

A New Theory-driven Approach to Institutional Interplay.

Analyzing inter-linkages among the global regimes on biological diversity, climate change and trade?

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Paper presented at the Berlin Conference on the Human Dimensions of Global Environmental Change, 08-09 October 2010

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Introduction

In this article, we analyze the increasingly important phenomenon of “institutional interlinkages” in global environmental governance. Based on Keohane’s (1989, 3) broad understanding of institutions, we conceive institutional interlinkages as connections between policy processes, rules, norms and principles of two or more institutions (van Asselt, Gupta, and Biermann 2005, 257). We focus on a specific sub-set of institutional interlinkages here, namely regimes operating at the international level. Our focus is thus on horizontal interlinkages between one or more international (environmental) regimes.

From the mid-1990s onwards, the global governance literature has put greater emphasis on interlinkages among international institutions (Herr and Chia 1995; Young 1996). In addition to first conceptual approaches and single case studies (Rosendal 2001; Stokke 2001a; Young 2002, 2008), major research projects have been conducted, including: the Inter-Linkages Initiative of UN University (e.g. Chambers 2008), the Institutional Interaction Project (Oberthür and Gehring 2006a), and the Institutional Dimensions of Global Environmental Change (IDGEC) project (Young 2002; Young, King, and Schroeder 2008). The Global Governance Project has also addressed overlaps among institutional approaches (see van Asselt, Sindico, and Mehling 2008; van Asselt *fc.*; Biermann et al. 2009, 2010; Falkner and Gupta 2009; Gupta 2008; Zelli 2007; Zelli et al. 2010).

This progress notwithstanding, scholarly analysis of horizontal institutional interlinkages still lacks a sound theoretical basis. As Selin and VanDeveer (2003, 14) observe, “...the literature on linkages remains littered with proposed taxonomies of linkages”. Various terms such as interplay, linkage, interconnection or interaction are used interchangeably, which has added to conceptual confusion (Gehring and Oberthür 2006, 4). Some scholars have sought

to go beyond typological accounts and develop explanatory models (for example, Oberthür and Gehring 2006b; Rosendal 2001; and Stokke 2001b). Yet, as Underdal (2006, 9) notes, the focus has been “primarily on interaction at the level of specific regimes and less on links to the kind of basic ordering principles or norms highlighted in realist and sociological analyses of institutions”. Likewise, other scholars deplore the “limited progress [...] on rooting the study of interplay theoretically” (Chambers, Kim, and ten Have 2008, 7) and the lack of “theoretical concerns that can help us to understand the origins and consequences of interplay” (Young 2008, 134).

Against this backdrop, we introduce a theory-based concept of interlinkages in two steps. First, we frame regime interlinkages as conflicts among actors, based on a broad sociological understanding of conflict as a ubiquitous and not necessarily negative aspect of social interactions. We then place this behavioral notion of conflict in an overarching context of global norm developments (and the potential for norm *collusion* across regimes). In this step, we interpret positional differences among actors across regimes as articulations of ongoing conflicts (or lack thereof) over broader norms that underpin global environmental governance. We consider whether this broader context is one where certain global norms dominate and how this shapes regime-specific changes and horizontal institutional interactions. This also allows us to comment on a theoretically under-analyzed question: whether persisting regime conflicts can also be transformative of global norms.

We apply our conceptual framework to analysis of three dyadic interlinkages: between the UN climate regime and the WTO; between the UN climate regime and the Convention on Biological Diversity (CBD); and between the CBD’s Cartagena Protocol on Biosafety and the WTO. We explain the nature and consequences of regime overlaps in each case. Our explanation centers on positional differences among actors and an underlying normative dominance of liberal environmentalism that shapes regime interactions and change.

Conceptualization

When speaking of conflictive interlinkages, scholars either point to a conflict of regime rules or they discuss disruptive consequences of overlapping regimes. The first interpretation of conflicts is preponderant among international lawyers who largely restrict their attention to the actual existence, degree and potential settlement of a formal legal overlap, while blanking out the behavioral aspects that come with it (that is, disputes among actors during treaty negotiations or coordination attempts across regimes). The second view is pervasive among international relations scholars. Young (1996), for example, defines overlapping institutions as “producing substantial impacts” on each other. Oberthür and Gehring (2006b, 27) likewise hold that the conflictive or synergetic character of interlinkages can only be ascertained by their consequences. We argue that these two perspectives may miss out on procedural and behavioral implications of conflict. To allow for a more comprehensive analysis, we analyze regime interlinkages *as positional differences among actors in a context of global norm collusion*.

Conflict as positional differences: a sociological view

A key insight of sociological conflict theories is that social conflicts cannot be reduced to a mere contradiction of outcomes. They are procedural features of social systems and reflect positional differences among actors who constitute these systems (Simmel 1992, 284-382). Conflicts are hence socially immanent and ubiquitous; they are a vital element of social interaction and social change (Dahrendorf 1968, 112). As such, they are not necessarily

detrimental, but may perform beneficial functions in social systems, such as providing collective identities (Coser 1956) or promoting innovative ideas and policies (Weber 1980, 27). Some neo-institutionalist scholars have introduced this sociological notion of conflict to the study of international institutions (Rittberger and Zürn 1991; Schimmelfennig 1995), using Dahrendorf's definition of conflict as any kind of relation between elements that is characterized by objective (latent) or subjective (manifest) contradictions (Dahrendorf 1961, 20).

Going one step further, we apply Dahrendorf's definition of conflicts to the research object "institutional interlinkages" by framing them as positional differences. Zelli (2008) provided such an adaptation for interlinkages between international regimes, consequently speaking of "regime conflicts". A regime conflict is an interlinkage among two or more international regimes, consisting of a significant contradiction of rules and/or rule-related behavior. This contradiction is based on a positional difference among actors over contested issues that fall within the jurisdictions of the involved regimes.

The definition yields several implications for the analysis of regime interlinkages and their consequences. First of all, conflicts are more than a "negative" subset of regime interlinkages. Second, the definition goes beyond legalistic understandings of conflict as mere contradictions among laws by accounting for disputes among actors referring to different laws. Finally, it avoids blurring the distinction between conflicts and their outcomes. It differentiates between a conflict as such (the original contradictory constellation) and subsequent processes, such as the transformation and management of this conflict (Rittberger and Zürn 1991). In summary, the concept of regime interlinkages as latent or manifest conflicts captures both the structural and actor-related character of such conflicts. With this approach, it is possible to apply "greater attention to agents and their behavior than the literature on linkages has hitherto paid" (Selin and VanDeveer 2003, 41).

Norm collusion as the underlying context of positional differences

A logical next step then calls for analyzing how these latent or manifest conflicts are embedded in and shaped by the broader normative context underpinning global environmental governance. We understand norms here as *legitimate social purpose*, akin to what John Ruggie has termed, following Searle, "collective intentionality", that is, "...intersubjective frameworks of understandings that include a shared narrative about the conditions that make regimes [or governance more broadly] necessary and... the objectives intended to [be] accomplish[ed]". This understanding of norms extends beyond a focus only on agreed standards of behavior or rules of conduct (Ruggie 1998: 870, *italics added*). The normative basis for global environmental governance is the subject of renewed interest, with Steven Bernstein's (2002) influential analysis positing the dominance of what he terms the "compromise of liberal environmentalism" in a global governance context, a compromise that promotes overarching norms of economic efficiency and environmental improvements through unfettered markets, deregulation and privatization, with reliance on market-based regulatory mechanisms where necessary. This broader normative context will necessarily shape the norms and practices of regime-specific environmental governance and its interactions with other domains, such as finance or international trade.

If so, the central concern becomes not so much whether the norms or rules of two specific global regimes are conflicting or synergistic but rather on *how* overarching global norms of governance resonate with and shape the interpretation of—and positional differences over—regime-specific norms and regime change. Importantly, such an analysis is needed not only across potentially conflicting regimes but *within* each regime as well.

A hypothesis flowing from such an approach is that rather than normative conflict, normative *collusion* across individual global regimes is a likely phenomenon, given that regime-specific norms reflect and articulate wider norms of global governance. For example, a broad neoliberal normative bent in global environmental governance might prevent evolution of regime-specific norms that conflict with such a dominant normative bent. One prominent example is the “shadow of the WTO” over development and evolution of global environmental regimes (Eckersley 2004). Our point of departure here is that where the WTO casts a shadow, it is because the overarching normative environment is conducive to such an outcome. And where it is not—where the overarching normative basis of governance remains contested—such contestation will be evident in *interpretation of both WTO and environmental regime norms* rather than simply as a legal conflict between them.

We turn next to analyzing the nature and consequences of evolving interlinkages across global trade, climate, biological diversity and biosafety regimes.

Experiences

The UN Climate Regime and the WTO

Scholars from various disciplines have scrutinized the interplay between the UN climate regime and the world trade regime (for example, Brewer 2003, 2004; Charnovitz 2003; Cottier, Nartova, and Bigdeli 2009). These authors have identified a range of overlapping issues that fall within the jurisdictional scope of both regimes, while disagreeing about the potentially synergistic or conflictive nature of these interlinkages.

One example relates to trade-related policies and measures by which industrialized countries shall achieve emission reductions under the Kyoto Protocol. However, the protocol does not sufficiently specify concrete steps or targets to achieve such reductions, hence not ruling out that parties apply certain trade-distorting measures. These may include fiscal measures (subsidies, tariffs, or border taxes), regulatory measures (standards, technical regulations and labeling), and government procurement practices. Industrialized countries might consider such steps to reduce emissions or protect domestic industries adversely affected by such reductions—in other words: to level the playing field between regulated domestic industries and unregulated foreign competitors (Frankel 2005, 15).

Yet these measures might be WTO-incompatible. For example, marginal taxes on energy-intensive goods from countries that are not party to the Kyoto Protocol or do not take “comparable” climate change action might violate both the national treatment and most-favored nation principles of the GATT. Offsetting measures at the border to complement an emissions trading scheme—most recently being considered by the United States Congress, the French government and the European Commission – might also raise such concerns. While some believe such measures can be defended under WTO law (Ismer and Neuhoff 2007), others warn against their protectionist implications and possible violation of trade rules (Bhagwati and Mavroidis 2007).

How are these potential interlinkages evolving? And what positional differences across actors can be identified to explain latent or overt conflict? It is striking to note that, since adoption of the Kyoto Protocol, negotiators have avoided trade-restrictive modalities. The list of policies and measures remains purely indicative and non-mandatory. The EU made several proposals for stricter and binding measures but constantly met strong opposition from the U.S. and developing countries.

The institutional context to discuss such interlinkages within the trade regime is the WTO Committee on Trade and Environment (CTE); and the WTO Dispute Settlement Body

remains the most likely arena where these overlaps might be settled (Stokke 2004, 339). By contrast, under the climate regime, the dispute settlement procedure remains weak. Although there is a regime compliance system, it does not cover trade sanctions for greenhouse gas-intensive products. Non-compliance does not entail financial penalties or a loss of carbon credits, nor does it include any other trade sanctions, even though these were proposed by the EU (Stokke 2004, 352).

In debates about interlinkage management within the WTO-CTE, an EU-led coalition suggested granting further exceptions under WTO law in favor of environmental regimes, including the climate regime. However, these proposals were rejected, again by a U.S.-led coalition and the majority of developing countries. In fact, the mandate of CTE discussions on exemptions was narrowed, so they are not even covering the climate regime's policies and measures. The rights of WTO members to challenge such measures hence remain intact (Eckersley 2004, 36).

The UN Climate Regime and the Convention on Biological Diversity

Various contributions have pointed to the complex interactions between the causes and consequences of climate change and the conservation and sustainable use of biological diversity (CBD Secretariat 2003; IPCC 2002). Climate change has negative impacts on a range of ecosystems and species, even as ecosystems with high biological diversity are more resilient to climate variability and better able to adapt to climate change (CBD Secretariat 2003, 78). Furthermore, certain ecosystems form either net carbon sinks or sources of emissions (CBD Secretariat 2003, 48). Avoiding deforestation and forest degradation, as well as afforestation and reforestation, therefore have significant potential for climate change mitigation, while their impacts on biodiversity may be positive, neutral, or negative (CBD Secretariat 2003, 58).

Most analyses of institutional interlinkages between the climate regime and the CBD have focused on the biodiversity implications of the implementation of the Kyoto Protocol, particularly its decisions on land use, land use-change and forestry, and the use of so-called "sinks" in the protocol's Clean Development Mechanism (CDM) (Bäckstrand and Lövbrand 2006; Jacquemont and Caparrós 2002; Sagemüller 2006; Wolfrum and Matz 2003, 79-93). The Kyoto Protocol is largely silent about the biodiversity impacts of sinks activities, although it calls on its parties to implement policies and measures, including the protection and enhancement of sinks and reservoirs, "taking into account its commitments under relevant international environmental agreements" (Art. 2.1 (a) (ii) Kyoto Protocol), a provision which presumably includes the biodiversity convention.

Including sinks in emissions accounting, and especially in the CDM has been a controversial issue since the 1990s. Whereas the EU, supported by various developing countries, initially opposed their inclusion in the CDM, the U.S., supported by Latin American countries, pushed for their inclusion (Boyd, Corbera, and Estrada 2006, 106). A compromise reached in 2001 entails that, with some limitations, forestry projects can be eligible for credits under the CDM. Critics have argued that the rules on CDM sinks do not sufficiently safeguard biodiversity concerns, and could frustrate the objectives of the biodiversity convention. The main concerns raised are that current rules allow for projects which result in destructive large-scale, monoculture plantations, a lack of protection for existing old-growth forests, and the use of invasive alien species and GMOs (Meinshausen and Hare 2003). Notwithstanding these criticisms, one of the general principles governing forestry activities requires that "the implementation of land use, land-use change and forestry activities contributes to the conservation of biodiversity and sustainable use of natural

resources” (UNFCCC 2006, Annex, § 1 (e)). This principle has been elaborated at the ninth conference of the parties to the climate convention in 2003 for forestry projects under the CDM. In these negotiations, the EU, together with the Alliance of Small Island States sought to accommodate biodiversity concerns through including sustainable development criteria, but found itself opposed by many developing countries as well as Canada (Boyd, Corbera, and Estrada 2009, 105).¹ The resulting rules require analysis of socio-economic and environmental impacts of forestry projects, but do not go as far as the EU originally proposed (Sagemüller 2006, 221).

In recent years, discussions on the role of forests in the climate regime have mainly taken place under the heading of “reduced emissions from deforestation and degradation” (REDD). Through a REDD mechanism, countries with tropical forests could be compensated for efforts to reduce deforestation and forest degradation. However, there are concerns that such efforts might be concentrated on forested areas that are cheapest to protect rather than biodiversity “hotspots” (Grainger et al. 2009). The idea of creating incentives for reducing deforestation is hardly contested but there is disagreement about the design of a REDD mechanism, with a key question being whether such a mechanism should be market- or fund-based or a combination thereof (Stockwell, Hare and Macey 2009).

While the rules developed under the Kyoto Protocol have only paid lip service to biodiversity protection, parties to the biodiversity convention have actively sought to manage the interlinkages between the regimes. First, a number of decisions have been adopted by the conference of the parties to the CBD on biodiversity and climate change, which have been considered instrumental in highlighting biodiversity concerns in UNFCCC decisions (Yamin and Depledge 2004, 523-524). Second, at the request of the CBD parties, a joint liaison group has been established to share information and coordinate activities between the secretariats of the climate and biodiversity conventions, yet its mandate precludes it from becoming involved in rule development on overlapping issues (van Asselt *et al.*). Third, CBD parties have established several ad hoc technical expert groups to provide scientific and technical advice on climate change and biodiversity linkages. While these initiatives have created awareness of such linkages and fostered cooperation between actors involved in both regimes, they have so far failed to reduce tensions about use of sinks in climate mitigation activities.

The Cartagena Protocol on Biosafety and the WTO

The relationship between the global environmental regime of the Cartagena Protocol on Biosafety under the CBD and the WTO’s Agreement on Application on Sanitary and Phytosanitary Measures (SPS Agreement) has been much scrutinized (Isaac and Kerr 2003; Millstone and van Zwanenberg 2003; Oberthür and Gehring 2006c; Safrin 2002; Young 2008). The Cartagena Protocol calls for the “advance informed agreement” of an importing country prior to trade in certain genetically modified organisms (GMOs). This notion encapsulates two important areas of potential trade-environment conflicts: first, the *criteria* that should underpin decisions about GMO imports, in particular whether importing country trade restrictions can invoke the precautionary principle as justification; and second, the nature and extent of information to be disclosed by prospective exporters about GMOs in the agricultural commodity trade, since such disclosure can have trade restricting effects.

With regard to these two elements, the European Union and most developing countries long demanded, first, that precautionary restrictions on GMO trade should be permitted under the Cartagena Protocol, given scientific uncertainties over harm; and second, that

¹ By this time, the U.S. was no longer involved in the formal negotiations, given that it had turned its back on Kyoto in 2001.

detailed information needs to be made available to potential importers about specific genetically modified varieties in the global agricultural commodity trade. These demands were strongly opposed by an influential coalition of GMO producing and exporting countries, including the U.S., Canada, Australia, Argentina and Uruguay. These countries have long argued that trade restrictions are only justifiable where “sound” scientific evidence of harm caused by GMOs is available; and hence oppose restrictions on the basis of the precautionary principle. They also oppose demands for disclosure of comprehensive information about specific GMOs in the commodity trade, so as to minimize disruption to such trade. These positional differences are articulated not only in development of Cartagena Protocol rules, but also within the context of the WTO-SPS regime and its dispute settlement mechanism.

From textual analysis alone, diametrically opposed arguments have been made about the path-breaking nature of the compromise language relating to precaution included in Cartagena Protocol: ranging from a view that its inclusion has broken new ground in institutionalizing the precautionary principle in global environmental governance (Isaac and Kerr 2003) to arguments that its scope is not fundamentally different from precautionary action already permitted under the WTO-SPS agreement (Gupta 2002; Safrin 2002). If so, it is in how reliance upon precaution is being interpreted and institutionalized within specific regulatory contexts that a conflict (or lack thereof) between these regimes can be ascertained. For example, it can be illustrative to see if Protocol interpretations are challenged as WTO incompatible, by whom and if such challenges are being upheld. Many observers expected that a recent U.S.-led WTO challenge to the EU’s precautionary GMO regulatory regime would shed light on the issue of Cartagena Protocol-WTO compatibility. However, the WTO Dispute Settlement body avoided taking a position on this, holding that since not all parties to the WTO dispute were parties to the Protocol (the U.S. has not ratified it or the CBD), the Protocol’s provisions had no bearing on the dispute at hand (Liebermann and Grey 2008).

With regard to information disclosure about the GMO trade, the Protocol’s evolving obligations currently require only a minimal statement: that bulk agricultural commodity shipments declare that they “may contain” GMOs. Most GMO exporters, such as U.S., Canada or Australia, have strenuously opposed strengthening these disclosure requirements, with the result that they are *market-following rather than market-forcing*: that is, they are not detailed enough to force changes to the ways in which the commodity trade is currently organized, nor do they require GMO exporting country practices to change (Gupta 2010b).

The Protocol also calls for certain biosafety information to be disclosed by all Parties to an online Biosafety Clearing House. This includes information such as which GMO varieties are approved in producer countries, and domestic biosafety laws and contact persons responsible for import decisions. The original normative intent of such disclosure was to further a right to know of potential GMO importing countries. Since these countries are, however, the main parties to the Protocol, the burden of disclosure has ironically fallen on them rather than on GMO producers. It is mainly importing countries that are now systematically compiling and disclosing information about domestic biosafety laws and contact persons to a global biosafety clearing house. Disclosure of such information can paradoxically have *trade-facilitating* rather than *trade-restrictive* effects, as it shifts the burden of ferreting out such information (essential for trade to occur) from GMO exporters (Gupta 2010a). As this discussion implies, it is far from clear that Protocol norms and rules, as currently being institutionalized, are in conflict with global trade regime obligations.

Explanations

In this section, we argue that the regime-specific developments highlighted above (including how regime norms, rules and principles are being institutionalized and implemented) can be explained by evoking the dominance of the compromise of liberal environmentalism in a broader governance context, reflecting a certain degree of norm collusion across overlapping regimes. However, this dominance is becoming contested to a greater or lesser extent across the cases we examine—a trend that is partly mirrored in recent regime changes.

The UN Climate Regime and the WTO

While many scholars and practitioners deny a conflictive character of the relationship between these two regimes, our sociological approach points to the opposite: there has been a longstanding positional difference among major country groups on the overlapping issue of trade-restrictive policies and measures. This conflict, and the underlying normative structure, has had a major influence on the rule development in both arenas, to the disadvantage of the climate regime.

In both arenas, U.S.-led coalitions were “highly influential in establishing a market approach to managing climate change” (Boyd, Corbera, and Estrada 2008, 106). The Umbrella Group, comprising the U.S and various non-EU industrialized countries, tabled initiatives for WTO-compliant elements in the climate regime. Moreover, the group successfully rejected trade-restrictive proposals by the EU for a binding list of policies and measures and their mandatory coordination, or for quantitative limits to the use of flexibility mechanisms. Developing countries largely seconded the Umbrella Group’s opposition to trade restrictions on these various occasions. In the WTO, it was also a group of non-EU industrialized countries, including the U.S., which continuously and effectively prevented any legal concessions towards trade-related provisions of environmental regimes. And again, the bulk of developing countries—with their majority of votes—supported this position.

In line with our two-step conceptual approach, our explanation of the positional differences between the U.S. and developing countries on one side and the EU on the other (and the specific compromises arising out of such differences) is related to underlying norm complexes in global governance. Bernstein (2001, 2002) and Eckersley (2008, 2009) argue that the compromise of liberal environmentalism has dominated debates on overlaps between trade and environment from the early 1990s onwards. It has replaced the dominance of slightly more trade-skeptical discourses on the environment-economy nexus, for instance the sustainable development debate of the 1980s over the extent to which economic growth could be decoupled from environmental degradation (Eckersley 2009, 14–16). Liberal environmentalism implies a focus “on efficiency gains from technological innovation” (Eckersley 2008, 2), claiming synergy among trade and environment while sidelining detrimental aspects.

With regard to climate change, this norm translates into the formula that trade liberalization promotes climate protection, for example by enabling the diffusion of climate-friendly goods and the efficient allocation of resources. This strongly market-friendly norm embraces the promotion of market policy tools, such as emissions trading, over “command-and-control” regulation, that is, top-down domestic policies and measures (see also Eckersley 2009). The reluctance of the U.S. and developing countries to trade-restrictive policies and measures can thus be seen as embedded in liberal environmentalism. Developing countries have repeatedly held that such policies represent a form of “green protectionism” (Thomas 2004, 17–18). From the UNFCCC’s inception, U.S. negotiators have tried to feed market-

friendly elements into the climate regime, while often characterizing regulatory approaches as interventionist (Schreurs 2004, 213–214). The dominance of liberal environmentalism reveals itself not only in rejections of certain regulatory proposals in the climate regime but also in a process of “self-censorship” (Eckersley 2008, 2). Negotiators often refrained from tabling ambitious proposals for trade-restrictive climate protection measures. The establishment of the WTO dispute settlement mechanism further intensified this “chill effect” (Stilwell and Tuerk 1999; Eckersley 2004), as parties to the UN climate regime try to avoid legal challenges and potential sanctions against them.

On the other hand, recent developments suggest that the dominance of liberal environmentalism is increasingly challenged. Eckersley (2009, 15) discerns a “generic counter-discourse” in statements from environmental NGOs or green think tanks. Moreover, recent years have witnessed a shift of interests in U.S. domestic politics towards more trade-restrictive approaches— but in order to safeguard domestic industries rather than for environmental reasons. For instance, in June 2009, the House of Representatives adopted a provision obliging the President to impose tariffs or offsetting requirements on goods from countries that do not take comparable action to limit greenhouse gas emissions.

The UN Climate Regime and the Convention on Biological Diversity

The conflict between the climate and biodiversity regimes is not apparent from specific treaty rules but has rather emerged in the implementation stages of the Kyoto Protocol, particularly relating to inclusion of forests as sinks in the CDM, and in the design of REDD as a climate mitigation strategy. Following our broad conceptualization of conflicts, we identify the key positional differences and the norms upon which they are based to explain the evolving relationship between the two regimes.

The inclusion of sinks in the CDM is inextricably intertwined with the emergence of market-based flexibility mechanisms in the climate regime in general. In the early 1990s, it was primarily the U.S. that proposed the use of emissions trading in international climate policy, while the EU was still heavily opposed to the use of market mechanisms (van Asselt and Gupta 2009). The U.S. has also been influential in the CDM sinks discussion, despite its withdrawal from engagement in the Kyoto Protocol process by 2003 (Boyd, Corbera, and Estrada 2006, 107). Referring to the U.S. and the other countries in the Umbrella Group, Bäckstrand and Lövbrand (2006, 60–61) identify flexibility, cost-effectiveness, and a “seductive narrative of ‘maximized synergies’” as the key elements of the “legitimizing discourse” for the inclusion of sinks in the CDM. Northern countries favoring the inclusion of sinks in the CDM have emphasized the cost-saving potential of expanding the scope of the mechanism, while countries in the South have highlighted the various (economic and non-economic) co-benefits, including financial and technology transfers.

These legitimizing discourses reflect again a norm of liberal environmentalism that favors market-based approaches to environmental governance (Bernstein 2002). Nonetheless, these discourses remain contested. This is evident from ongoing efforts by different actors to push for consideration of biodiversity concerns in the climate regime and efforts by CBD Parties to manage interlinkages with the climate regime in various ways.

Bäckstrand and Lövbrand (2006, 64–65) argue that persisting concerns expressed about sinks in the CDM are part of a “critical discourse” that contests a dominant market-oriented liberal environmentalist perspective. This critical discourse not only emphasizes the potentially negative effects on biodiversity and ecosystem protection, but also draws attention to the social and equity aspects of including sinks in the CDM—as well as the use of market-based mechanisms more generally. The discourse, which found support among NGOs

as well as some developing countries, provides an explanation for the requirement to conduct a socio-economic and environmental analysis of CDM forestry projects (Bäckstrand and Lövbrand 2006, 69). It also provides an explanation for the push to include biodiversity considerations in a REDD mechanism by NGOs, scientists and a number of Parties to the UNFCCC (for example, Grainger et al. 2009), and the efforts of CBD parties to engage with the climate regime in drawing attention to complex climate-biodiversity linkages.

Nonetheless, interplay management efforts by CBD Parties have yielded little effect to date. This is related, first and foremost, to the fact that any effort by actors in one regime to influence rule development in another is limited by the extent to which memberships and mandates of the two are congruent. An important barrier is that the U.S. is a party to the climate convention but not to the biodiversity convention. A broad mandate for the UNFCCC secretariat to cooperate with the CBD secretariat could give the impression that national sovereignty is eroded by “importing” concepts or rules from the biodiversity convention (cf. Wolfrum and Matz 2003, 163). Second, efforts to incorporate biodiversity concerns in the CDM in essence seek to alter the mechanism’s market-based nature, and indirectly challenge the dominance of the norm of neoliberal environmentalism. While it is clear that biodiversity concerns are not completely ignored in the climate regime, parties have yet to give biodiversity conservation a more prominent place.

The Cartagena Protocol on Biosafety and the WTO

Evolving linkages between the Cartagena Protocol and the WTO reflect clear positional differences among major coalitions of actors on trade-restrictive GMO policies. The notion of “advance informed agreement” underpinning the Protocol’s governance of GMO trade derives from the longer established “prior informed consent” relied upon in a global context to govern trade in hazardous wastes and restricted chemicals. Prior informed consent is explicitly intended to be a compromise between a ban on risky trade, versus *caveat emptor* or “let the buyer beware” (Mehri 1988, see also Gupta 2010b).

Yet the overarching normative context within which this compromise is interpreted and institutionalized remains contested (see also Wolf 2000). Informed consent can, on the one hand, be interpreted as a way to ensure freedom from harm by providing the bases for restrictions on trade (through comprehensive information disclosure; and institutionalizing precaution as justification for restrictions). On the other hand, it can be interpreted as a vehicle to ensure efficiency in decision-making and thus to facilitate trade (through minimal information disclosure; and institutionalizing reliance on sound-scientific decisions). As seen earlier, the first interpretation is promoted globally by the EU and many developing countries; and the second by those advocating for unrestricted trade in GMOs, including the U.S. and other GMO producing countries. Importantly, this normative conflict is not confined to one between the WTO and the Cartagena Protocol, but rather transcends both. Thus, the norms and rules of each regime—how far-reaching they are and how far the shadow of the WTO extends in shaping those of the Protocol—cannot be analyzed in isolation from the overall contested global normative context that shape developments in *both* regimes.

Yet, the manner in which potential areas of regime conflict are being interpreted and institutionalized within both suggests a dominance of a liberal environmentalist approach to global risk governance. This can be posited from the fact that, although the potential for the Cartagena Protocol to institutionalize a more trade-restrictive interpretation of a precautionary approach to GMO transfers (vis-a-vis the WTO-SPS Agreement) certainly remains alive, to date the Protocol’s inclusion of precaution appears not to have directly influenced ongoing transatlantic or bilateral disputes relating to GMO trade, in a manner that

is detrimental to trade. This is partly because the specific use of the Protocol as a bulwark against the WTO has been rendered difficult as a result of diverse memberships across the two regimes. In essence, the fact that key GMO exporters are missing from the Protocol has ensured that its normative contribution to global risk governance (or its potential to question dominant global governance norms) is weakened. This is even more palpable in how information disclosure relating to the GMO trade is being institutionalized, whereby Protocol obligations remain minimally trade-disruptive and may even have trade-facilitating effects. As a result, there is arguably a prioritization of market access over biosafety considerations in the existing global risk governance architecture for GMO trade, an outcome aligned with an overarching market liberal bias in global environmental governance.² Even the notion of “advance informed agreement” as the central global risk governance mechanism for GMOs can be seen as aligned with such a (market) liberal perspective, one that elevates (individual or collective) *choice* over command-and-control regulatory approaches such as bans.

Even so, the dominance of a market liberal approach to global environmental and risk governance does not go wholly unchallenged. Yet, in contrast to the two examples examined earlier, in the GMO case, a market liberal approach faces not only its strongest challenge but also asserts the strongest counter-pressure. The transatlantic EU-U.S. GMO trade conflict reflects an overt normative conflict about appropriate aims of governance as well as means needed to fulfill them (even more so than in the case of climate change, where self censorship by the EU keeps some market restrictive approaches from being adopted within the climate regime). In the GMO case, the EU has consistently pushed for trade restrictive policies in all fora, even as the US has consistently opposed these. This normative tension endures partly because the very existence of a governance problem remains fundamentally contested here. The U.S. position is that there is no need for governance, since GMOs are not intrinsically hazardous (again in contrast to acknowledgment by all of the need for at least some action on climate change). Given the U.S view in the GMO case, it is harder to push back decisively against a privileging of open markets and trade facilitation in this area, even though the EU, supported by many developing countries, continually demands the flexibility to do so.

Conclusions and Outlook

This article has sought to analyze horizontal regime interlinkages from a sociological perspective on conflict and the role of global norms therein. We thereby attended to a major research gap in the evolving scholarly literature on interlinkages, namely the lack of theoretical explanations of this emerging global governance phenomenon. By framing regime interlinkages as conflicts among actors across regimes, which are embedded in underlying normative structures, we combined both behavioral and structural elements to explain the nature of emerging interlinkages and their consequences for the development of the affected regimes. We illustrated the added value of this approach through analyzing various examples of regime interlinkages in the global environmental and trade domains, finding that all of them are characterized, to greater or lesser extent, by a dominance of liberal environmentalism, which is mirrored in the interests of the most influential parties.

Our findings illustrate a number of interesting (comparative) claims that merit further conceptual and empirical analysis. First, in the case of the climate-trade interaction, we postulate a dominance of a liberal environmental perspective that privileges market approaches, both through the influence of the U.S. and through self-censorship of the EU. In

² While this conclusion may not hold for the European Union’s regional GMO governance approach, it refers here to the global context.

contrast, we see that in the case of climate-biodiversity, there is no inherent conflict between climate and biodiversity protection, yet it is in the process of norm institutionalization that regime conflict may manifest itself. Thus the “devil lies in the detail” whereby the question whether climate-induced incentives to reduce deforestation will be synergistic or conflictual with biodiversity objectives will reveal itself in the design of the still new REDD mechanism. Finally, the most overt global normative conflict persists in the case of biosafety-trade interlinkages. It is in this issue-area that market liberal approaches to risk governance are open to the most serious challenge (given the EU’s desire for stringent regulation), but it is also here that any challenge to market liberalism will be fiercely resisted (given the U.S. view that GMOs do not merit global regulation).

Our analysis also raises two important questions meriting further inquiry: first, if regime conflicts are related to certain dominant global norms, can the persistence of inter-regime conflicts contribute to global normative evolution? This might be the case, for example, if norms that question a dominant market liberal approach succeed in becoming institutionalized in the climate, biodiversity or biosafety regimes. And second, can one posit a dominance of liberal environmentalism when the “coalitions of the willing” vary considerably across issue areas, in particular, when developing countries end up on different ends of a normative spectrum promoting or resisting liberal approaches? For example, in the climate case, positional differences and a push back against a market liberal approach tends to line up the EU against the US *and* developing countries; and similarly so for the climate-biodiversity case; but in the GMO case, developing countries tend to ally themselves with the EU’s calls for precaution and stringent information disclosure. What do such varying North-South positional differences suggest about our overarching claim that liberal environmentalism tends to dominate in global environmental governance?

Our claims thus require further theoretical and empirical consolidation. Such inquiry could be informed, for example, by recent insights into “discursive institutionalism” (Schmidt 2008; Arts and Buizer 2009), as well as identification of causal mechanisms that lead from norm collusion to conflicts among actors. Apart from the explanatory elements we emphasize here, additional theoretical approaches to the study of regime interlinkages may adopt different causal variables from theories of international relations and other disciplines. For instance, they could scrutinize domestic drivers that shape country positions in regime conflicts. Such analytical frameworks might, for example, draw on theories of multi-level governance (Putnam 1988; Scharpf 2002).

Scholars could further explore the extent to which horizontal interlinkages alter regime compliance rates and practices in diverse national contexts (see, for example, Falkner and Gupta 2009) or how they shape the ultimate problem-solving effectiveness of regimes (Sprinz 2005). New approaches could also help explain the emergence of interlinkages; or they could concentrate on options for and barriers to “interplay management” (Oberthür and Stokke *fc.*). In addition, given the proliferation of transnational institutions in global environmental governance (Dingwerth 2007; Pattberg 2007), conflicts involving such new mechanisms and actors may soon become a promising research object.

Finally, more work is necessary that goes beyond dyadic relations between distinct regimes and adopts an overarching or meta-perspective on interlinkages. Only recently have scholars of international relations identified the fragmentation of global environmental governance as a timely research object. Biermann et al. (2009, 2010) introduced a first typology of different degrees of fragmentation, and explored the pros and cons of advanced fragmentation in global climate governance. Similar to the aforementioned open questions on dyadic interlinkages, future research may either address existing theoretical gaps, relating to explanations for fragmentation or its variation across domains, or it may scrutinize the management of fragmentation in a given issue area. In doing so, it may also shed light on the

underlying question animating our analysis here: to what extent fragmentation is shaped by overarching norm collusion, and, vice versa, how fragmentation can induce normative changes in global environmental governance.

References

- Arts, Bas, and Marleen Buizer. 2009. "Forests, Discourses, Institutions. A Discursive-institutional Analysis of Global Forest Governance." *Forest Policy and Economics* 11(5-6): 340-347.
- Bäckstrand, Karin, and Eva Lövbrand. 2006. "Planting Trees to Mitigate Climate Change: Contested Discourses of Ecological Modernization, Green Governmentality, and Civic Environmentalism." *Global Environmental Politics* 6(1): 50-75.
- Bernstein, Steven. 2001. *The Compromise of Liberal Environmentalism*. New York: Columbia University Press.
- Bernstein, Steven. 2002. "Liberal Environmentalism and Global Environmental Governance", *Global Environmental Politics* 2(3): 1-16.
- Bhagwati, Jagdish, and Petros C. Mavroidis. 2007. "Is Action Against US Exports for Failure to Sign Kyoto Protocol WTO-legal?" *World Trade Review* 6(2): 299-310.
- Biermann, Frank, and Philipp Pattberg. 2008. "Global Environmental Governance: Taking Stock, Moving Forward." *Annual Review of Environment and Resources* 33(1): 277-294.
- Biermann, Frank, Philipp Pattberg, Harro van Asselt, and Fariborz Zelli. 2009. "The Fragmentation of Global Governance Architectures: a Framework for Analysis." *Global Environmental Politics* 9(4): 14-40.
- Biermann, Frank, Fariborz Zelli, Philipp Pattberg, and Harro van Asselt. 2010. "The Architecture of Global Climate Governance: Setting the Stage." In *Global Climate Governance beyond 2012: Architecture, Agency and Adaptation*, edited by Frank Biermann, Philipp Pattberg, and Fariborz Zelli, 15-24. Cambridge, UK: Cambridge University Press.
- Boyd, Emily, Esteve Corbera, and Manuel Estrada. 2006. "UNFCCC Negotiations (pre-Kyoto to COP-9): What the Process says about the Politics of CDM-Sinks", *International Environmental Agreements: Politics, Law and Economics* 8(2): 95-112.
- Brewer, Thomas L. 2003. "The Trade Regime and the Climate Regime. Institutional Evolution and Adaptation." *Climate Policy* 3(4): 329-341.
- Brewer, Thomas L. 2004. "The WTO and the Kyoto Protocol: Interaction Issues." *Climate Policy* 4(1): 3-12.
- CBD Secretariat. 2003. *Interlinkages Between Biological Diversity and Climate Change. Advice on the Integration of Biodiversity Considerations into the Implementation of the United Nations Framework Convention on Climate Change and its Kyoto Protocol*. Montreal: Secretariat of the CBD.
- Chambers, W. Bradnee. 2008. *Interlinkages and the Effectiveness of Multilateral Environmental Agreements*. Tokyo: United Nations University Press.
- Chambers, W. Bradnee, Joy A. Kim, and Claudia ten Have. 2008. "Institutional Interplay and the Governance of Biosafety." In *Institutional Interplay: Biosafety and Trade*, edited by Young, Oran R., W. Bradnee Chambers, Joy A. Kim, and Claudia ten Have, 3-18. Tokyo: United Nations University Press.
- Charnovitz, Steve. 2003. "Trade and Climate: Potential Conflicts and Synergies." In *Beyond Kyoto. Advancing the International Effort against Climate Change*, edited by Pew Center on Global Climate Change. Arlington, VA: Pew Center on Global Climate Change.
- Coser, Lewis A. 1956. *The Functions of Social Conflict*. New York, NY: Free Press.
- Cottier, Thomas, Olga Nartova, and Sadeq Z. Bigdeli, eds. 2009. *International Trade Regulation and the Mitigation of Climate Change*. Cambridge, UK: Cambridge University Press.
- Dahrendorf, Ralf. 1961. *Gesellschaft und Freiheit. Zur soziologischen Analyse der Gegenwart*. Munich, Germany: Piper.
- Dahrendorf, Ralf. 1968. "Zu einer Theorie des sozialen Konflikts." In *Theorien sozialen Wandels*, edited by Wolfgang Zapf, 108-123. Berlin, Germany: Kiepenheuer & Witsch.
- Dingwerth, Klaus. 2007. *The New Transnationalism: Transnational Governance and Democratic Legitimacy*. Basingstoke, UK: Palgrave.
- Eckersley, Robyn. 2004. "The Big Chill: The WTO and Multilateral Environmental Agreements." *Global Environmental Politics* 4(2): 24-40.
- Eckersley, Robyn. 2008. *A Critical Constructivist Theory of Regime Interplay: The Kyoto Protocol and the World Trade Organization*. Paper Presented at the Annual Convention of the International Studies Association. San Francisco, CA, 26-29 March 2008.
- Eckersley, Robyn. 2009. "Understanding the Interplay between the Climate and Trade Regimes." In *Climate and Trade Policies in a Post-2012 World*, edited by the United Nations Environment Programme (Benjamin Simmons) and the ADAM Project (Harro van Asselt and Fariborz Zelli), 11-18. Geneva: UNEP.
- Falkner, Robert and Aarti Gupta. 2009. "Limits of Regulatory Convergence: Globalization and GMO Politics in the South" *International Environmental Agreements: Politics, Law and Economics* 9(2):113-133.
- Frankel, Jeffrey. 2005. "Climate and Trade. Links between the Kyoto Protocol and WTO." *Environment* 47(7) 8-19.
- Gehring, Thomas, and Sebastian Oberthür. 2006. "Introduction" In *Institutional Interaction in Global Environmental Governance: Synergy and Conflict among International and EU Policies*, edited by Sebastian Oberthür, and Thomas Gehring, 4-18. Cambridge, MA: MIT Press.

- Grainger, Alan, Douglas H. Boucher, Peter C. Frumhoff, William F. Laurance, Thomas Lovejoy, Jeffrey McNeely, Manfred Niekisch, Peter Raven, Navjot S. Sodhi, Oscar Venter, and Stuart L. Pimm. 2009. "Biodiversity and REDD at Copenhagen." *Current Biology* 19(21): R974-R976.
- Gupta, Aarti. 2002. "Advance Informed Agreement: a shared basis to govern trade in genetically modified organisms?" *Indiana Journal of Global Legal Studies* 9 (1): 265-281.
- Gupta, Aarti. 2008. "Global Biosafety Governance: Emergence and Evolution." In *Institutional Interplay: Biosafety and Trade*, edited by Young, Oran R., W. Bradnee Chambers, Joy A. Kim, and Claudia ten Have, 19-46. Tokyo: United Nations University Press.
- Gupta, Aarti. 2010a. "Transparency to what end? Governing by disclosure through the Biosafety Clearing House". *Environment and Planning C: Government and Policy* 28 (2), 128-144.
- Gupta, Aarti. 2010b. "Transparency as contested political terrain: who knows what about the global GMO trade and why does it matter?" *Global Environmental Politics*, forthcoming, August.
- Herr, Richard A., and Edmund Chia. 1995. "The Concept of Regime Overlap. Toward Identification and Assessment." In *Overlapping Maritime Regimes. An Initial Reconnaissance*, edited by Bruce Davis, 11-26. Hobart, Australia: Antarctic Climate and Ecosystems Cooperative Research Centre and Institute of Antarctic and Southern Ocean Studies.
- Intergovernmental Panel on Climate Change (IPCC). 2002. *Climate Change and Biodiversity*. Geneva: IPCC.
- Ismer, Roland, and Karsten Neuhoff. 2007. "Border Tax Adjustment: a Feasible Way to Support Stringent Emission Trading." *European Journal of Law and Economics* 24(2): 137-164.
- Isaac, Grant E. and William A. Kerr. 2003. "Genetically Modified Organisms at the World Trade Organisation: A Harvest of Trouble", *Journal of World Trade* 37(6): 1083-1095.
- Jacquemont, Frédéric, and Alejandro Caparrós. 2002. "The Convention on Biological Diversity and the Climate Change Convention 10 Years After Rio: Towards a Synergy of the Two Regimes?" *Review of European Community and International Environmental Law* 11(2): 139-180.
- Keohane, Robert O. 1989. *International Institutions and State Power. Essays in International Relations Theory*. Boulder, CO: Westview Press.
- Lieberman, Sarah and Tim Grey. 2008. The World Trade Organization's Report on the EU's Moratorium on Biotech Products: The wisdom of the US challenge to the EU in the WTO. *Global Environmental Politics* 8 (1): 33-52.
- Mehri, Cyrus. 1988. Prior informed consent: an emerging compromise for Hazardous Exports. *Cornell International Law Journal* 21: 365-389.
- Meinshausen, Malte, and Bill Hare (. 2003). *Sinks in the CDM: After the Climate, Biodiversity Goes Down the Drain. An Analysis of the CDM Sinks Agreement at CoP-9*. Available at <http://www.greenpeace.org/raw/content/usa/press-center/reports4/sinks-in-the-cdm-after-the-cl.pdf> (accessed 30 March 2010).
- Millstone, Eric and Patrick van Zwanenberg. 2003. "Food and Agricultural Biotechnology Policy: How Much Autonomy Can Developing Countries Exercise?" *Development Policy Review* 21(5): 655-667.
- Oberthür, Sebastian, and Olav Schram Stokke, eds. Forthcoming. *Institutional Interplay and Global Environmental Change. Interplay Management and Institutional Complexes*. Cambridge, MA: MIT Press.
- Oberthür, Sebastian, and Thomas Gehring, eds. 2006a. *Institutional Interaction in Global Environmental Governance: Synergy and Conflict among International and EU Policies*. Cambridge, MA: MIT Press.
- Oberthür, Sebastian, and Thomas Gehring. 2006b. "Conceptual Foundations and Institutional Interaction." In *Institutional Interaction in Global Environmental Governance: Synergy and Conflict among International and EU Policies*, edited by Sebastian Oberthür, and Thomas Gehring, 19-52. Cambridge, MA: MIT Press.
- Oberthür, Sebastian, and Thomas Gehring. 2006c. "Institutional Interaction in Global Environmental Governance: The Case of the Cartagena Protocol and the World Trade Organization", *Global Environmental Politics* 6(2): 1-31.
- Pattberg, Philipp. 2007. *Private Institutions and Global Governance. The New Politics of Environmental Sustainability*. Cheltenham, UK: Edward Elgar.
- Putnam, Robert D. 1988. "Diplomacy and Domestic Politics: the Logic of Two-level Games." *International Organization* 42(3): 427-460.
- Rittberger, Volker, and Michael Zürn. 1991. "Regime Theory: Findings from the Study of East-West Regimes'." *Cooperation and Conflict* 26(4): 165-183.
- Rosendal, G. Kristin. 2001. "Impacts of Overlapping International Regimes: the Case of Biodiversity." *Global Governance* 7(1): 95-117.
- Ruggie, John Gerard. 1998. "What makes the World Hang Together? Neo-utilitarianism and the social constructivist challenge". *International Organization* 52 (4): 855-885.
- Safrin, Sabrina. 2002. "Treaties in Collision? The Biosafety Protocol and the World Trade Organization Agreements", *American Journal of International Law* 96(3): 606-628.
- Sagemüller, Imke. 2006. "Forest Sinks under the United Nations Framework Convention on Climate Change and the Kyoto Protocol: Opportunity or Risk for Biodiversity?" *Columbia Journal of Environmental Law* 31(2): 189-242.
- Scharpf, Fritz W. 2002. "Regieren im europäischen Mehrebenensystem. Ansätze zu einer Theorie." *Leviathan* 30(1): 65-93.
- Schimmelfennig, Frank. 1995. *Debatten zwischen Staaten. Eine Argumentationstheorie internationaler Systemkonflikte*. Opladen, Germany: Leske + Budrich.
- Schmidt, Vivien A. 2008. "Discursive Institutionalism: The Explanatory Power of Ideas and Discourse." *Annual Review of Political Science* 11(1): 303-326.

- Schreurs, Miranda A. 2004. "The Climate Change Divide: The European Union, the United States, and the Future of the Kyoto Protocol." In *Green Giants? Environmental Policies of the United States and the European Union*, edited by Norman J. Vig and Michael G. Faure, 207-230. Cambridge, MA: MIT Press.
- Selin, Henrik, and Stacy D. VanDeveer. 2003. "Mapping Institutional Linkages in European Air Pollution Politics." *Global Environmental Politics* 3(3): 14-46.
- Simmel, Georg. 1992. *Soziologie. Untersuchungen über die Formen der Vergesellschaftung. Gesamtausgabe Band 11*. Frankfurt am Main, Germany: Suhrkamp.
- Sprinz, Detlef F. 2005. *Regime Effectiveness. The Next Wave of Research*. Paper Prepared for the 2005 Berlin Conference on the Human Dimensions of Global Environmental Change, 02-03 December 2005.
- Stillwell, Matthew T., and Elisabeth Tuerk. 1999. *Trade Measures and Multilateral Agreements: Resolving Uncertainty and Removing the WTO Chill Factor*. WWF International Discussion Paper, November 1999.
- Stockwell, Claire, Bill Hare, and Kirsten Macey. 2009. "Designing a REDD Mechanism: The TDERM Triptych." In *Climate Law and Developing Countries: Legal and Policy Challenges for the World Economy*, edited by Benjamin J. Richardson, Yves Le Bouthillier, Heather McLeod-Kilmurray, and Stepan Wood, 151-177. Cheltenham, UK: Edward Elgar.
- Stokke, Olav Schram, ed. 2001a. *Governing High Seas Fisheries. The Interplay of Global and Regional Regimes*. Oxford, UK: Oxford University Press.
- Stokke, Olav Schram 2001b. *The Interplay of International Regimes. Putting Effectiveness Theory to Work*. FNI Report No. 14/2001. Lysaker, Norway: Fridtjof Nansen Institute.
- Stokke, Olav Schram 2004. "Trade Measures and Climate Compliance: Institutional Interplay between WTO and the Marrakesh Accords" *International Environmental Agreements: Politics, Law and Economics* 4(4): 339-357.
- Thomas, Urs P. 2004. "Trade and the Environment: Stuck in a Political Impasse at the WTO after the Doha and Cancún Ministerial Conferences." *Global Environmental Politics* 4(3): 9-21.
- Underdal, Arild. 2006. *Determining the Causal Significance of Institutions. Accomplishments and Challenges*. Paper Prepared for the 'Institutional Dimensions of Global Environmental Change' Project Synthesis Conference, Nusa Dua, Bali, Indonesia, 6-9 December 2006.
- United Nations Framework Convention on Climate Change (UNFCCC). 2006. *Decision 16/CMP.1, Land Use, Land-Use Change, and Forestry* (30 March 2006). UN Doc. FCCC/KP/CMP/2005/8/Add.3.
- van Asselt, Harro. Forthcoming. "Dealing with the Fragmentation of Global Climate Governance: Legal and Political Approaches in Interplay Management." In *Institutional Interplay and Global Environmental Change: State of the Art and Perspectives*, edited by Sebastian Oberthür, and Olav Schram Stokke. Cambridge, MA: The MIT Press.
- van Asselt, Harro, and Joyeeta Gupta. 2009. "Stretching Too Far? Developing Countries and the Role of Flexibility Mechanisms Beyond Kyoto." *Stanford Environmental Law Journal* 28(2): 311-379.
- van Asselt, Harro van, Joyeeta Gupta, and Frank Biermann. 2005. "Advancing the Climate Agenda: Exploiting Material and Institutional Linkages to Develop a Menu of Policy Options." *Review of European Community and International Environmental Law* 14(3): 255-264.
- van Asselt, Harro, Francesco Sindico, Michael A. Mehling. 2008. "Global Climate Change and the Fragmentation of International Law." *Law and Policy* 30(4): 423-449.
- Weber, Max. 1980. *Wirtschaft und Gesellschaft*. Tübingen, Germany: Mohr Siebeck.
- Wolfrum, Rüdiger, and Nele Matz. 2003. *Conflicts in International Environmental Law*. Berlin, Germany: Springer.
- Yamin, Farhana, and Joanna Depledge. 2004. *The International Climate Change Regime: A Guide to Rules, Institutions and Procedures*. Cambridge, UK: Cambridge University Press.
- Young, Oran R. 1996. "Institutional Linkages in International Society. Polar Perspectives" *Global Governance* 2(1): 1-24.
- Young, Oran R. 2002. *The Institutional Dimensions of Environmental Change. Fit, Interplay, and Scale*. Cambridge, MA: MIT Press.
- Young, Oran R. 2008. "Deriving Insights from the Case of the WTO and the Cartagena Protocol." In *Institutional Interplay: Biosafety and Trade*, edited by Young, Oran R., W. Bradnee Chambers, Joy A. Kim, and Claudia ten Have, 131-158. Tokyo: United Nations University Press.
- Young, Oran R., Leslie A. King, and Heike Schroeder. 2008. *Institutions and Environmental Change. Principal Findings, Applications, and Research Frontiers*. Cambridge, MA: MIT Press.
- Zelli, Fariborz. 2007. "The World Trade Organization: Free Trade and its Environmental Impacts." In *Handbook of Globalization and the Environment*, edited by Khi V. Thai, Dianne Rahm, and Jerrell D. Cogburn, 177-216. London, UK: Taylor & Francis.
- Zelli, Fariborz. 2008. *Regime Conflicts in Global Environmental Governance. A Framework for Analysis*. Global Governance Working Paper No. 36. Amsterdam, the Netherlands: The Global Governance Project. Available at <http://www.glogov.org/images/doc/wp36.pdf> (accessed 30 March 2010).
- Zelli, Fariborz, Frank Biermann, Philipp Pattberg, and Harro van Asselt. 2010. "The Consequences of a Fragmented Climate Governance Architecture: a Policy Appraisal." In *Global Climate Governance beyond 2012: Architecture, Agency and Adaptation*, edited by Frank Biermann, Philipp Pattberg, and Fariborz Zelli, 25-34. Cambridge, UK: Cambridge University Press.