Good Climate Governance: Only a Fragmented System of International Law Away?

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Fragmentation is the hallmark of international environmental law—it is both the key to its success and the pathway to its unraveling. Recognizing that law is an essential component of systems of supranational climate governance, addressing gaps between international legal systems is fundamentally important to the legitimacy of international law and to on-going attempts to use international law as a central component in efforts to address climate change. This article analyzes developments in international environmental law with a view towards suggesting how efforts to develop an international climate change legal regime—and a broader system of global climate governance—highlight the pressing need to look more closely at the linkages between climate change and other areas of international law and to begin thinking about ways to minimize gaps and maximize cooperation among international environmental institutions and between international environmental law and other spheres of international law.

I. INTRODUCTION

It is widely recognized that conflicts over the causes and consequences of global climate change complicate efforts to formulate an effective system of international climate governance. What is less widely discussed, but equally critical to the international governance debate, is how climate change highlights fundamental disconnects within and between international environmental law and other fields of international law. Climate change provides a vehicle for identifying and beginning to address institutional gaps and linkages that have hitherto impeded attempts to develop synergistic systems of international law and policy. This article argues that issue and institutional fragmentation impede efforts to develop effective systems of supranational climate governance. It then makes the case that overcoming the barriers created by fragmentation requires the international community to adopt a two-fold strategy of aggressively moving forward with plans to create an international environmental organization while simultaneously working to

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improve communication and cooperation among international institutions with overlapping mandates and/or complimentary objectives.

II. INTERNATIONAL CLIMATE GOVERNANCE: PROBLEMS, POSSIBILITIES, AND APPROACH

A. CLIMATE GOVERNANCE: DEFINING THE PROBLEM

With the 2007 UN Climate Summit in Bali erupting in passionate pleas and threats and the global community battling it out to negotiate a post-Kyoto governance regime for climate change, the task of agreeing to international legal parameters for climate governance seems monumental, if not impossible. However, even if the international community is able to define the guiding terms for a post-Kyoto agreement, this will only create a skeletal framework for global climate governance. Ongoing international negotiations primarily focus on (1) determining the legitimacy of legally binding greenhouse gas emission reductions for developed and developing countries, (2) establishing guidelines for emission reduction measures, (3) strengthening provisions for clean technology transfer and financial assistance to the developing world, and (4) negotiating principles for forestry management. These are all vital components of an international climate governance regime. Yet, even if all of these matters were to be resolved, this would only reveal the tip of a quickly sinking iceberg.

Efforts to develop a system of global climate governance reveal a fundamental flaw that challenges not just international climate governance, but also the creation of an integrated system of international environmental governance. That flaw is the fragmentation—both issue compartmentalization and institutional disjunction—that defines international environmental law today. Fragmentation is the hallmark of modern international environmental law; it is both the key to its success and the possible pathway to its unravelling.

International environmental law is defined largely by and through the many multilateral environmental agreements (MEAs) that now exist. Rarely, if ever, do these MEAs cross issue-specific lines to address more cross-cutting questions, except at the periphery. Further, MEAs often impact other areas of international law, from human rights, to trade, to the law of the sea without directly or indirectly addressing these interlinkages. The international legal regime for climate change epitomizes the fragmented nature of international environmental law, with both its positive and negative points.

On the positive side, maintaining a sole-issue focus enables states with disparate interests and attitudes to negotiate within set parameters. It also allows states to negotiate the optimal legal solution for a specific problem. On the negative side, issue compartmentalization defies the reality of most environmental problems, which are normally multidimensional and

cross-sectoral in nature. By creating an array of issue-specific legal agreements and institutions, the gaps and interlinkages among environmental problems and between international environmental law and other areas of international law are frequently left unaddressed at the margins of legal regimes—becoming the equivalent in international law of "no man's land."

Existing within the domain of "no man's land," for example, are questions of how to: balance trade and environmental objectives, reconcile human rights and environmental protection, negotiate the boundaries between ocean governance and international environmental governance, and coordinate the objectives of diverse biodiversity protection legal regimes. Each of these issues raises fundamental questions of how to use international law to balance and coordinate environmental objectives with an array of other human interests. The fragmented nature and compartmentalization of international law is not a new phenomenon; however, the question of climate change brings the flaws of this system to the forefront as never before. This article will demonstrate how climate change both highlights existing governance gaps in international law and offers a potential avenue for beginning to improve coordination and communication between previously distinct international legal regimes.

B. STRUCTURE OF ARTICLE

By analyzing developments in international environmental law this article demonstrates how efforts to develop a system of global climate governance highlight the importance of, first, looking more closely at the linkages between climate change law and other areas of international law and, second, taking the crucial first steps towards overcoming existing institutional weaknesses.

Section III of the article sets the scene by briefly exploring the concept of climate governance to flesh out why and how this term is being used, before moving on to review patterns of development in international law that have encouraged compartmentalization within international environmental law. This section concludes with an examination of how this evolution has, in turn, created a wide variety of conventions that regulate diverse aspects of environmental management, creating a fragmented system of law. Section IV picks up on the current disjointed nature of international environmental law by introducing the concept of linkages between distinct international regimes as a possible way to understand and overcome problems created by fragmentation. In particular, Section IV analyzes linkages among international environmental agreements and between environmental agreements and other areas of international law, focusing on the relationship between the emerging international climate change regime and international trade law, the law of the sea, human rights law, and biodiversity law. Here, it is suggested that climate change constitutes the "ultimate" linkage among many areas of international law, and thus, affords a new conceptual tool for analyzing and overcoming institutional gaps. Finally, Section V of this article reveals how climate

change can function not only as a mechanism for highlighting governance shortcomings, but also as a vehicle for improving coordination, integration, and cohesion between institutionally distinct but substantively interlinked areas of international law. In so doing, it argues for a two-tiered approach to improving institutional functioning, which advocates the creation of an overarching international environmental law organization and concerted efforts to improve institutional communication and coordination.

III. CLIMATE GOVERNANCE AND FRAGMENTATION IN INTERNATIONAL LAW

A. CONCEPTS OF "GOVERNANCE" EXPLORED

Nowhere is it more necessary to examine current forms of supranational governance than at the intersection of climate change and other domains of international law. Crossing the crevasse separating international efforts to mitigate and adapt to global climate change and to respond to questions of environmental, ocean, trade, and human rights law—among others—is essential to any long-term supranational environmental governance regime.

Bridging the gaps between climate governance and other fields of international governance requires in-depth examination of the systems of international law that define the parameters of existing legal regimes in the area of environmental management, international trade, law of the sea, and human rights. The bodies of law constituting international law in these domains are vast, congested, and fragmented; they lack coherence, comprehensiveness, and often, long-term effectiveness. This complicates efforts to structure sound systems of international governance.

Understanding and responding to the inextricable ties between climate governance and other areas of supranational governance is not just an academic endeavor; it is fundamental to ensuring a healthy human environment and healthy natural systems and human relations, for example, fisheries, whale stocks, marine habitats, food security, trade relations, human rights. Put simply, developing an effective, sustainable, and equitable system of climate governance requires policymakers to integrate and institutionalize climate change considerations into existing international legal regimes and vice versa; it also requires reconsidering the adequacy of existing institutions of international environmental law. In particular, it is essential to find ways to formally and informally bridge gaps between the United Nations Framework Convention on Climate Change (UNFCCC) and the Kyoto Protocol to the UNFCCC and, for example, the World Trade Organization (WTO), the United Nations Convention on the Law of the Sea (UNCLOS), the Convention on Biological Diversity (CBD), the Inter-American Commission on Human Rights (IACHR), and the numerous conventions and institutions shaping international human rights law.

Research on the interaction between climate change law and other areas of international law has focused primarily on the possibility of using institutions such as the IACHR, UNCLOS, and WTO dispute settlement mechanisms as external enforcement devices for limiting greenhouse gas emissions—especially against the United States, which is not a party to the Kyoto Protocol (Burns 2007: 34–41; Wiggins 2007: 22–24; Burns 2006: 27–52). This research is intriguing, but it does not go far enough towards improving systems of supranational governance. Recognizing the connections between climate change and patterns of trade, ocean functioning, biodiversity management, and preservation of human rights, how can our global climate change governance regimes succeed if the component parts of the system remain distinct and fragmented? They cannot. It is for this reason that this article examines the relationship between the international climate change regime and other key areas of international law and highlights the importance of creating more effective mechanisms for bridging information and decision-making gaps.

B. EXPLORING CLIMATE GOVERNANCE

The first question that must be posed is what do we mean by supranational and climate governance, and what constitutes "good" climate governance? These terms appear frequently in academic and popular literature, but as conceptual terms they remain ill-defined and underexplored.

Daniel Esty defines supranational governance as:

> refer[ing] to any number of policymaking processes and institutions that help to manage international interdependence, including (1) negotiation by nation-states leading to a treaty; (2) dispute settlement within an international organization; (3) rulemaking by international bodies in support of treaty implementation; (4) development of government-backed codes of conduct, guidelines, and norms; (5) pre-negotiation agenda-setting and issue analysis in support of treatymaking; (6) technical standard-setting to facilitate trade; (7) networking and policy coordination by regulators; (8) structured public-private efforts at norm creation; (9) informal workshops at which policymakers, NGOs, business leaders, and academics exchange ideas; and (10) private sector policymaking activities. (2006: 1490)

This definition provides a good starting point for thinking about the role of climate governance in promoting "good supranational" governance. Here, Esty defines supranational governance to encompass but also to reach beyond the boundaries of international law. It includes the processes, institutions, and outcomes of international law, but it also includes the peripheral public, private, and intergovernmental activities that shape and support international law-making processes. In this way, supranational governance reflects the realities of the international system, where law is a fundamental, but nevertheless, component part of a larger system that creates the parameters of international relations and international rules and regulations—both soft and hard.

Climate governance must be approached through a similarly wide lens. Climate governance includes the processes of regional and international negotiation, rule making by international institutions (e.g., the UNFCCC), intergovernmental negotiation, and guidance (e.g., Intergovernmental Panel on Climate Change (IPCC), World Health Organization (WHO)), civil society's direct and indirect attempts to influence domestic and international agenda setting, to share information and, to create patterns of thought and behavior, as well as efforts at multiple levels to maximize economic opportunities and minimize social and economic costs arising out of climate change.

Climate governance is much more than climate law. Analyzing existing regimes of climate governance requires considering law within a much wider social, economic, and cultural milieu.

So then, if climate governance, like supranational governance, is the broad domain encompassing the negotiating, agenda-setting, norm-creating, and rule-making involved in climate change decisionmaking at the international level, what is good climate governance? Good climate governance inevitably means many things to many people. To members of the private sector, it may be a measure of which companies are taking efforts to minimize their impacts on climate change and to maximize the economic benefits of green activities (Cogan 2006). To members of a local government authority, it is likely a gauge of how successful an array of legal and political measures is in minimizing the local emissions of greenhouse gas emissions, prompting complimentary action at the regional and national level, and minimizing the impacts of climate change on local citizenry. At the national level, it inevitably involves a balancing of economic and environmental interests and domestic and foreign policy priorities over the short and long term. At the international level, creating a good system of climate governance revolves around generating normative and behavioral consistency among diverse actors (Harris 2006: 309; Cass 2006: 230). At all levels, "good" systems of climate governance require breadth and consistency.

The intent here is not to propose an all-purpose definition of good climate governance, but to generate broader debate on the necessary components of a good system of supranational climate governance and, more specifically, to elucidate the role of international law in promoting effective systems of climate governance at the supranational level.

As a starting point, effective systems of supranational governance can only be effective if they are clear, consistent, and functional (U.S. Commission on Ocean Policy 2004: 68). Strong, integrated international laws are indispensable. International law only comprises a single component of the architecture of supranational climate governance, but it is a vital component whose absence or inadequacy could be the downfall of the entire system. At the moment, two of the most critical challenges to developing a coherent system of international climate change law are (1) negotiating a post-Kyoto legal framework, and (2) overcoming normative and institutional gaps between domains of international law essential to addressing global climate change.

The first challenge is receiving abundant academic and political attention; the second is not. This article seeks to advance debate on the role of international law in promoting good systems of climate governance, focusing on the need within international law to reexamine the adequacy of existing institutions of international environmental law and to improve cooperation and communication between distinct legal regimes.

To this end, the following section explores how historical developments in international law have created a framework within which areas of law have become increasingly fragmented and compartmentalized, making it difficult to create the type of coherent trans-disciplinary legal regimes that will be necessary to generating "good" systems of supranational climate governance.

C. FRAGMENTATION IN INTERNATIONAL LAW: DEVELOPMENTS IN INTERNATIONAL LAW

In his examination of the evolving role of the International Law Commission, Martti Koskennien relates a common concern among international lawyers that just as the legitimacy of international law has grown, so has the shape and face of international law undergone a significant overhaul (2005: 78). Of particular concern is the perceived compartmentalization and, arguably, fragmentation of international law. This fragmentation was predicted as early as 1971 by Niklas Luhmann, who suggested that: "global law would experience a radical fragmentation, not along territorial, but along social sectoral lines. The reason for this would be a transformation from normative (politics, morality, law) to cognitive expectations (economy, science, technology)" (Fischer-Lescano and Leubner 2004: 1000, citing Luhmann 1971).

Since Luhmann made his prediction, the fragmentation of international law has received considerable academic attention (Koskenniemi and Paivi Leino 2002: 553–79). Many commentators fear that compartmentalization and fragmentation threaten the integrity of international law (Brownlie 1988: 15) by creating legal and doctrinal inconsistencies (Fischer-Lescano and Leubner 2004: 1001–02). Concerns over fragmentation are rife, prompting increasing question about the unity and legitimacy of the field (Prost and Clark 2006: 342).

Ronald Dworkin, in his seminal work, *Law's Empire*, explores the issue of the compartmentalization of law (1986: 251). In considering the compartmentalization of law, Dworkin posits that a judge, here referring to his idealized judge—"Hercules"—is able to "expand out from the immediate case before him in a series of concentric circles" (1986: 250) to issue a judgment that allows him to transcend legal boundaries where such boundaries inhibit good practice (1986: 253). In this way, Dworkin suggests that Hercules is able to perceive and advance global legal coherence despite legal compartmentalization.

Hercules navigates seemingly distinct and, at times, contradictory areas of law. From Dworkin's perspective, while compartmentalization is a common

characteristic of modern systems law, it should not be viewed as a hindrance to a well-functioning legal system. Despite widespread confidence in judicial capacity (Koskenniemi and Leino 2002: 575), the increasingly complex legal landscape raises important questions about judges' ability to navigate the diverse terrain (Sunstein 2002: 1200). Whether law is seen as concentric circles or disconnected boxes, the disjunctions between areas of law pose notable challenges for even the most Herculean of judges, as well as for the many lawyers, academics, and members of civil society who occupy the field.

In examining modern compartmentalization and fragmentation, Koskenniem sees the roots of it as resting in the increasing deformalization of international law (2005: 78). As a result of deformalization, standard-making takes places within the framework of multilateral treaty law-making processes and, thus, creates issue-specific substantive and procedural rules rather than developing general behavioral standards—as was common in the early days of international law. Deformalization is evidenced by the compartmentalization of law as well as by the delegation of law-making authority from traditional international law actors—that is, states—to new international organizations—that is, multilateral environmental agreement (MEA) secretariats and conferences of the parties (COPs). This creates a cycle whereby international law becomes increasingly detailed and clustered by topic.

Deformalization encourages the proliferation of "soft" law and, at times, erodes treaty legitimacy, but it also facilitates informed, issue-specific negotiations (Koskenniemi 2005: 88). For international environmental law, this is a critical development. Environmental law is intrinsically tied to complex scientific and social processes and divides countries down cultural and economic lines. In the absence of deformalized law-making procedures that facilitate extensive negotiations and compromise, it is doubtful that much international environmental law would exist. Deformalization, thus, offers essential opportunities for advancement in specialized, but no less important, areas of international law.

Deformalization, however, also creates substantive and administrative divisions and challenges the overarching unity and role of international law in interstate relations (Koskenniemi and Leino 2002: 555). The creation of specialized branches of international law creates new opportunities for interstate negotiations, but it also raises concerns about the coherence and legitimacy of international law as a whole.

In this way, increasing fragmentation challenges the traditional view of international law as top heavy, that is, UN and state driven (Koskenniemi and Leino 2002: 557), and raises questions about normative legitimacy as well as about the best way to maneuver the diverse "normative islands" (Prost and Clark 2006: 342) that now characterize international law. There is, however, a convincing argument that specialized areas of international law do not deviate from but, rather, seek to draw upon traditional principles

of international law (Rao 2004: 929).[1] That is, fragmentation does not create new normative structures, but instead allows institutions to draw upon existing principles to derive solutions for new problems.

Regardless of the normative origins of existing—or emerging—principles of international law, the arena of international law now embodies diverse fields of specialized law that rely on specific forms of expertise, negotiation, lawmaking, and enforcement that represent diverging representations of international law. Navigating between these fields challenges the most astute of international lawyers as well as the domestic civil services and members of civil society working within these fields.

The issue of climate change highlights these tensions within international law. Attempts to use international law to address global climate change underscore the fault lines in the unity of international law (Peters 2005). Normative origins aside, these fault lines impede efforts to address a nominally environmental issue that impacts, for example, the seas, human rights, trade, and security.

In the following section, this article analyzes the challenges fragmentation poses for international environmental law, with a view toward improving understanding of the challenges that climate change poses to the effective functioning of international law.

D. FRAGMENTATION IN INTERNATIONAL ENVIRONMENTAL LAW

International environmental law is a growing field—both in terms of treaty proliferation and in terms of the pure substantive and procedural breath of the subject matter it encompasses. The lines between where international environmental law ends and other fields of international law begins are often blurred and, thus, become points of contention—for example, the Shrimp Turtle dispute in the WTO, the Bluefin Tuna dispute in the International Tribunal for the Law of the Sea (ITLOS), the Gabcikovo-Ngymoros case before the International Court of Justice (ICJ). International environmental and other international law institutions increasingly find themselves considering overlapping questions without any clear parameters for determining questions of jurisdiction, or more importantly, for determining the most effective ways to harmonize law-making, implementation and enforcement.

Issue fragmentation has characterized international environmental law from the outset. Since the 1970s, treaty proliferation (Weiss 1997: 297) has meant that each new MEA that has been negotiated has created a set of issue specific institutions, rules and procedures (Driesen 2003: 356). This problem-specific approach has enabled the international community to negotiate numerous treaties and tackle complex environmental problems that otherwise would have gone unaddressed. Treaty proliferation has created a field that can point to numerous success stories, for example, reductions in ozone depleting substances and control of trade in endangered species. It has also, however, created a field where issue overlaps and gaps are all too

common and, where there are no effective mechanisms for either assessing gaps and establishing overarching goals and priorities within the field, or for facilitating coordination with other areas of international law (Palmer 1992: 263).

International environmental law is now at a crossroads. Unlike other areas of international law, for example, trade, labor, and human rights, where there are overarching institutions or dispute settlement forums that help navigate the intricate relationships between issue areas, international environmental law lacks coherent institutional, legislative, or judicial mechanisms for managing environmental issues within the field and at its edges. The absence of an overarching international environmental institution results in inefficiency among MEAs and puts international environmental law at a normative and procedural disadvantage to more established and better coordinated fields of international law when issues of institutional overlap arise.

The absence of an umbrella organization for the field has long been identified as an impediment, with commentators calling for the creation of a overarching environmental organization under various guises, to include: an International Environmental Organization (IEO) (Driesen 2003: 365–66), a Global Environmental Organization (GEO) (Esty 2000, Esty 1994), a World Environmental Organization (WEO) (Biermann and Bauer 2005; Charnovitz 2002; Panitchpakdi 2001), a Global Environmental Mechanism (GEM) (Esty and Ivanova 2003), and a United Nations Environmental Organization (UNEO) (Tarasofsky and Hoare 2007; Tarasofsky and Hoare 2004; Tarasofsky 2002).

The basic organizational structure and extent of enforcement powers differ among the proposals. In general, however, it is envisioned that such an institution would facilitate collective action relating to transboundary environmental problems by consolidating organizational mandates, decision making and administrative structures as well as by establishing stable funding sources and strengthening monitoring, enforcement, and compliance mechanisms.

Similar to the WTO, the IEO's mandate would enumerate overarching institutional goals and principles—for example, precautionary principle, common but differentiated responsibilities, participation, transparency—create a common secretariat and rules for institutional decision making, and establish procedures for: (1) administering existing international environmental agreements, (2) negotiating new agreements, (3) consolidating and improving scientific assessment, (4) establishing general problem solving capacities, and (5) creating universal dispute settlement mechanisms. An IEO fashioned in this vein would facilitate efforts to overcome fragmentation in international environmental law as well as to improve the normative status of principles of international environmental law within the larger field of international law. It would also advance the procedural and substantive legitimacy of international environmental law (Esty and Ivanova 2001: 15–19). As of yet, however, no overarching international environmental law

organization has emerged and ideas for such an organization remain largely academic (Najim 2001, 2002, 2003).

In the absence of an IEO, the primary institution with broad purview over international environmental issues is the United Nations Environment Programme (UNEP). Established by a General Assembly resolution in 1972, UNEP is tasked "to promote international cooperation in the field of the environment and to recommend, as appropriate, policies to this end" as well as "to provide general policy guidance for the direction and co-ordination of environmental programmes within the United Nations system" (UN General Assembly Resolution 2997: I(2)(a) & (b)). UNEP currently serves as an information clearing house; it helps build consensus on environmental issues; it serves as a forum for the negotiation and management of international law agreements.

While UNEP plays an important role in the international environmental law-making process, its role is limited because it depends entirely on voluntary contributions to finance its operations, and it lacks any official independent legislative, executive, or judicial authority. Despite these constitutional and functional limits, UNEP plays a central role in the functioning of international environmental law. As the primary institution with broad purview over international environmental law, UNEP has an especially important role to play in facilitating coordination among the various institutions tasked with addressing questions of international environmental law.

Unfortunately, while UNEP has had success in other areas, for example, monitoring and assessment and initiating new environmental agreements, in the all important area of coordinating policy and serving as an overarching institutional home for international environmental law, UNEP has faltered (Ivanova 2005: 9). UNEP's shortcomings are due to a combination of factors, including its status as a UN programme—with limited capacity and authority as compared to specialized agencies. In addition, UNEP focuses on member state needs and politics rather than pursuing collectively agreed agendas and overarching organizational priorities. Further, UNEP's funding structures are ineffective and easily manipulated. Compounding UNEP's shortcomings, geographic separation from the centers of modern political power—its headquarters are located in Nairobi—exacerbates difficulties in coordinating global environment agencies and influencing political decision making (ibid.: 10).

For these reasons, UNEP has failed to evolve into the institutional stronghold that international environmental law needs to minimize fragmentation among MEAs and between MEAs and other institutions of international law. UNEP's failure to facilitate institutional coordination means that the field of international environmental law has developed in a haphazard, ill-coordinated manner. UNEPs inability to fulfill the role of an umbrella organization (Palmer 1992: 263) has created an institutional vacuum in the field.

The absence of an effective coordinating institution is exacerbated by the fact that many MEAs lack solid internal law-making and enforcement

structures. Consequently, even individual international environmental law institutions are often weak and disjointed (Bruch and Pendergrass 2003: 876).

Among MEAs, the predominant method of coordination occurs via communication between the secretariats. MEA secretariats, however, are generally small offices with limited resources[2] and modest influence on the decisions of the COPs, where the primary decision making takes place. Thus, whatever communication and cooperation occurs among MEA secretariats is valuable only insofar as the secretariats are then able to filter information to state parties and influence COP decision making.

Despite existing institutional constraints, the role of secretariats should not be overlooked. Secretariats have the potential to be influential, inasmuch as they are information clearing houses; the information that they receive and present often serves as the basis for COP decision making. The facilitative role of secretariats is currently underutilized; improving coordination among MEA secretariats will be central to overcoming institutional gaps and fragmentation.

Much more is needed, however. Treaty proliferation, weak institutional structures, and issue fragmentation challenge efforts to create a more effective system of supranational governance, both within international environmental law and at the borders where environmental law and other areas of international law intersect.

These tensions have received considerable attention in the context of trade-environmental disputes, where the absence of authoritative, well-coordinated international environmental institutions has meant that the WTO Dispute Settlement Body is the forum of choice for trade-environment disputes (Bruch and Pendergrass 2003: 876; Carlarne 2006). Fragmentation and weak institutional mechanisms, thus, result in the unintentional outsourcing of international environmental disputes.

In order to avoid the "gravitational" pull of the WTO and other external forums for settling international environmental disputes, and to improve the normative and institutional stability of the field, international environmental law must deal with its internal weaknesses. In particular, scholars and practitioners in international environmental law must reconsider ways to improve the integrity of the field; this debate must focus on ways to overcome conflicts and gaps among MEAs and between MEAs and other areas of international law.

Divisions in international environmental law do not pose insurmountable challenges; deep linkages already exist between particular international institutions (Perez 2005: 736). International environmental regimes and other fields of international law are inherently linked both by a common set of "players" (ibid.: 737)—for example, state parties and members of civil society—and by a common set of issues—for example, legal questions of authority and jurisdiction and "tangible" (ibid.) questions of overlapping coverage. Thus, despite apparent contextual differences, there is sufficient common

ground to begin reexamining the relationship among international institutions and rethinking forms of international environmental governance.

The following section examines the concept of issue linkages and reveals the role that climate change may play in linking distinct areas of international law.

IV. GOVERNANCE GAPS

A. LINKAGES BETWEEN CLIMATE CHANGE AND OTHER AREAS OF INTERNATIONAL LAW

While MEAs constitute distinct organizations with autonomous institutional arrangements (Zofko 2006: 109–28) that remain largely uncoordinated, there are social, scientific, and jurisdictional linkages among international environmental agreements and their implementing institutions (ibid.: 124). These linkages, whether overt or hidden, impact the effectiveness of individual MEAs. Linkages among environmental issues and between environmental issues and other legal concerns is nothing new. However, the present failure to account for these linkages impedes not only the efficacy of existing agreements but also the ability of the international community to negotiate solutions for emerging dilemmas, for example, global climate change.

The idea of identifying linkages in international law initially arose as a way to reconceptualize complex questions of trade law (Perez 2005: 735). In particular, the concept of linkages helped frame debates over the relationship between trade liberalization, environmental protection and labor law. Identifying linkages materialized as a way to develop comprehensive solutions for complex, interdisciplinary legal challenges and, thus, improve systems of global governance (ibid.: 736).

Exclusive reference to systemic linkages is helpful but not a panacea. It is not enough to recognize basic linkages between legal regimes; one must also consider the fundamental complexities underlying twenty-first century social, economic, and legal systems and the impact of these complexities on systemic relations. Identifying systemic linkages is only the first step in creating the foundations for improving "cross-regime sensitivities" (ibid.: 739).

Drawing upon the concept of linkages, however, offers a starting point for overcoming key impediments—for example, fragmentation and political differences among state players—to improving systems of global governance (ibid.: 740–42). Identifying institutional linkages creates opportunities for international institutions to be mutually supportive, for widening the scope of negotiations, and for addressing issues that arise at legal intersections.

Identifying linkages is a first step. Finding ways to use linkages to improve institutional coordination within the complex political and institutional cultures that define international law is the second step; this is where current research falls short. In the context of international environmental law, both of these steps are further complicated by the profound interplay between

science and policy that characterizes the field. Integrating science into international laws challenge the development of law in any one field; when two areas of law meet that are both governed by the interaction between science and policy, these challenges multiply exponentially, as demonstrated in the following discussion of the relationship between international climate change law and the law of the sea.

In the following section, this article analyzes linkages between international environmental law and trade law, human rights law, and the law of the sea to demonstrate the critical importance of identifying and utilizing linkages to improve systems of supranational governance.

B. CLIMATE CHANGE AND LAW OF THE SEA

The law of the sea—like international environmental law—is a vast and diverse area of international law. Unlike international environmental law, the law of the sea is not dominated by an overarching goal of environmental protection but, instead, aims to create a system of good ocean governance in environmental, economic, and cultural terms. The law of the sea includes numerous treaties with provisions governing shipping, fishing, commerce, pollution, and much more.

Despite variations in mandate and objective, links between the law of the sea and international environmental law exist on many levels. From marine pollution associated with shipping, the regulation of fisheries and whaling, the control of land-based sources of marine pollution, and jurisdictional control of ocean and coastal waters, to the relationship between the health of marine ecosystems and the changing climate, the law of the sea and international environmental law overlap in numerous direct and indirect ways. These links, in fact, helped spur the creation of international environmental law in the 1970s. Early recognition of institutional links aside, the relationship between ocean and environmental regimes remains, by and large, fragmented, informal and underexplored.

Due to the complexity of both fields, there is little opportunity for overarching integration between the distinct regimes. Such excessive synchronization would be counterproductive to achieving the issue-specific goals embodied by the various treaties contained within the two fields. There is, however, scope for improving coordination in specific ways. The relationship between global climate change and ocean governance is one area where improved cooperation is imperative.

The opportunities that UNCLOS, the umbrella organization for the law of the sea, provides for interinstitutional cooperation is vital to addressing the question of how to ensure sustainable ocean governance in light of global climate change. Global crises such as global warming increasingly reveal the limits of existing ocean regimes (Rothwell and VanderZwaag 2006: 3) and prompt rethinking of the relationship between the law of the sea and international environmental law.

As environmental law has evolved and as understanding of climate change has grown, a number of new governance initiatives have sprung up around the issue of the protection of the marine environment (ibid.: 9). In spite of this renewed focus on governance of the marine environment, the question of how to structure sustainable systems of ocean governance in response to the threats posed by global warming remains underexplored. No institution has taken the lead in bringing this all-important question to the forefront of climate law or law of the sea debates.

Despite institutional stagnation, interest in the links between climate change and ocean health is growing. With key ocean law institutions noting the importance of the Kyoto Protocol for the protection of the marine environment (DOALOS/UNITAR Briefing 2002: 7) and key environmental institutions calling for better understanding of the relationship between the oceans and the climate (ibid.: 9), it is apparent that questions of ocean and environmental governance are increasingly complicated by overlapping questions of how to respond to global climate change.

As previously mentioned, the primary response to recognized links between the oceans and the climate has been to suggest using UNCLOS dispute settlement mechanisms as an instrument for holding countries liable for greenhouse gas emissions that result in negative impacts to the marine environment. This is, at best, a piecemeal approach. What is needed is more thorough analysis and institutional recognition of the physical and political linkages between ocean and climate management.

Bridging gaps between science and policy is necessary to formulating pragmatic international environmental laws across issue lines. Recognizing the interdependency between science and policy, environmental decision makers have increasingly been creating problem-solving partnerships that bring scientists, policymakers, and other relevant actors—for example, non-governmental organizations (NGOs), businesses—together. The IPCC is a prime example of this type of endeavor. On a smaller scale, many MEAs have scientific committees that filter data into the law-making process. These efforts have varying degrees of success in bridging communication gaps, with much room for improvement existing. In the context of climate change and the law of the sea, there is the added challenge of crossing not only science-policy gaps but also the political, substantive, and procedural boundaries between the law of the sea and international environmental law. Political decision makers struggle to interpret and translate climate science into policy; adding questions of, for example, oceanography and marine science to the mix daunts even the most scientifically savvy of policymakers. Nevertheless, this is precisely the challenge that lies ahead. Integrating these issues more fully into the agenda of the IPCC is a good starting point—and is starting to happen around issues such as climate-induced ocean acidification. As a second step, the legal institutions responsible for climate change law and the law of the sea must individually and in coordination with one another create new scientific committees that collect and examine information about

the relationship between climatic changes and ocean processes and then filter this data into the decision-making processes in multiple forums.

C. CLIMATE CHANGE AND HUMAN RIGHTS

Strong linkages also exist between international environmental law and international human rights law. Almost fifteen years ago, in an effort to overcome legal gaps and address the links between environmental protection and human rights, an expert UN-convened group produced a "Draft Declaration on Principles of Human Rights and the Environment" (1994). The Draft Declaration was presented to the UN Sub-Commission on Prevention of Discrimination and Protection of Minorities as part of a report on the connections between human rights and the environment. The report failed to generate support within the United Nations for the creation of a new category of rights.[3] Since the submission of the report in 1994, the evolution of a new Human Right to a Safe and Healthy Environment has stalled in international law (Fabra 2002). Despite the absence of a recognized human right to a healthy environment, evidence of the links between basic human rights and environmental well-being abound. Further, individually, almost sixty countries have recognized a constitutional right to a healthy environment (May 2006: 114; Eurick 2001: 186).

The climate change debate is refocusing attention on the links between human rights and the environment at the international level. Climate change will impact food and water supplies, alter disease risks, cause climatic variations and instabilities that create imbalances in the physical, chemical and biological components of ecological systems, and lead to biodiversity loss. Further, following on from E. O. Wilson's theory of biophilia (Biophilia 1984), climate change is expected to cause great social and psychological disruptions among populations whose intimate interactions with the natural environment and their source of livelihood are disrupted (Sengupta 2006)—highlighting the importance of evaluating climate change in terms of ecological *and* social vulnerability and analysing how climate change will affect established human rights to life, health, dignity, culture, physical integrity, security, etc.

As the impacts of climate change begin to be felt, people have begun to seek legal recognition of the links between climate change and human rights. In 2006, the Center for International Environmental Law (CIEL) filed a petition with the IACHR on behalf of sixty-three Inuit petitioners (CIEL 2005) based on the "impact of global warming on the Inuit and other vulnerable communities in the Americas and the implication of these impacts for human rights" (CIEL 2007). The Inuit petitions alleged that United States' contribution to greenhouse gas emissions and its failure to address global warming constituted a violation of the Inuit's human rights, for example, the right to enjoy property without undue interference, and the rights to life, physical integrity, and security.

The IACHR rejected CIEL's petition without prejudice but then invited the petitioners to provide testimony to the Commission on the links between climate change and human rights (ClimateScienceWatch 2007). The solicited testimony explored the physical, cultural and legal links between climate change and human rights and pushed for the creation of enforceable links between international human rights law, international environmental law, and global climate change.

The Inuit petitions to the IACHR signaled a trend whereby states and members of civil society seek redress for the harms posed by climate change through international mechanisms, often using the language of rights. For example, the island state of Tuvalu has threatened to bring a case against the United States before the ICJ based on similar claims about the links between climate change damages and violations of international human rights. On the institutional front, the WHO has recognized the links between the human right to health and climate change.

As climate change increasingly impacts human well-being, the lines between recognized human rights and evolving rights to a healthy environment intermingle, and linkages between human rights and environmental institutions become increasingly important. Whether these linkages support the case for developing a new category of human rights—that is, a human right to a healthy environment—or merely support the need for improved institutional coordination is a question for another article. Regardless, the gaps between these areas of law are no longer institutionally or socially acceptable and ways need to be devised for addressing environment-human rights linkages in a comprehensive, joined-up manner (Depledge and Carlarne 2007, 2008).

As linkages between climate change and human rights become increasingly apparent, the failure to respond to the linkages increasingly impacts efforts to structure comprehensive systems of climate governance. Effective systems of climate governance must address the impacts of climate change on humans; doing so requires a more active dialogue between lawyers, scientists and civil society activists working on issues of human rights, environmental justice, and climate change. Improving internal cohesion among international environmental law institutions and incorporating equity and justice considerations more fully into environmental decision making is a necessary first step.

D. CLIMATE CHANGE AND INTERNATIONAL TRADE

The intersections between trade liberalization and environmental law are well documented. Trade and environmental norms and policy objectives often conflict (Carlarne 2006). Trade policymakers normally seek to liberalize trade and promote economic development, focusing on short-term economic gains (Hsu and Liu 2001–2002: 191–92, 207–08), while international environmental policymakers generally attempt to protect natural resources from

the forces of industrialization and economic development, concentrating on long-term environmental protection. Recognizing these tensions, many policymakers support efforts to identify linkages and to improve coordination between trade and environmental law (Ricupero 2002: 48).

In recent years, trade-environment tensions have raised the profile of both international environmental law and free trade debates, most prominently over issues such as restrictions on tuna and shrimp imports, asbestos, growth-inducing hormones, and genetically modified organisms.

Linkages between trade and the environment are many and multilayered. Trade liberalization is linked to increased environmental degradation across subject matter and geographic spheres from direct impacts, for example, trade in species of flora and fauna and hazardous waste, to indirect impacts, for example, the effects of trade liberalization on greenhouse gas emission rates and consumption patterns.

Recognizing these links as well as the efficacy of using trade restrictions to increase state compliance, many MEAs employ trade measures to implement and enforce environmental obligations. These instruments, often referred to as trade-related environmental measures (TREMs), accentuate the existence of linkages and the necessity of clarifying the relationship between trade and environmental objectives, as embodied by the WTO and MEAs such as the Kyoto Protocol.

Many existing MEAs[4] embody TREMS that directly and indirectly link free trade and environmental protection. Although such provisions potentially affect international trade rules and vice versa, most MEAs fail to analyze whether TREMs contravene WTO obligations and how to reconcile such conflicts. In the absence of an overarching international environmental organization or mechanisms for interinstitutional coordination, individual MEAs address trade-environment tensions in varying ways, creating a disorganized and informal decision-making system. Similarly, most WTO negotiations only consider environmental issues at the margins, leaving these questions to be dealt with on an issue-by-issue basis rather than through sustained and comprehensive negotiations.

Despite the visible nature of trade-environment links, these linkages have only been nominally addressed in either forum. Certain soft law agreements, for example, Agenda 21 (1992), have addressed the issues of trade-environment linkages, and particular trade-environment issues have been considered in international dispute settlement forums, for example, the WTO dispute settlement body (General Agreement on Tariffs and Trade Panel Report 1991, 1994; WTO Appellate Body Report 1998). Despite these isolated references, there is no trade, environmental, or common international institution that provides the particular tools necessary to address widespread linkages between the WTO and MEAs. Coordination between the WTO and MEA secretariats is haphazard and fragile, at best. Dissonance within the environmental sphere and the continuing absence of integrated institutional coordination mechanisms for dealing with trade-environment linkages impedes efforts to

improve systemic relations between international trade and environmental institutions and complicates efforts to develop law in both fields.

The climate change debate highlights links and exacerbates tensions between free trade and environmental protection. Although the Kyoto Protocol does not directly employ TREMS, more than any existing MEA, it influences national economic decision making. Limiting greenhouse gas emissions under Kyoto requires developed countries to modify primary economic structures, including transformations within energy, transportation, manufacturing, agriculture, and investment sectors. Therefore, although Kyoto does not on its face contravene WTO rules, it has the potential to impact key sectors of the economy and to alter patterns of international trade through compliance measures employed by member states. State implementation of the Kyoto Protocol, therefore, brings trade-environment linkages to the fore in a very high profile way.

Issues, such as the validity of carbon taxes, mandatory carbon labelling programs, and consideration of process and production methods, promise to raise questions of Kyoto Protocol–WTO compatibility. Governmental efforts to limit greenhouse gas emissions, to promote less carbon-intensive lifestyles, and to mitigate and adapt to climate change are intrinsically linked to state economic activities. It is increasingly impossible to separate the two domains.

As MEAs and TREMs proliferate and climate change highlights trade-environment tensions, it becomes increasingly likely that trade-environment linkages will become the source of international contention. Although this is an area of international governance that has received substantial scholarly attention (Green and Epps 2007), there is still little consensus[5] on the most effective way to identify and address trade-environment linkages, and even less attention on the specific conflicts that might arise between systems of trade and climate governance. This continuing indeterminacy challenges institutional stability and hinders attempts to create effective systems of supranational trade and climate governance.

Further complicating the matter, given the dearth of either a common forum or coordinated mechanisms for harmonizing international environmental law decision making, is the likelihood that such issues will continue to be referred to the WTO, creating imbalance between trade and environmental considerations in favour of trade liberalization goals.

E. CHALLENGES WITHIN INTERNATIONAL ENVIRONMENTAL LAW: CLIMATE CHANGE AND BIODIVERSITY

Institutional links and tensions are also common within the field of international environmental law. In the field of international environmental law, for example, multiple treaties address questions of biodiversity protection—for example, the CBD, the Convention on International Trade in Endangered Species (CITES), the Convention on the Conservation of Migratory Species of Wild Animals (CMS), the Convention on Wetlands (Ramsar Convention), the World Heritage Convention (WHC), International Treaty on Plant

Genetic Resources for Food and Agriculture (ITPGR), and the International Convention on the Regulation of Whaling (ICRW), among others.

Recognizing the need to improve institutional coordination, the CBD, CITES, CMS, Ramsar, ITPGR, and the WHC have established a joint program through which they work together to promote shared conservation goals and encourage the use of complimentary approaches and operational tools (CBD, Joint Web site). This partnership seeks to maximize issue interlinkages and mutually supportive practices. In furtherance of these goals, the COPs for each of the biodiversity-related conventions have formally recognized the need for cooperation through mandates for cooperation (CBD Mandates for Cooperation). In addition, the COPs have entered into various memoranda of cooperation/ understanding and joint programs of work with one another. Through these measures, the conventions promote communication between secretariats, representation of secretariats at the COP meetings for other conventions, the granting of observer status in COP meetings to representatives from other conventions, information exchange, coordination of work programs, joint conservation action, and coordination on treaty implementation and monitoring (Memorandum of Cooperation 1996).

Drawing upon these measures, the conventions have made discernible progress in improving institutional coordination. For example, the CBD has recognized the CMS (CBD 2004), CITES, WHC, and Ramsar (Joint Work Plan 1996) as lead partners or partners in joint activities for programs on migratory species, plant conservation, protected areas, and wetlands, respectively. In addition, some efforts have been made to implement joint and cross-convention conservation activities. The scale of cross-convention coordination exceeds cooperation in other areas of international environmental law, but it still pales in comparison to the task the conventions face; independent and uncoordinated action is still the norm, despite best efforts.

In addition to the above-mentioned collaborations, there has also been a long and interesting relationship between CITES and the ICRW—or, more accurately, the International Whaling Commission (IWC). Both CITES and the IWC regulate catches and trade—or moratoriums thereof—in cetaceans. The IWC is the key regulatory regime for whales; however, CITES, UNCLOS, and the North Atlantic Marine Mammal Commission also play a part in shaping the future of whaling policy (Carlarne 2005).

CITES, in particular, plays an important role in the international regulation of whaling. In the early days of its existence, CITES did not control trade in most species of cetaceans. Over time, however, CITES has gradually upgraded protection of certain whale stocks (D'Amato and Chopra 1991: 42–44; Birnie 1985: 394–98; Andresson 1999: 218) and has evolved into something akin to an external enforcement mechanism for IWC policies.

Throughout the past two decades, the parties to CITES have laterally supported the IWC's imposition of a moratorium on commercial whaling. However, CITES, like the IWC, now faces mounting pressure from pro-whaling states who argue that certain whale stocks are no longer threatened

and that protection for these species should be reduced to allow limited trade (Machipisa 2000). In this way, deliberations within CITES and the IWC directly overlap—climate-related impacts on cetaceans further complicate intra- and interinstitutional relationships.

The links between the mandates of the IWC and CITES are explicit and much debated. What is less clear is whether there have been concerted efforts to create institutionally sound mechanisms for addressing these linkages or whether the links have been exploited for differing purposes. The latter explanation appears more accurate, if less optimistic.

Thus, despite ongoing efforts, there is still considerable room to improve cooperation among biodiversity institutions. Interinstitutional cooperation is even weaker in other areas of international environmental law, for example, between institutions dealing with atmospheric pollution, water quality and access, and waste management. Here, again, the gap created by the absence of an umbrella organization—or, even, established mechanisms for cooperation —for international environmental law is readily apparent.

Climate change both compounds existing institutional fragmentation and offers new opportunities for maximizing linkages in international environmental law. As a brief example of how climate change exacerbates fragmentation and offers linkages among MEAs, there has already been considerable concern over the impact of climate change on World Heritage sites, as designated under the WHC. Within the WHC, various parties have petitioned to have sites listed as "in danger" due to climate change threats. For example, on February 16, 2006—the first anniversary of the Kyoto Protocol's entry into force—twelve U.S. and Canadian conservation groups petitioned the World Heritage Committee to list Waterton-Glacier International Peace Park—located across the U.S. and Canadian borders—on the List of World Heritage Sites in Danger[6] as a consequence of the threats that climate change posed to the natural environment at the site (Climate Justice 2006). The petitioners requested that the World Heritage Committee list the site as in danger and adopt a management plan with a set of corrective measures centered on U.S. reductions in greenhouse gas emissions (Climate Justice 2006: viii). Responding to growing concerns about climate related threats, the World Heritage Committee commissioned a report on the impacts of climate change on World Heritage sites (Cassar et al. 2006). The report confirmed that climate change posed an array of threats to listed sites. Upon reviewing the report, the Committee (UNESCO 2006) issued a decision on the question of climate change and heritage (UNESCO, *Decision 30 COM 7.1*). The decision acknowledges the links between climate change and heritage and the importance of creating an institutional strategy for responding to this new challenge. Neither the Committee nor the WHC COP has yet issued any binding rules that create new obligations for state parties in respect to climate change, but the debate is under way and the linkages between climate change and cultural and natural heritage protection have been formally recognized by the WHC.

This is one of many contexts where MEA COPs are starting to reconsider institutional objectives in light of challenges posed to environmental protection by climate change. This being said, even within the field of international environmental law, efforts to respond to linkages are still in their infancy, and efforts to structure overarching systems of international environmental governance are basically nonexistent.

The linkages among international environmental law are many and complex and deserve continuing scholarly attention. Here, it is enough to briefly describe some of the ways that these linkages manifest and to suggest that while efforts are under way to improve institutional coordination, these efforts are modest and often clustered in areas where coordination offers low-hanging fruit and low transaction costs, for example, among the biodiversity treaties with common goals. In areas of international law where linkages entail trade-offs among environmental goals or between environmental goals and, for example, economic development, freedom of the seas, and human rights, fragmentation and poor coordination are still the dominant themes. This is particularly evident in the context of climate change where linkages are evident and yet, more often than not, left unaddressed due to high transaction costs. Continuing legal fragmentation—and the failure to actively engage with the issue within academic or political forums—impedes efforts to improve systems of supranational climate change governance.

V. CONCLUSION

In the previous section, this article showed how climate change highlights existing gaps and linkages between areas of international law in terms of issue coverage. Such gaps impede the functioning of international law and the development of overarching systems of supranational governance. While Section IV used climate change as a mechanism for identifying gaps and linkages, it is here argued that climate change can function not only as a mechanism for highlighting present shortcomings, but also as a vehicle for improving coordination between institutionally distinct but substantively interlinked areas of international law. Recognizing that divisions exist between international legal regimes, climate change provides an opportunity to more closely examine overlapping mandates and to begin structuring new mechanisms for addressing these issues in a comprehensive, joined-up manner. This improved legal coordination will, in turn, contribute to better systems of supranational climate governance.

A. CLIMATE CHANGE AS A VEHICLE FOR COORDINATION

Climate change can serve as a catalyst for improving coordination between institutionally distinct but substantively interlinked areas of international law in several ways. First, climate change by its very nature highlights the

need for better understanding of, for example: (1) the ocean's role in global carbon and heat cycling; (2) the connection between trade liberalization and environmental conditions; (3) the relationship between the state of the natural environment and human health and well-being; and (4) the connections between biodiversity, climatic conditions, and human society. While other environmental issues have occasionally crossed sector boundaries to prompt trade debates or raise human rights questions, climate change is the first issue that is so socially and economically pervasive as to defy categorization as an "environmental problem" with concomitant social and economic questions. Instead, climate change creates a new category of international problem that is as much about equity, sociality, and economics as it is about the environment. International climate change negotiations cross boundaries between international environmental law and public and private international law to demand a new type of hybrid, more engaged system of law.

Second, climate change—as a global issue and as a legal problem—is inherently interdisciplinary. Climate change cannot be understood, much less addressed, without drawing upon experts from a wide range of disciplines, for example, natural and social scientists from disciplines ranging from chemistry, physics, and oceanography to economics, sociology, and anthropology, as well as lawyers, engineers, and ethicists. Climate change straddles not only a wide range of disciplines and sectors of society but also seemingly distinct fields of law. More than any existing "environmental" issue climate change requires policymakers to develop linkages between normally compartmentalized systems of law (Zofko 2006: 128).

Third, climate change brings together advocates from different fields in new ways and with new motivations for addressing the causes and consequences of climate change. The UNFCCC meeting in Bali aptly demonstrated this phenomenon. As well as high-profile governmental debates, the 2007 meeting also heralded unprecedented levels of participation in side meetings and negotiations by NGOs, small and big businesses, and individual activists. Increasing interaction between, for example, auto makers, energy producers, labor organizations, environmental activists, local governments, and indigenous peoples, reflect how climate change can serve as a catalyst for looking at legal solutions for "environmental" problems in a more synergistic manner.

Fourth, climate change with its range of local–global impacts crosses traditional geographic and political boundaries in international law. In international law, states remain the primary players in terms of negotiating legally binding agreements. However, the interests and voices of specific groups—for example, indigenous peoples in the Arctic region and citizens of the Association of Small Island States—that represent minority or marginalized populations increasingly infiltrate international debate. Further, such groups are seeking new ways to use international law to achieve their objectives, including linking climate change to human rights to seek redress in international courts and linking climate change to issues such as cultural heritage protection and marine environmental pollution to force the hand

of otherwise impenetrable states. In this way, climate change generates new alliances that defy traditional state boundaries and that facilitate new ways of viewing existing legal institutions and obligations. New partnerships and more creative uses of existing international laws facilitate efforts to move beyond traditional legal compartmentalization to develop linkages between and across legal domains.

In these ways, climate change provides a new lens for viewing existing and evolving systems of international law. Further, the urgency of climate change creates the conditions for prompting otherwise resistant actors and institutions to improve communication and coordination across invisible but pervasive legal boundaries.

B. THE WAY FORWARD

Recognizing that climate change creates an urgent opportunity to reevaluate legal fragmentation in order to improve systems of international climate change law and governance, what is the way forward? The first step is to identify key components of a comprehensive system of international climate change law. The second step is to engage with key players and to initiate a more active dialogue about the best ways to move forward incrementally. Different levels of response are called for in the short and long term.

In the long term, some form of an IEO (Driesen 2003: 365–66) must be developed. With the first call dating back to 1970 (Kennan 1970) and more fleshed out proposals arising in the early 1990s, the time is now ripe—with climate change serving as a driving factor—to more aggressively pursue the creation of an IEO with comparable breadth and responsibility to existing international institutions such as the International Labor Organization (Palmer 1992: 280) or the WTO. An IEO could help mitigate procedural and substantive fragmentation within international environmental law by bringing together distinct MEAs and their secretariats under an umbrella agreement and by creating an overarching institution that can enunciate agreed principles of international environmental law while also establishing rule-making, dispute settlement, enforcement, and compliance mechanisms comparable to those that exist in other areas of international law. Creating an IEO would advance efforts to improve systems of international environmental governance by allowing the global community to negotiate and more effectively implement comprehensive solutions for transboundary and interdisciplinary problems, for example, climate change.

While advocates have called for the creation of an IEO for many years now, as yet these appeals have had little success in terms of pushing the IEO agenda forward. Some commentators doubt that an IEO will ever exist (Hicks 1999: 1662)—or hope that it will not (Najam 2003).[7] Despite persistent doubts, creating an IEO would offer significant advantages to harmonizing and managing international environmental law and to facilitating relations between international environmental law and other fields of international law. Pros and

cons aside, the creation of an IEO has long remained a distant dream; there have been no major efforts to draft a constitution or to initiate multilateral dialogue on the creation of an IEO. However, this situation could change quickly and climate change could be right issue for pushing the IEO agenda forward.

Developing an IEO offers long-term possibilities for improving the efficacy and legitimacy of international environmental law. In the short term, however, it offers minimal opportunities for efforts to structure sound systems of climate change law and governance.

Nevertheless, there are still very good reasons for taking bold actions in the short run, especially in light of the social and environmental challenges posed by climate change. Current systems of international environmental law, due in large part to compartmentalization and to the absence of strong, overarching systems of dispute settlement, are unable to cope with complex transboundary issues such as climate change (Palmer 1992: 262). In the absence of bold steps —including but not limited to efforts to create an IEO—problems such as climate change will continue to defy the parameters of international environmental law. In addition, environmental issues will continue to be subjugated to or overlooked by more powerful and established systems of international law, for example, the WTO. Thus, while creating and operating an IEO is a long-term endeavor, initiating this process is a short-term necessity.

In the interim, complimentary short-term efforts are called for, including for example: (1) improving formal mechanisms for communication and cooperation between the secretariats for environmental, human rights, and economic institutions (e.g., memorandums of understanding, observer status, hybrid organizations, specialized committees); (2) developing improved mechanisms for addressing transboundary environmental problems; (3) increasing dialogue about gaps and synergies between regimes of international law, and (4) discovering ways to limit damage brought about because of fragmentation through stop-gap patches (e.g., using external dispute settlement mechanisms to limit greenhouse gases) and through more lasting solutions (e.g., initiating IEO discussions).

These suggestions focus on moving forward to improve legal unity progressively. It will be impossible to achieve legal harmony either within international environmental law or between international environmental law and other areas of international law in the short term. What is called for is not instant reconciliation of the distinct parts of the international system, but instead, gradual but meaningful harmonization of its many related and complimentary elements.

C. FINAL THOUGHTS

This article demonstrates the importance of tackling legal fragmentation in order to ensure concomitant improvements in supranational governance regimes. Efforts to tackle legal fragmentation, however, cannot be separated from the social context which gives rise to it (Fischer-Lescano and Teubner 2004:

1045). The suggestion here is not to force a false separation of law from its social, political, and economic context. Rather, this article shows how the issue of legal fragmentation—with its causes and consequences—functions as a stumbling block to achieving effective systems of international climate change law and governance. It also highlights the distinction between these two domains, which are often conflated in academic and political dialogue, and encourages commentators to more carefully consider how the terms of law, governance, and "good systems" of law and governance are being used.

Addressing gaps between international legal systems is fundamental both to the legitimacy of international law in the twenty-first century and to ongoing efforts to use international law as a central component in global efforts to address climate change, one of the greatest social, economic and political problems of our age.

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NOTES

1. Citing Brownlie (1988: 15).
2. This is in contrast to the administrative bodies of the WTO, which have large budgets, numerous personnel, and significant authority (Bruch and Pendegrass 2003: 876).
3. Efforts to use human rights as a vehicle to protect the environment have been critiqued by human rights and environmental advocates alike (Anderson 1998: 1–25).
4. Over twenty MEAs contain trade provisions, for example, CITES and the Basel Convention.
5. The current round of trade talks include this issue as an agenda item.
6. If a site is inscribed on the list of World Heritage in Danger, the World Heritage Committee must work in conjunction with the state party where the site is located to create a program for rehabilitating and monitoring the condition of the site with the end goal of removing the site from the list of properties in danger. Four other petitions have been filed by conservation organizations worldwide to add Mount Everest, the Peruvian Andes, the Great Barrier Reef, and the Belize Barrier Reef to the list of sites in danger due to climate change.
7. But see Najam, Papa, and Taiyab (2006).

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