as the Clean Development Mechanism and Joint Implementation measures rely on credit systems. Again, because these systems rely heavily on regulatory oversight with little additional value in increased environmental integrity, a strong argument could be made by domestic and international commercial interests to shift toward cap-and-trade systems. Because most European countries have yet to fully qualify their positions on the matter, the pure economic benefits of a cap-and-trade system should be emphasized to allow for future harmonization.

Seller Liability Governance Rules

Accountability is the final technical component that must be addressed and harmonized as a precursor to global emissions trading. It is in the areas of accountability, risk, transparency, reporting, and enforcement that international GHG trading differs most fundamentally from other aspects of international trading. With Kyoto, ultimately legal accountability derives from the legal authority of the government and the institutions that sign and subsequently ratify the protocol (Tietenberg et al. 2003: 59). Without Kyoto, it remains to be seen whether or not governments will accept final responsibility for emissions reductions. Importantly, if compliance and enforcement work well, then there is no need for accountability— it is, in essence, the first line of accountability, with liability being the second. These functions will be executed largely by domestic governmental organizations as per Kyoto. In attempting to create a climate for international transactions, however, the issue of accountability, specifically liability, must be settled well in advance of linkage talks; harmonization will be necessary if there is any hope of achieving maximum economic efficiency and providing for equitable dispute resolution.

In all trading systems, liability will be the responsibility of the firms engaging in trades; the question is "which firm?" International contract law on emissions trading is in its embryonic stages, largely because the laws themselves have yet to be promulgated. Commodity trading provides clues as to how order within the markets can be achieved, and evidence points strongly to the benefits of seller liability. Within the context of emissions trading, similar conclusions are being drawn at the international level.

Generally, a system of strict liability is preferable in a strong enforcement environment. It provides incentives for those selling the allowances to ensure their validity, and it reduces risk and uncertainty in trading, significantly enhancing their vendibility. Because buyer liability erodes the commodity nature of allowances by allowing them to be retroactively devalued, thereby creating uncertainty and discouraging trading, refinements to this approach may be desirable (Tietenberg et al. 2003: 17).

Without question, the private sector strongly prefers seller liability regimes. To begin with, selling institutions would be in a better position to know whether or not they will be in compliance with their domestic regimes than their trading partners would be. Buyer liability would, by its nature, reduce market liquidity by increasing the risk associated with trading, thereby increasing transaction costs. Attempting to link buyer and seller regimes while technically possible, would greatly reduce the intrinsic value of global trading by increasing the legal and governance costs associated with assuming another firm's liabilities.

While the "pro-efficiency" camp will clearly ally themselves with their political counterparts to argue for seller liability, the "pro-environment" camp has been more cautious in its acceptance of seller liability governance rules. The concern among environmentalists is that firms residing within domestic trading programs with weak enforcement/compliance regimes will have incentives to sell credits for profit with full knowledge that the penalties, as well as the likelihood of penalties being assessed, is small. Under this scenario, the environmental integrity of the entire system is jeopardized due to the dilution of allowances on the open market. This valid concern, however, may be more effectively dealt with in the context of other operational characteristics. For example, enacting a reserve requirement would reduce the risk posed by illegitimate allowances. To this point, government action on liability regimes has largely favored seller liability.
primarily in the interest of stability and risk reduction (Hailes 2001: 60). It does, however, raise important questions about environmental integrity that will need to be addressed at the domestic level, with the knowledge that the decisions made will affect the international community’s ability to create an international system.

IDENTIFYING KEY ACTORS
The debate surrounding international emissions trading involves governments and their regulatory agencies, international organizations, various business trade groups, environmental groups, and a host of interested non-governmental organizations. Their diverse interests and competencies, as well as the uncertainty of the future of emissions trading, are leading to the formation of alliances with groups that both support and mistrust both domestic as well as international emissions trading. Global trading systems are likely only to be developed over time, yet building the technical framework upon which future agreements can be made must begin now, and will require the buy-in of several key actors. These actors include:

- **Government**: It is important to note that each domestic trading system — even within the EU, will have significant leeway to develop initiatives that reflect the unique circumstances in each country. The heterogeneity of this group of actors would need to be addressed, making “one-size fits all” lobbying strategies problematic. For example, it would not be sufficient to simply tout the cost savings associated with global trading when a nation’s industries would likely be competing against American firms for trade allowances. Likewise, American government officials would require prodding to enact mandatory participation. Each country would need varying levels of engagement in order to get the right processes in place. Often alliances would be made at the agency level, sometimes even sparking contention across regulatory bodies.

- **Primary Industry Actors**: Because of the diversity of the marketplace, as well as the different development stages of emissions trading in various nations, many private actors are cautious in their approach to international trading. In the United States, for example, the creation of a federal trading system is not yet a foregone conclusion. In countries, particularly non-Kyoto countries, where trading is not assured, debating the merits of linking must be couched within more general merits of trading in general. In Europe, industry opposition to international trading would likely come from carbon intensive utilities that would find the price of allowances bid up by American firms. Strategic concerns would likely focus on the costs of regulation, liability, and general predictability.

- **Financial Service Sector**: As emerging regulatory frameworks are being developed, the financial services sector must begin to consider the implications of a company’s carbon strategy on its investment portfolio. Given the implications of the emerging regulatory framework on the counterparties of bank lenders and institutional investors, it is inevitable that this “carbon risk factor” will also translate into added risk in the portfolios of financial institutions (Tatraley and Bodnar 2003: 67). The Carbon Disclosure Project, which brought together a group of 35 institutional investors managing more than $4.5 trillion in investments found that companies in heavy industries could see market capitalization fall by as much as 40 percent unless action is taken quickly (Tatraley and Bodnar 2003: 70). Because these institutions represent an essential source of capital in the private sector, obtaining their buy-in to global trading could spur other sectors into action. This group should be seen as a key actor in international trading, because they have the power to drive corporate behavior through risk-assessment strategies.

- **Environmental Interests**: Procuring the support of key environmental interests will require balancing concerns about market efficiency with overall environmental integrity. This would likely require compromises to be made between proponents of laissez-faire market structures and proponents of strong regulatory regimes. Here, systems designs that underline compliance and enforcement could concern significant elements of both factions. Designers may wish to look to the American securities market, which, despite its reputation for being free from restrictions to capital flows, is actually the most highly regulated international market. A key insight to developing strategies for buy-in, particularly among environmental groups, is that domestic environmental interests may be relatively powerless to affect the compliance and enforcement mechanisms enacted outside of their own nation’s jurisdiction, even though the structure of these mechanisms will ultimately affect the environmental integrity of their nation’s system. As a result, these groups must react to international trade agendas with options that are limited to an “approve-it-or-reject-it” strategy. More often, as has been demonstrated by high profile groups such as Greenpeace, the choice has been to reject trading because their interests have been deemed to be better served by preventing the dilution of domestic programs. This points to the clear importance of establishing core symmetries and laying the proper foundation before the decisions about linking are finalized.

- **Developing Countries**: Although the lack of key market structures and regulatory frameworks precludes developing countries from participating in international emissions trading, the use of Joint Initiative and CDM projects within domestic programs does not jeopardize that country’s participation in global trading (Hailes 2001: 9). As such, any movement toward internationalization must include these actors, particularly within China and India, two nations likely to be major players in any international system. The concerns of these groups, while far from homogeneous, would likely focus on equity issues and economic competitiveness. Moving toward a framework would likely begin once these nations improve economic efficiencies up to the point where other developed nations could become strongly concerned about the economic advantages these actors carry from being unencumbered by carbon mitigation regulations. For now, proponents of International Emissions Trading (IET) would focus on developing strategies that utilize domestic policies to put these actors in positions to benefit from trading over a certain time period.
IMPLEMENTATION MECHANISM: UNSCET

This technical framework will require an organizational component to ensure that advocacy is both consistent as well as effective. To this point, advocacy has been fragmented and analytical in nature; focus has been drawn to general terms such as "economic cost savings," "efficient pricing models," and "hot-air." Advocacy groups have tended to work amongst peers, particularly within the private sector. The International Emissions Trading Agency, a non-profit advocacy group, exemplifies this strategy. The principal vision involves "establishing market-based trading systems for greenhouse gas emissions by businesses that are demonstrably fair, open, efficient, accountable, and consistent across national boundaries" (IETA 2004). The agency's objective is to create systems and instruments that will ensure effective business participation. The underlying assumption is that businesses have vested interests in ensuring access to the broadest and most homogeneous market structures possible, a position shared by groups such as UNCTAD and the IEA.

Strategically, it has focused on advocacy through education, establishing working groups in workshops and seminars, publishing its research, developing models for taxation, contract standardization, and registries. Its effectiveness to this point has been moderate — a lack of international expertise across different regimes has limited its impact on the global stage.

Political and environmental actors have also worked to attempt to link systems, most obviously with the European Union, where members are attempting to meet emissions targets using bubble targets. To this point, the focus has been the use of flexibility mechanisms as a supplement to emissions reductions rather than on working to develop a standard regional trading system. This reflects the unique and conflicting interests within governments themselves. As political groups grapple with issues ranging from sovereignty to taxation to environmental integrity, a clear consensus on specific standardized systems has yet to emerge. Proponents have advocated linkage to the extent that their unique systems can benefit from trade rather than by approaching linkage more holistically.

To attempt to bring the diverse interests together, an international advocacy should be formed under UNCTAD's wing. The group, which should be called the United Nations Sub-Commission on Emissions Trading (UNSCET), would have the mandate of building consensus for the framework for International Emissions Trading. Its guiding principles would be economic efficiency, environmental integrity, and political equity, embodied within the technical framework itself. Functioning principally as an advocacy group, this organization would need to consist of multi-national experts across the spectrum of financial and commodity regulation, environmental science, industry operations, and politics. The organization's core responsibilities would be to build broad-based consensus for the framework and to address other operational system design where symmetry is considered important for linkage purposes. Additional operational features that would need to be addressed include banking and borrowing agreements, compliance and enforcement mechanisms, and registry provisions. While these features would need to exhibit considerable symmetry across regimes, they lend themselves to easier "on-the-fly" adjustments than the core properties dealt with in this discussion.

Efforts would include advocacy through education, similar to the IETA model, yet broader in scope, with a greater focus on specific regional concerns, both economic and environmental. Such research would be likely to carry greater weight than that sponsored by NGOs because of the breadth of resources that UN organizations have at their disposal. The diverse membership of the organization would also give it greater legitimacy. An additional principal responsibility of the organization would be to provide a forum for the discussion and resolution of linkage issues among stakeholders.

Despite the countless international directives that already cover hundreds of diverse topics, the creation of UNSCET would be an important driver of global emissions trading harmonization. Most importantly, it would fill an important void in emissions trading advocacy by reaching out to actors across geographic regions and building consensus from the bottom up. By creating an advocacy group under the auspices of the UN, the global community would signal its endorsement of the ideals of global emissions trading. This approach would force opponents of linkage to focus their attention on specific aspects of trading rather than on the misconception that global trading is inherently dangerous, a strategy that can be dealt with through thoughtful, carefully crafted policy. Secondly, any UN advocacy group would be viewed as neutral and free from specific philosophical biases regarding the true purpose of emissions trading. Skillful management of the numerous stakeholders decreases the likelihood of advocacy being dismissed as a tool of a particular industry or political viewpoint.

Third, and perhaps most importantly, global emissions trading is now viewed less contentiously compared to other international climate change initiatives, particularly the Kyoto Protocol itself. Again, the ideals of global emissions trading seem to be considered worth supporting because domestic trading is likely to become a reality. The difficulty with international trading is that it raises equity issues that must be addressed in a multi-lateral context. Fortunately, great flexibility exists to address these issues, particularly because many systems are still in the early stages of development. The principal challenge is to create a framework that lights the path toward integration. The path requires all domestic systems to contain minimum yet vital symmetries to make global trading a reality. The principal institutional advocacy group should reside within the United Nations, while the framework that it would advocate would be designed with economic efficiency and environmental integrity as its principal guiding force so as to hold wide appeal among the industry players that hope to profit from it and the environmental interests who hope that lower compliance costs would lead to faster reductions.

CONCLUSION

Carbon emissions trading systems represent an opportunity for divergent stakeholders to unite behind a unique mechanism that can be expected to "expand the pie" by providing economic incentives to reduce GHG emissions. The mechanism, however, is only as useful as the structure that supports it. Recognizing the interests of global trading stakeholders and understanding their various motivations is a prerequisite for developing a framework that hastens the implementation of global trading. Building a model that makes trading viable need not account for every idiosyncratic detail within each individual program, although it must meet minimum standards of economic, political, and environmental rigor in order to achieve multilateral acceptance. By identifying core properties for which symmetry of
design will be essential, progress could be made at an early stage toward global trading, reducing the risk that obstacles would develop and render global linkage negotiations more difficult. The fundamental principal is one of precaution. Furthermore, by creating an advocacy unit under the auspices of the United Nations, the merits of the framework can be disseminated more widely, with greater credibility, and more thoughtfully than would otherwise be possible given the vacuum of perceived leadership on the issue.

This proposal addresses one of the key barriers to global emissions trading, supreme decentralization. In order to make progress in negotiations, the framework would require a certain degree of commitment to symmetrical design. This would ensure that a minimum standard would be established that would lead to a system where economic efficiency, political equity, and environmental integrity could become realities. This is the minimum that must be established for future negotiations to proceed in a relatively smooth and timely fashion. As each country develops its own regulatory structures, this early framework model could help the global community to reap the financial and environmental benefits of trade that it might otherwise deny itself.

REFERENCES


