



Regime Conflicts in Global Environmental Governance

A Framework for Analysis

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The Global Governance Project is a joint research programme of eleven European research institutions. It seeks to advance understanding of the new actors, institutions and mechanisms of global governance, especially in the field of sustainable development.

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Abstract

In light of calls for more substantiated theoretical approaches to institutional interactions, the paper presents an analytical framework for a particular type of interplay, namely for conflicts among international regimes. Such contradictive overlaps have increasingly evolved in the domain of global environmental governance, in particular between environmental and trade regimes. The paper argues that, when studying such conflicts, major independent variables of international relations theories should be taken into consideration. This is illustrated for two such determinants, namely for the power structure and the knowledge structure in which the rivalling regimes are embedded. These independent variables shall help answer a crucial question about the consequences of a regime conflict, namely: which regime prevails - and why? Regime prevalence, the framework's dependent variable, is defined in terms of a regime's stronger *output* effectiveness, i.e. the norms, principles and rules it produces, on the contested issues. In addition, the framework includes the process of conflict management, framed as the central intermediate process through which power or knowledge structures can cause the prevalence of a regime. There are several confines to the framework's validity scope, e.g. the fact that not every regime conflict might clearly produce prevailing or deferring regimes. These limits notwithstanding, bringing in core determinants from social theories, as suggested in this paper, can help identify important conditions for strengthening the robustness of an affected regime, or for enhancing synergies between regimes.

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Foreword

This working paper was written as part of the Global Governance Project, a joint research programme of eleven European research institutions that seeks to advance understanding of the new actors, institutions and mechanisms of global governance. While we address the phenomenon of global governance in general, most of our research projects focus on global environmental change and governance for sustainable development. The Project is co-ordinated by the Department of Environmental Policy Analysis of the Institute for Environmental Studies at the Vrije Universiteit Amsterdam and includes associate faculty members and research fellows from eleven European institutions: Science Po Bordeaux, Bremen University, Freie Universität Berlin (Environmental Policy Research Centre), The Fridtjof Nansen Institute Oslo, London School of Economics and Political Science, Lund University, Oldenburg University, Potsdam Institute for Climate Impact Research, Vrije Universiteit Amsterdam, Vrije Universiteit Brussel (Institute for European Studies) and Wageningen University (Environmental Policy Group).

Analytically, we define global governance by three criteria, which also shape the research groups within the Project. First, we see global governance as characterised by the increasing participation of actors other than states, ranging from private actors such as multinational corporations and (networks of) scientists and environmentalists to public non-state actors such as intergovernmental organisations ('multiactor governance'). These new actors of global governance are the focus of our research group MANUS—Managers of Global Change.

Second, we see global governance as marked by new mechanisms of organisation such as public-private and private-private rule-making and implementation partnerships, alongside the traditional system of legal treaties negotiated by states. This is the focus of our research group MECGLO—New Mechanisms of Global Governance.

Third, we see global governance as characterised by different layers and clusters of rule-making and rule-implementation, both vertically between supranational, international, national and subnational layers of authority ('multilevel governance') and horizontally between different parallel rule-making systems. This stands at the centre of our research group MOSAIC—'Multiple Options, Solutions and Approaches: Institutional Interplay and Conflict'.

Comments on this working paper, as well as on the other activities of the Global Governance Project, are highly welcome. We believe that understanding global governance is only feasible through joint effort of colleagues from various backgrounds and from all regions of the world. We look forward to your response.

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Contents

1	Introduction	1
2	Defining the Research Object: Conflicts among International Regimes	2
3	The Concept of Regime Prevalence	3
	3.1 <i>Focusing on Output Effectiveness</i>	3
	3.2 <i>Indicating Regime Prevalence: Comparative Assessment of Output on Contested Issues</i>	5
4	Conflict Management as an Intermediate Process	8
5	Determinants for Regime Prevalence: Power and Knowledge	10
	5.1 <i>Power Structure</i>	10
	5.2 <i>Knowledge Structure</i>	14
	5.3 <i>Rival Explanations</i>	17
6	Conclusions	18
	References	19

1 Introduction

By the very nature of its subject, research on institutional interplay has to look beyond the confines of a single institution, trying to grasp its synergetic or disruptive interactions with other regimes or organizations. However, despite the inherent centrality of institutional environments, the theoretical approaches to the issue have largely stopped short of the more profound structures in which these interactions are embedded. As Underdal (2006: 9) observes, 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”.

In this paper, I intend to address this research gap by introducing an analytical framework which includes “major determinants of human behaviour and social outcomes” in the explanatory model (ibid.: 8). This framework will be geared to a particular type of institutional interplay, namely conflicts among international regimes. Over the last two decades, such conflicts have increasingly evolved in the domain of global environmental governance. They do not only include environmental regimes, but often-times involve regimes which were formed to regulate other domains such as international trade. These conflicts can have significant consequences for the functionality and effectiveness of the affected regimes. By bringing in core determinants such as knowledge and power structures, the framework shall facilitate the in-depth analysis of these consequences. More precisely, it shall help answer the question whether one of these regimes prevails, and if so, why?

Resting upon international relations theories and pioneering studies on institutional interplay (Chambers 2001; Oberthür and Gehring 2006; Stokke 2001; Young et al. 2005), I will successively introduce the different building blocks of the analytical framework. The paper will be structured as follows:

In section 2, I will define the term international regime conflicts in a broad manner, not only covering legal incompatibilities, termed latent conflicts, but also behavioural contradictions, termed manifest conflicts. This extensive understanding of regime conflicts will provide a basis for the framework’s inclusion of major determinants of social behaviour.

Section 3 will introduce the framework’s dependent variable, the prevalence of one of the involved regimes. For both pragmatic and substantial reasons, prevalence will be framed in terms of a regime’s *output* effectiveness, i.e. the norms and rules it produces. More precisely, a regime prevails if it generates stronger *output* on the particular issues about which the regimes collide.

I will then establish the process of conflict management as the major intermediate process through which independent variables can cause the prevalence of a regime (section 4). I will distinguish different types of management approaches and briefly discuss the role of conflict management in the analytical framework.

In section 5, I will introduce two independent variables which I will adopt from international relations theories, namely power structure and knowledge structure. Power structure will be framed as the constellation of power among countries, whereas knowledge structure will be operationalized as the basis of knowledge about the contested issues. For both of these determinants, I will develop a configurational hypothe-

sis and discuss elements of an in-depth examination. To this end, the section will address hampering or magnifying conditions, causal mechanisms, the impact on conflict management, and rival explanations.

The concluding section will summarize the components and causal assumptions of the analytical framework and address some caveats and limits to its validity scope.

2 Defining the Research Object: Conflicts among International Regimes

I define a regime conflict as:

a functional overlap among two or more international regimes (formed for different purposes and largely without reference to one another), consisting in a significant contradiction of rules and / or rule-related behaviour.

This definition is based on understandings of three more generic terms, namely international regimes, regime interactions and conflict. As for the first of these terms, I follow Keohane's definition of international regimes as "institutions with explicit rules, agreed upon by governments that pertain to particular sets of issues in international relations" (Keohane 1993: 28). How do such "institutions with explicit rules" interact? Oran Young (1996: 2ff.) has distinguished several types of interaction, including one he termed "overlapping institutions". In this case, regimes formed for different purposes and largely without reference to one another intersect "on a de facto basis, producing substantial impacts on each other in the process".

Young's understanding of "overlapping" regimes is a major building block of the above definition, yet it needs further qualification as "overlapping" does not necessarily mean "conflictive". The mutual impact of an overlap between regimes could also prove to be synergetic. I have therefore added the element of "contradiction" in both a legal ("rules") and a behavioural sense ("rule-related behaviour"). With this twofold understanding of contradiction, I follow a broad sociological definition of "conflict" by Dahrendorf (1961: 201) as any kind of relation between elements which is characterized by what he terms "objective" (= latent) or "subjective" (= behavioural or manifest) contradictions.

Based on this broad definition, two main types of conflict can be distinguished, latent and manifest ones:

The most straightforward indication of a conflict between regulatory systems is a contradiction amongst some of their rules. Such rule incompatibilities or *latent conflicts* can appear between an obligation or permissive rule under one regime and the prohibition of this very conduct by the rules of another regime (Vranes 2006: 398ff.). A prominent example for a latent conflict is the contradiction between Article 4 of the 1987 Montreal Protocol and the most-favoured nation principle (MFN) of the General Agreement on Tariffs and Trade (GATT). Whereas the MFN obliges its parties to the equal treatment of trading partners, the Montreal Protocol discriminates between different groups of countries and their trading benefits. It strictly bans the import and export of the controlled ozone-depleting substances (ODS) from or to "any State not

party to this Protocol”, unless the non-Party is “in full compliance” with the Protocol’s phase-out and control measures (Article 4). In spite of the latter qualification and the nearly universal membership of the Montreal Protocol, many observers do not rule out the possibility that such import bans might be challenged under WTO law (e.g. Palmer et al. 2006: 186; Neumann 2002: 266f.; OECD 1999: 35f.; Werksman 2001: 183). Likewise, the issue of full GATT / WTO compatibility of the Montreal Protocol’s trade provisions has been the subject of several regime-internal debates and clarification attempts, e.g. in an Ad Hoc Working Group of Legal and Technical Experts or during the 14th Meeting of the Parties (Chambers 2001a: 102f.).

The above definition of regime conflicts exceeds a merely legal understanding of incompatibilities. With its concept of “rule-related behaviour”, the definition also accounts for *manifest conflicts* which can include every form of dispute between actors who are referring to rules of different regimes. For instance, a manifest conflict arose when the Canadian Navy arrested a Spanish flag halibut-fishing vessel in the high seas, just outside the Canadian 200-mile zone, in March 1995. Canada justified this action by referring to the rules of the Northwest Atlantic Fisheries Organization (NAFO), claiming that, at the time of the incident, NAFO’s annual total allowable catch rates for halibut had already been exhausted. On the other hand, Spain, interpreted the Canadian behaviour as a violation of the UN Convention on the Law of the Sea which grants extensive enforcement powers to coastal states for protection of marine resources only within their 200-mile zones (“exclusive economic zones”) (cf. Bernauer and Ruloff 1999: 13f., 35ff.; Joyner 2001).

Not all manifest conflicts take place at the level of implementation. In fact, several sub-types of manifest conflicts are possible: their definition as “disputes among actors” leaves open *when* in a regime’s life-cycle (e.g. during negotiation, at the norm-setting stage) or *where* (e.g. within regime organs) certain actors come into conflict with each other. Nor does it foreclose *who* these actors are (e. g. states [parties, non-parties] or bureaucracies).

The distinction between latent and manifest conflicts shall not insinuate a static understanding of these two chief types. In fact, conflicts are moving targets. They can vary over time, e.g. changing from latent to manifest. Or, in the best case, they lose their disruptive implications altogether due to successful conflict management. For instance, the aforementioned manifest conflict between UNCLOS and NAFO was settled - i.e. brought back to the status of a latent conflict - by a Canadian-EC agreement in April 1995 which confirmed NAFO’s total allowable catch rate (TAC) for Greenland halibut and excluded Spain and Portugal from Canadian Coastal Fisheries Protection regulations (Joyner 2001: 216ff.).

3 The Concept of Regime Prevalence

3.1 Focusing on Output Effectiveness

The *output* level is but one of three dimensions of effectiveness which research on international regimes has adopted from policy analysis literature (Easton 1965:

351f.; Underdal 2002: 5ff.; Underdal 2004; Wolf 1991: 104ff.). Oberthür and Gehring (2006a) have further developed this trias for their model of institutional interaction. For them, the three dimensions of effectiveness form three respective “targets” for the consequences of a regime interaction: 1. the norms, principles and rules produced by the involved regimes (*output*), 2. the regimes’ behavioural effects on relevant actors (*outcome*) and 3. the ultimate effectiveness of the regimes with regard to their actual subject matters (*impact*).

In light of the aforementioned definition of regime conflicts as contradictions of rules or rule-related behaviour, the *output* level, as the level of production of further rules and decisions, is where we can expect immediate repercussions of such contradictions. As section 3.2 will show in greater detail, insights can be derived from a comparative assessment of the rules and decisions agreed upon by regime parties in the further course of regime development.

As the affected regimes are crucial arenas of interaction, the concentration on their *output* level is helpful for identifying immediate behavioural effects of regime conflicts. A look at the different interactive processes within these regimes, e.g. agenda-setting or drafting and formula-building, can signal to what extent concerns about regime conflicts are affecting these processes, thereby hampering or weakening the generation of further *output*. The affected regimes will often be the first or central place where actors will discuss these overlaps and the potential strategies to manage them. It is largely feasible to track down *output*-related debates on these contested issues which are often led in issue-specific regime bodies such as working groups, panels, subsidiary bodies or committees.

Unfortunately, an equally accurate and tractable causal analysis of changes on the *outcome* and *impact* levels will turn out more difficult. As Underdal (2006: 16) observes, “[t]he number and range of potentially relevant variables increases the further ‘out’ we move along the causal chain, and most sharply as we go from studying effects on human behavior to examining consequences in terms of change in the biophysical environment itself.”

Difficulties already arise at the level of *outcome*-effectiveness. At first glance, picking a fairly narrow indicator, e.g. parties’ compliance with their contractual obligations, might insinuate analytical feasibility. This concept seems suitable for before / after studies which ask to what degree compliance rates have deteriorated (or improved) after the occurrence of an incompatibility with another regime. But whereas unravelling such correlations might appear fairly simple, an explanatory attempt would be confronted with a considerable number of rival explanations which all might have an influence on compliance levels or other behavioural aspects, e.g. various domestic factors.

An analysis on the *impact*-level would turn out even more complex while chances to clearly attribute consequences to a regime conflict further decrease. Even regimes with a high rate of compliance might have a rather low impact, since the complexity of their subject matter places many factors beyond political control. As keeping track with the *impact*-effectiveness of a single regime is already highly demanding, doing so with several cases which comprise two or more regimes seems hardly feasible for an averaged-sized social science project, at least when aiming for results with high degrees of representativity and “external validity” (Mitchell and Bernauer 1998).

At the end of the day, the research design would have to be much more encompassing and complex for the *outcome* and *impact* levels. The framework presented in this paper is thus geared to the *output* level where one will encounter the more immediate effects of regime conflicts.

These substantive and pragmatic advantages notwithstanding, the trade-off for this choice is a limited validity scope, since some mid- and long-term effects of regime conflicts will not be captured.

3.2 *Indicating Regime Prevalence: Comparative Assessment of Output on Contested Issues*

I will argue in favour of a comparative assessment of the *output* development of the affected regimes, with particular emphasis on the contested issues. This argument will be unfolded in several steps. First, I will frame *output* in an evolutionary sense as regime development. Second, I will name quantitative and qualitative criteria to determine and compare the *output* development of regimes. Third, I will suggest using two chief scopes for applying these criteria, thereby gearing the comparison to the *output* development on the contested issues.

The analytical framework is based on an extended understanding of regime *output*. In traditional regime research, scholars mostly equate *output* with regime formation and the respective processes (agenda-setting, negotiation, and implementation) (Young 1998). An extended or evolutionary understanding also takes into account the further growth or decline of a regime after its formation, i.e. the “regime development path” (Miles et al. 1992: 484). When applying this extended understanding to the analysis of regime conflicts, the observation period does not necessarily start with the process of regime formation, but with the appearance of the conflict. Ideally for the analysis, both acts do not coincide; this allows for comparisons between the developments of a regime before and after the beginning of a conflict.¹ Is there a change of pattern, e.g. from growth towards stagnation, after the occurrence of a conflict? And is one regime clearly more affected in this regard?

Quantitative criteria to compare the development of the involved regimes are 1. the amount of their further *output* and 2. their change in membership. The first indicator includes additional agreements between states parties (in the form of protocols, amendments, declarations or decisions made at conferences and meetings of parties). The second yardstick, the numbers of ratifying parties of the various agreements, points to the support which these further agreements and the regime as a whole are meeting. These numbers can indicate the degree of acceptance of the regime as the (leading) regulative institution for a certain issue area.

An example for a continuously growing regime is the ozone regime, starting out with the 1985 Vienna Convention, followed by the 1987 Montreal Protocol, four amendments and several adjustments. With 191 ratifying countries as of January 2008, the convention and the protocol have reached nearly universal status, while the regime’s latest amendment from 1999 has already been ratified by 135 parties. For com-

¹ In each regime conflict, such a before / after analysis should at least be possible for the older regime, unless the regimes have evolved in parallel as in the case of CBD and TRIPS.

parison: the Basel Convention on hazardous wastes, which is colliding with GATT on similar grounds as the Montreal Protocol, has encountered more difficulties for its development. Its 1995 amendment, which bans exports from OECD to non-OECD countries for final deposit, is still far from entering into force.

However, these quantitative indicators (i.e. additional *output* and membership) alone are not sufficient to characterize and compare the developments of regimes. Additional decisions could more or less be repetitions of existing ones, rather adding to the complexity than to the substance of a regime. Therefore, qualitative criteria are needed for assessing and comparing the degree of *output* effectiveness across regimes more comprehensively. Based on Abbott et al. (2000), Underdal (2002: 5f.) and Wettstad (2001: 319ff.), three chief qualitative criteria can be distinguished:

- *Inclusiveness*: the degree to which a regime has brought the targeted system of activities under its jurisdiction;
- *Stringency*; indicators include:
 - o degree of obligation (unconditional, with implicit conditions, contingent, hortatory, merely guidelines, or even explicit negation of legally binding treaty);
 - o degree of precision (determinate rules, limited or broad issues of interpretation, or even too vague to determine when conduct complies);
- *Collaboration and delegation*: the degree to which regime bodies and third parties have been granted authority, resources and expertise; indicators include the type of dispute resolution, verification and implementation mechanisms, decision rules, funding mechanisms as well as available scientific expertise and bodies for science-policy interface.

Coming back to the previous example, the ozone regime has started out with relatively low degrees on all three accounts (Abbott et al. 2000: 406), yet there has been a continuously positive trend in terms of obligation and inclusiveness. While the Vienna Convention did not impose obligations to reduce the use of ODS, the Montreal Protocol as well as the subsequent amendments and adjustments have introduced binding control measures for a growing number of substances. The degree of delegation has equally increased, due to the establishment of a special funding mechanism (Multilateral Fund) and several bodies, for instance an Implementation Committee and three panels of experts (IISD 2007; Oberthür 2001: 360f.; Wettstad 2002: 150ff.).

What has been said so far can be used to indicate and compare the qualitative and quantitative developments of all sorts of regime *output* which the involved regimes produce. It can prove insightful to stay abreast of this overall *output* development, in particular if it is possible to identify changes before and after the beginning of a regime conflict. However, the results of this general comparison need to be treated very carefully. Apart from a regime conflict and its underlying determinants, several other factors can obviously be held accountable for the course of overall regime development.²

² This is especially the case where the contested issue is not at the core of a regime's jurisdiction. Take the conflict between the GATT and the trade measures of several environmental regimes. The question of trade in ODS, hazardous wastes or endangered species only touches upon a tiny

The identified overall changes might hence best be interpreted as wider ramifications of regime conflicts, rather than as direct effects.

In order to capture more immediate effects, the aforementioned yardsticks need to be further tailored to the peculiarities of regime conflicts. To this end, I suggest two chief lenses or scopes of analysis which both give specific attention to the issues on which the regimes overlap:

1. comparing the *output* produced by the colliding regimes on the contested issues
2. comparing the *output* produced by third institutions on the contested issues

A crucial step for the analysis is hence the careful identification of the contested issues. For instance, in the conflict between the Convention on Biological Diversity (CBD) and the WTO's Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), the major controversial issues are access to genetic resources and equitable benefit sharing. Notably, not all contested issues in a regime conflict have been there from the start; additional controversies might arise in the course of a regime conflict, e.g. due to amendments or protocols. For example, the CBD's 2000 Cartagena Protocol on Biosafety (BSP) might collide with several WTO agreements on the issue of prior informed consent on the introduction of living modified organisms (Andrée 2005).

A regime's enhanced claim or leverage over such contested issues can be indicated by the increased willingness of major players to debate the respective subjects under its umbrella, and ultimately by additional decisions and legal provisions on these matters. This focus on contested issues specifically relates to the above criterion of inclusiveness, asking to what extent a regime has managed to further bring these issues under its jurisdiction (e.g. by extending the list of substances for which trade restrictions apply). But also the two other qualitative criteria can be indicative: have additional decisions or provisions altered the degree of stringency and collaboration with regard to the contested issues, e.g. by introducing binding targets or control measures and by strengthening the respective appraisal procedures?

Another look at the case of the ozone regime illustrates that the focus on contested issues – instead of overall regime development – can reveal quite a different picture. While the regime's general development has been positive both in qualitative and quantitative terms, its further record on the contested issues rather points to stagnation if not deference on these matters. As Palmer et al. (2006: 185f.) observe, the continuous concern about the consistency with GATT / WTO rules has limited the further development and application of the regime's trade restrictions. Planned limitations on trade in goods produced with ODS, but not containing them, have not been applied, "partly because WTO rules have traditionally been understood to prohibit trade restrictions based on non-product-related process and production methods". Moreover, the concern over WTO disciplines "limited Montreal Protocol parties' use of trade measures" with respect to products that are obsolete because of bans on ODS.

fraction of the jurisdiction of the GATT. In these cases, the ongoing stagnation of the Doha Round should rather not be taken as evidence of a strong effect of this conflict.

Apart from an examination of the involved regimes, a second scope of analysis can address the wider institutional context of the regime conflict. Following Raustiala and Victor (2004) and their definition of “regime complexes”, this wider *output* context includes other institutions and agreements which also address the contested issues and the associated policy field(s). These agreements can support one of the involved regimes, if they apply a similar approach to the contested issues, i.e. they contain a similar understanding or solution. In the CBD-TRIPS conflict for example, Rosendal (2006: 92) observes nothing less than an “arms race” which so far rather points to the prevalence of the trade regime: The quarrels between developed and developing countries on access and benefit-sharing of genetic resources have eventually extended to other institutions and agreements which either follow the CBD approach (national sovereignty) or rather apply the TRIPS approach (patent systems). These include regional agreements in Africa and Latin America, the UN’s Food and Agriculture Organization (FAO) and the World Intellectual Property Organization (WIPO). Moreover, the US and the EU have initiated several bilateral ‘TRIPS plus’ accords with developing countries.

To sum up: in light of the suggested scopes of analysis and the aforementioned criteria, the prevalence of a regime on the *output* level can be determined by answering two core questions:

- Which regime has rather managed to bring the contested issues under its jurisdiction
 - o by serving as the preferred arena for negotiations and decisions on these issues?
 - o by producing more inclusive, stringent and delegating provisions on these issues?
- Which regime’s approach and jurisdiction in terms of the contested issues has been rather echoed or strengthened by third institutions (and their degrees of inclusiveness, stringency and delegation)?

4 Conflict Management as an Intermediate Process

As one of the key processes for addressing contested issues, conflict management deserves special attention when examining the consequences of a regime conflict. The term refers to any deliberate attempt to address, mitigate or even solve the incompatibility between the involved regimes. Such management attempts can be taken within one of the affected regimes, within both of them or between them. They may also involve third institutions as mediators or dispute settlers, but should be geared directly towards the relations among the rivalling regimes and the contested issues. Conflict management hence constitutes a response to an already existing conflict and should not be confused with the conflict itself; it is an additional, not a necessary element of the interaction between two regimes (Gehring and Oberthür 2006b: 314; Stokke 2001: 11).

Figure 1 presents a brief overview of management approaches which rests upon respective taxonomies in international law literature (Neumann 2002: 317ff.; Pauwelyn 2003: 237ff.; van Asselt 2007). Approaches can be differentiated according to whether

they immediately affect the wording or meaning of rules (legal approaches) or whether they involve the active coordination or cooperation between regime organs (political approaches).

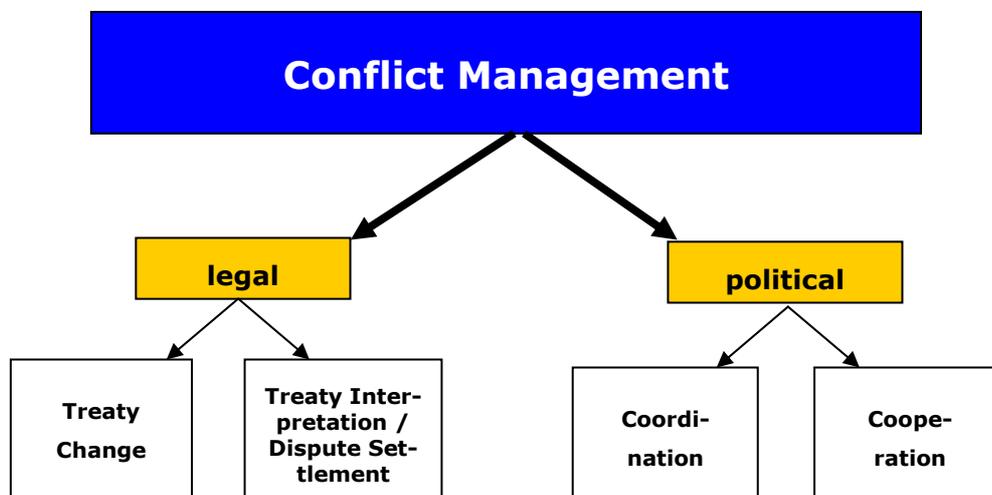


Figure 1: Management Approaches for International Regime

Legal approaches include negotiations among parties about treaty changes e.g. about the inclusion of priority clauses in favour of one or more regimes. Apart from such direct modifications, interpretations of treaty rules can provide another form of legal conflict management. They can be agreed by states parties or they can be provided by regime organs designed for dispute settlement. Moreover, if appealed to, third parties such as regime-external dispute settlement agencies (e.g. the International Court of Justice) might provide interpretations of overlapping rules, by referring to superordinate regulatory systems (e.g. the Vienna Convention on the Law of Treaties).

As for political approaches: while coordination mostly refers to ad hoc or temporary consultations between regime organs (esp. secretariats or expert working groups), cooperation implies more continuous and intensive relations between regimes. Cooperation is often institutionalized by respective agreements or the establishment of special agencies such as the Liaison Group of the CBD, the UN Framework Convention on Climate Change (FCCC) and the UN Convention to Combat Desertification (CCD) (Neumann 2002: 92ff.). Such agreements can address different targets, e.g. the coherence of rules and national implementation, the common support of implementation, joint or coordinated scientific research and assessment, and information exchange (Yamin and Depledge 2004).

Which role does conflict management in its various forms play in the analytical framework? Conflict management is understood as an “intervening process[...] through which one variable exerts a causal effect on another variable” (Mahoney 2000: 531). Management approaches such as treaty change or inter-regime cooperation can influence the prevalence of a regime, but they are not genuinely causing it. Instead, the choice of one or more of the abovementioned approaches, but also their course and results, are functions of more deeply rooted independent variables. Analyzing the in-

intermediate process of conflict management can therefore help substantiate the causal significance of these independent variables for the prevalence of a regime.³ The adjacent sections will illustrate this for the examination of two independent variables.

Likewise, conflict management should not be confused with the dependent variable. This notwithstanding, the results of a management process can be highly instructive for assessing regime prevalence or deference. Political approaches can lead to asymmetrical consequences, if they promote or compromise the clout of one of the involved regimes over the contested issues. Legal management approaches might even amount to an additional *output* on the contested issues as far as they are codified in treaty language. Important insights can also be gained even when the management process does not lead to such explicit agreements. Wherever a policy response in favour of a certain regime is restricted or stalled, this points to that regime's deference. For instance, the shadow of WTO law and its strong dispute settlement system may well provoke anticipatory conflicts or "chilling effects" in other regimes (Stillwell and Tuerk 1999, Eckersley 2004). Negotiators of environmental regimes might then prefer regime-internal autonomous adaptation and refrain from more ambitious policy responses (Oberthür and Gehring 2006b: 314ff.).

5 Determinants for Regime Prevalence: Power and Knowledge

Two core independent variables from international relations theories will be harnessed for the study of regime conflicts: the power structure and the knowledge structure in which the rivalling regimes are embedded. "Bringing in" these determinants in the following sub-sections will imply two crucial steps:

1. framing the independent variable as an asymmetry (i.e. which regime scores better in terms of this determinant?), then generating a "prime hypothesis" (van Evera 1997: 11) which conveys the relationship between independent and dependent variables: In case of a conflict among international regimes, the one(s) with a higher score of factor A will prevail.
2. moving from this prime hypothesis to a configurational one, by attending to conditions, causal mechanisms, the role of conflict management and rival explanations.

5.1. *Power Structure*

The concept of power structure in regime conflicts can be partly derived from traditional power-based regime theories. They offer several structural determinants for the formation and robustness of regimes which might also help explain regime preva-

³ This is not to say that the process analysis should focus solely on conflict management. Decisions on contested issues can also be taken in other contexts and forums (including third institutions). This notwithstanding, conflict management should be given specific attention, since of all *output*-related processes, it is the interaction most explicitly geared to address a regime conflict.

lence. One of these theories, hegemonic stability theory (Kindleberger 1973, 1981), “posits that regimes are neither created nor maintained unless there is hegemonic leadership in this issue-area” (Hasenclever et al. 1997: 103). The hegemon can either be benevolent (Snidal 1985), willing to provide collective goods all by itself, or coercive (Gilpin 1981, 1987), using its power to impose its own will on others and forcing them to contribute as well. However, the rather narrow claim that only states privileged by a hegemon will be provided with international regimes has eventually come under criticism. Snidal himself demonstrated that, through collective action, a group of states “may effectively substitute for hegemonic unilateral leadership” and succeed in achieving their common good (Hasenclever et al. 1997: 101).

The broader concept of the most powerful coalition of countries – which may, but does not need to include the hegemon – is applicable to a wider array of cases of regime conflicts. Not every regime conflict takes place among regimes which include the (regional) hegemon. Moreover, the negotiations of major trade or environmental regimes have not been dominated by a single power, but by blocs or coalitions of countries, e.g. for the climate regime the EU, the Umbrella Group (a loose coalition of non-EU developed countries), and the G-77 & China which embraces further sub-groups such as least-developed countries and small-island developing states. The power of such a country coalition in a regime conflict can be assessed with regard to at least three spheres of influence: a. within the coalition (coherence and robustness of the coalition over time), b. with respect to other country coalitions within each regime, c. in the combined functional and geographical scopes of the involved regimes.

Apart from the agents of power, the essence or concept of power has to be defined more precisely in order to apply to the subject of regime conflicts. Underdal (2002: 29ff.) ascribes the poor performance of power-based propositions in regime research to rather inappropriate concepts such as the concentration of capabilities or overall structural power. He deplores that another connotation has oftentimes been neglected, namely the “distribution of power over the configuration of interests [in] the system of activities to be regulated”. Unlike traditional understandings, this determinant of power relates more directly to the control over outcomes of collective problem-solving, and can hence prove more suitable for researching regime formation: “the probability that a particular solution will be adopted and successfully implemented is a function of *the extent to which it is perceived to serve the interests of powerful actors*” (emphasis in original text). In a regime conflict, such a “solution” might be more beneficial for a certain regime than for others. Subsequently, a prime hypothesis which forms the point of departure for the following configurations reads: In case of a conflict among international regimes, the regime(s) supported by the more powerful coalition of countries will prevail.

In order to flesh out this assumption, I will now turn to two major structural conditions for its validity: problem structure and decision structure, i.e. the distribution of votes in the decision-making bodies. Like the independent variable, both structural conditions can be adopted from the literature about the formation and effectiveness of single regimes.

As Underdal (2002: 15ff.) points out, the structure of the problem constitutes an important condition for the influence of a powerful coalition in a regime. For a “benign problem”, i.e. a problem characterized by similar or slightly differing preferences of countries, it is relatively easy for the powerful group to control these preferences and to

generate support for a regime. But in case of a severe asymmetry of preferences (“malign problem”), governments of less powerful countries will think twice: “concentration of power in the hands of *pushers* might generate fear among *laggards* and possibly also other prospective parties that *their* interests will not be accommodated within the regime” (ibid.: 31).

According to Rittberger and Zürn (1990), the degree of problem malignancy (i.e. of asymmetry of preferences) depends on the object of contention. For instance, governments might differ about core values and goals, in which case they might be hardly willing to compromise in spite of the incentives they might get from more powerful countries. Chances for building or maintaining a regime which would contradict the core values of some members are hence very low. On the other hand, prospects for regime formation and maintenance are better, if governments agree on values and goals, but simply have different views on the means to achieve these common goals. Apart from values and means, Rittberger and Zürn distinguish two further types of conflict objects. These are absolutely assessed goods (where only one’s own shares and gains in these goods matter; in short: how much do I get?) and relatively assessed goods (where relative shares and gains matter: how much more than the others do I get?). Altogether, prospects for regime formation are best for conflicts about absolutely assessed goods, then decreasing through conflicts about means and relatively assessed goods to conflicts about values (ibid.: 31f.).

Translating these insights from single regime research for the study of regime conflicts, one could speak of benign and malign conflicts. A regime conflict brings together the problem structures underlying the separate regimes, thereby creating an overall problem structure on the contested issue. For instance, one could ask: do regimes collide with regard to certain core values or goals? In such a case, it is highly difficult for delegates of a powerful group of countries to achieve the prevalence of *their* regime, e.g. in the CBD-TRIPS conflict as will be illustrated further below in this section.

Or do regimes only clash in operational terms, i.e. about the means (fiscal instruments, binding targets, etc.) they prescribe in order to attain their objectives (Young 2002: 125ff; Rosendal 2001: 96ff.)? An example for such a merely operational conflict is the climate-ozone case. There, the two respective regimes agree on the general value (protection of the atmosphere), but they differ with regard to the phase-out of certain dangerous greenhouse gases (GHGs) (Rosendal 2001: 99).

Apart from the problem structure, a second condition for the influence of the powerful coalition is the decision structure, i.e. the distribution of votes in the regimes’ decision-making bodies (Underdal 2002: 31). If the size of their coalition in a one country-one vote procedure is too small, delegates of powerful countries might not be able to generate more inclusive and stringent *output* in favour of *their* regime. By the same token, this condition can affect the process of conflict management within or between the affected regimes. If representatives of powerful countries cannot mobilize a majority for their preferences during the management process, they may be tempted to influence the regime conflict through other channels, namely outside of the affected regimes, in arenas where they can better exert their power.

The effects of these two conditions (problem structure and decision structure) have been evident in the case of the CBD-TRIPS conflict. Within both regimes, the powerful coalition of developed countries has not managed to bring about clear deci-

sions or rules which confirm the TRIPS approach to plant genetic resources. Preferences of the two camps (developed and developing countries) have been diametrically opposed: governments (and the major domestic industries and interest groups they are representing) either conceive of the contested issues as values (national sovereignty over genetic resources vs. private intellectual property rights) or at least as relatively assessed goods (when discussing an equitable sharing of benefits). What is more, developed countries hold a clear minority of votes in both regimes. This constellation has induced the aforementioned arms race. At the end of the day, the EU and the United States started to secure support for TRIPS through bilateral side-agreements with developing countries (Rosendal 2006).

In light of these qualifications, a modified and configurational hypothesis on the consequences of regime conflicts reads:

In case of a conflict among international regimes, the regime(s) supported by the more powerful coalition of countries will prevail.

These countries will be successful in influencing the output generation on the contested issues,

- *if the contested issues are absolutely assessed goods or means rather than relatively assessed goods or values / goals;*
- *if the decision structure of the affected regimes does not disadvantage the powerful coalition.*

Otherwise, the more powerful coalition will try to support the approach of its preferred regime to the contested issue through third institutions and agreements.

An in-depth examination of the causal mechanisms of power-based theories can significantly corroborate the hypothesis. Neo-realists assume that countries try to maximize their interests through extended influence and relative gains, while their interactions with other countries are characterized by a mutual lack of confidence and fear of cheating (Brooks 1997; Grieco 1988). Guided by these assumptions, one can explore whether the dominant coalition of states has indeed used its power to maximize its interests in the affected regimes – and whether lack of confidence has made them seek solutions in alternative arenas – thereby leading to the observed consequences on the *output* level.

While examining the relevance of these and other causal mechanisms, a focus on the intermediate process of conflict management can be particularly insightful: Have members of the more powerful coalition of countries successfully initiated or supported a certain type of conflict management? And to which extent have these attempts been in favour of the regime(s) this powerful coalition is supposedly backing up? For instance, in terms of legal conflict management, delegates of such countries might have (repeatedly) pushed for a treaty change, e.g. a priority clause favouring one or more regimes. Moreover, governments of one or more of these countries might appeal to a dispute settlement body (e.g. the International Court of Justice), arguing in favour or against the jurisdiction of a certain regime over a contested issue. Likewise, one could analyze whether delegates of the more powerful country coalition agitated for stronger inter-regime coordination or cooperation, e.g. by calling directly upon secretariats to take respective action, or by shaping a COP decision.

The analysis could also try to unravel whether members of this country coalition have successfully prevented or hampered certain conflict management approaches favoured by a competing group of countries. For instance, the continuous opposition by a US-led coalition has stalled an initiative by representatives from the EU, Switzerland and other countries for an “environmental window” in relevant WTO agreements (i.e. a priority clause for certain environmental regimes) (Sampson 2001: 74; Zelli 2006: 204ff.). Countries might also defy a stronger level of ambition for a regime’s regulation of contested issues. They could for example oppose the further development of trade measures under an environmental regime, thereby contributing to a chilling effect.

Finally, for a comprehensive confirmation of the hypothesis, an examination of the role of rival explanations for the observed regime prevalence is vital. Apart from the knowledge structure which I will discuss in the adjacent section, I will list some of these potential third factors in section 5.3.

5.2 *Knowledge Structure*

Constructivists have suggested an alternative organizing principle in international relations: they argue that actors, actions and institutions are embedded in a profound normative structure of international society – rather than in an international state of anarchy. The formation of regimes indicates that their underlying core norms have met the consent of a critical mass of key governments (Conca 2006: 26; Finemore and Sikkink 1998: 897). However, applying this theoretical approach proves rather difficult. The appropriate indication of the independent variable requires a profound insight into the fundamental beliefs, values and expectations which gear actors’ behaviour. Moreover, the whole constructivist ontology and concept of causation are different from rationalist, i.e. uni-directional cause-effect approaches (Kratochwil and Ruggie 1986: 767).

In light of these challenges, “weak cognitivism” might offer a welcome refuge (Hasenclever et al. 1997: 139ff.). This camp of knowledge-based regime theories does not problematize the overall normative environment of regimes, but instead focuses on the knowledge structure, i.e. the cognitive factors which shape actors’ preferences and their understandings of available choices. It is even compatible with a rationalist ontology, by assuming that actors will pursue and maximize their (knowledge-based) interests and preferences. According to weak cognitivism, the independent variable can be framed as the consensual basis of knowledge. The more negotiators share knowledge on the nature of a problem and on suitable solutions, and the stronger this common knowledge becomes (due to better evidence and reasoning), the higher are chances for agreement and cooperation, e.g. for the formation and maintenance of a regime (Haas 1992: 29).

A focus on the contested issues can help tailor this theory to the subject of regime conflicts. In a regime conflict, the colliding regimes obviously have different approaches to these issues, i.e. they include different understandings of them (e.g. as a harmful substance or as a tradable commodity) or they suggest different solutions for them. Following weak cognitivism, one can suppose that these different approaches are rooted in different bases of knowledge. A prime hypothesis could read: In case of a conflict among international regimes, the regime(s) whose approach to the contested issue is backed up by the stronger and more wide-spread basis of knowledge will prevail.

The relevance of the bases of knowledge might depend on several conditions two of which I will discuss here: the problem structure and the influence of knowledge brokers. The concept of problem structure has been introduced in the previous section in terms of the malignancy of the regime conflict. With regard to its role for the second independent variable, I assume that the relevance of the knowledge bases decreases the more malign a conflict is. The more governments' preferences differ on the contested issue, the less susceptible they might be for new knowledge which supports positions other than their own. This assumption rests upon research on institutional interplay. As Stokke (2001a: 22f.) observes, cognitive interaction across regimes is more likely in synergetic relations. Yet the more controversial a setting becomes, the harder it is to facilitate prevalence, let alone the successful diffusion, of certain regime features or problem-solving policies.

A second condition for the relevance of a basis of knowledge in a regime conflict is the entrepreneurial leadership provided by knowledge brokers. The list of potential knowledge brokers is quite extensive; it comprises members of regime secretariats, working groups and subsidiary bodies, but also private actors, transnational organizations and informal networks (Underdal 2002: 35f.). The latter include epistemic communities, i.e. informal networks of actors, who have been playing a prominent role in cognitivist regime literature. According to Haas (1992), the influence of epistemic communities depends on several conditions: the degree of uncertainty among policy-makers on core aspects of the subject matter, the degree of consensus among scientists on these aspects, and the degree of institutionalization of scientific advice, i.e. the institutional openness for this advice. One of the best examples for such institutional openness is the Intergovernmental Panel on Climate Change (IPCC) which – via functioning communication structures and its four assessment reports – has induced social learning processes among policymakers, thereby supporting and shaping the formation and evolution of the global climate regime (Siebenhüner 2006). For a strong entrepreneurial role of an epistemic community in a regime conflict, this institutional openness needs to be given across the involved regimes.

To sum up these conditions, a configurational hypothesis on the relevance of the basis of knowledge reads:

In case of a conflict among international regimes, the regime(s) whose approach to the contested issue is backed up by the stronger and more widespread basis of knowledge will prevail.

This stronger knowledge basis will have a high influence on the output generation on the contested issues,

- *if the contested issues are absolutely assessed goods or means rather than relatively assessed goods or values / goals;*
- *if the knowledge basis is shaped and supported by influential knowledge brokers such as epistemic communities.*

Epistemic communities will be able to shape and support the knowledge basis on the contested issues,

- *if they feature a high degree of consensus on the contested issues;*
- *if the involved regimes feature a high degree of institutional openness for their advice.*

An in-depth examination of this hypothesis can explore the role of causal mechanisms of cognitivist theories. These cannot be discussed in detail here; they include the knowledge-based behaviour of actors, social learning processes and the subsequent re-definition of policies (Underdal 2002: 34ff). In particular, the analysis can build on the concept of inter-institutional learning from the literature on institutional interplay (Stokke 2001a: 20ff.; Gehring and Oberthür 2006: 8).

With a view to the framework's main intermediate process, the analysis can examine the impact of the stronger knowledge basis on the process and the results of conflict management. Have knowledge brokers favoured or opposed a certain form of conflict management, and have they been directly involved in it? While doing so, have they supported one regime's approach over the contested issues? And have their respective recommendations been incorporated in the results of the management process? For instance, with regard to legal management approaches, one could examine whether epistemic communities or other knowledge brokers who advise governments or regime bodies have advocated a treaty amendment in favour of one regime. Epistemic communities can also inform the process of treaty interpretation, as an Ad Hoc Working Group of the Montreal Protocol has done in order to clarify compatibility with GATT rules. Or knowledge brokers could provide expertise or submit *amicus curiae* briefs to dispute settlement bodies (Neumann 2002: 619ff.).

A careful test of the above hypothesis should not only explore the degree of influence of knowledge brokers on conflict management, but also examine whether the most influential brokers are indeed representing the stronger knowledge base. A case of political conflict management, namely a coordination attempt between the ozone regime and the climate regime (Oberthür 2001: 368ff.), illustrates this need for caution. The contested issue between both regimes is the treatment of hydrofluorocarbons (HFCs) and perfluorocarbons (PFCs). These fluorinated gases are aggressive greenhouse gases which are not explicitly phased out under the ozone regime as they can serve as substitutes for ODS. Several environmental NGOs have called for a preferential consideration of non-fluorinated alternatives for these substances. Moreover, in 1999, a joint expert workshop was convened by the IPCC and the Montreal Protocol's Technology and Economic Assessment Panel (TEAP) which identified alternative technologies and options for reducing HFC and PFC emissions. In spite of these suggestions voiced by different knowledge brokers, parties of the Montreal Protocol at the time rather based their deliberations on a separate assessment presented by the TEAP. This assessment, as some observers suggested, "appeared to be somewhat biased in favour of HFCs" (Oberthür 2001: 369).

The influence of the separate 1999 TEAP assessment rather points to the importance of power structure than of knowledge structure in this case. In spite of favourable conditions (benign problem structure, degree of institutional openness), key parties did not rely on the potentially stronger knowledge base (which supported the climate regime's approach to reduce GHGs) but chose to follow the expert statement most favourable to their vested interests in the production of HFCs. At the time of writing, the ozone regime still lacks an unequivocal regulation on the production and emission of HFCs, despite another joint IPCC-TEAP special report from 2005 on the issue.

This case stresses the importance to attend to the effect of rival factors on the *output* of regimes on contested issues. Some of these factors will be sketched in the ensuing sub-section.

5.3 Rival Explanations

With a view to the variety of theories on international regimes, a number of other factors can possibly shape the *output* generation of regimes, including their *output* on the contested issues. It is beyond the scope of this article to present an exhaustive list of such further *output*-related factors, let alone to thoroughly derive them from respective theories. Yet some of them shall at least be sketched here in the form of prime hypotheses. This shall illustrate the scope of potential control factors which could be examined and, if possible, controlled for when analyzing regime conflicts.

Strands of neoliberal institutionalism, or interest-based regime theories as Hasenclever et al. (1997) term them, have come up with various *output*-related assumptions. One of them, the situation-structural approach, holds that the formation and design of a regime is a function of the collective action problem or strategic situation it tries to regulate.⁴ Proponents of this approach have also established secondary factors which can influence the *output* of a regime, e.g. the number of actors in the issue-area or the distribution of issue-specific resources (Hasenclever et al. 1997: 44ff.; Zürn 1992). Based on these tenets, one could assume that a regime prevails in a conflict, if it is regulating the more favourable strategic situation and if it scores better on these secondary factors.

With a view to further constructivist factors apart from knowledge structure, Müller (1994) and Risse (2000) have harnessed the theory of communicative action for international relations research. They argue that agreements might be significantly shaped by the strength and acceptance of arguments, wherever parties are open to persuasion and share a high level of confidence in the authenticity of each other's statements. One could therefore assume that under such conditions a regime based on the better argument might have a higher chance to prevail in a regime conflict.

A different strand of literature has attended to the impact of lead bureaucracies, i.e. secretariats, on the effectiveness of international organizations and regimes (Barnett and Finnemore 1999, 2004; Bauer 2006). This research agenda is located between the lines of classical regime theories: on the one hand, in accordance with the tenets of sociological institutionalism, it conceives of international organizations as independent actors who serve some social purpose or set of cultural values; on the other hand, secretariats might do so by following a rather rationalist logic of action, i.e. with the intention to maximize their interests by promoting their own autonomy and the effectiveness of the regime(s) under their auspices. Based on this literature, one could assume that the prevalence of a regime is also a function of certain features of its secretariat such as autonomy, coherence and goal-orientation (Bauer et al. 2007).

Finally, liberal international relations theories have scrutinized the emerging influence of business or civil society actors which might influence the *output* of regimes through various domestic and international channels (Putnam 1988; Wapner 1996). Following these theories, one might expect that the regime backed by more influential domestic and transnational actors will prevail.

⁴ To a certain extent interest-based assumptions have already been incorporated in the preceding sections, when establishing the constellation of preferences and problem structure as major conditions for the impact of power and knowledge structures.

6 Conclusions

In this paper, I have tried to follow the call for approaches towards “a more comprehensive, precise and dynamic understanding” of institutional interactions (Underdal 2006: 13). I have developed an analytical framework to study how conflicts among international regimes alter the effectiveness of these regimes – more precisely: which regimes prevail in such conflicts and why this is the case? Several comparative and interactive elements have been included in this framework:

- two independent variables adopted from regime theories: the power structure and the knowledge structure in which the competing regimes are embedded;
- the dependent variable: regime prevalence which has been framed as the stronger *output* effectiveness of a regime regarding the contested issues; this prevalence is not only indicated by the *output* which the colliding regimes themselves produce, but also by the *output* from the wider institutional complex, i.e. third international institutions;
- the intervening process of conflict management through which the independent variables can cause the prevalence of one regime;
- cross-references and causal links between the different variables – in order to sustain the coherence of the supposed framework, instead of presenting a mere “toolbox” of loosely connected factors.

Figure 2 summarizes the supposed causal relations among the three types of variables:

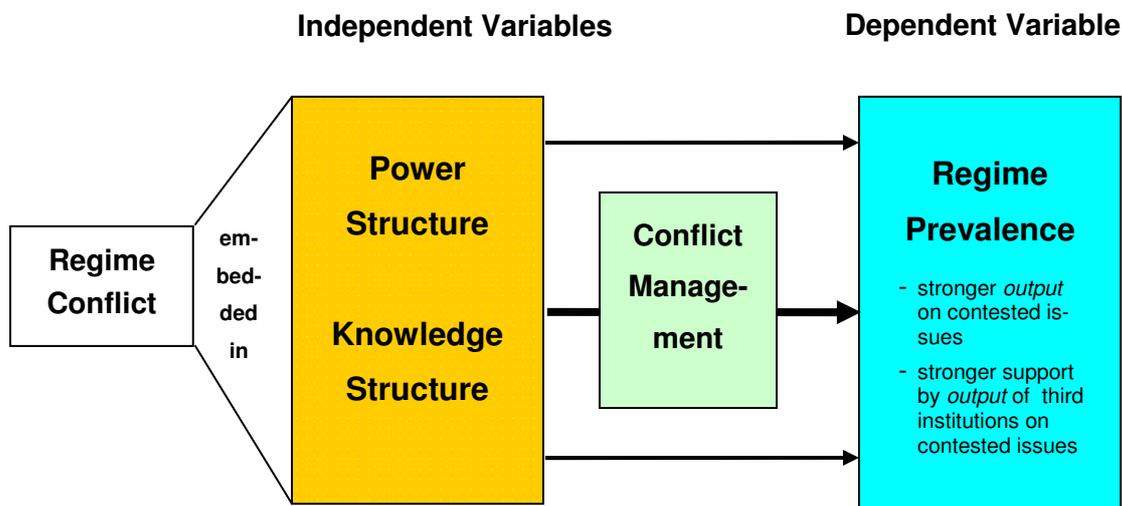


Figure 2: Overview of Analytical Framework

The paper has illustrated that international regime conflicts confront scholars with a highly complex research object which holds in store serious challenges for any systematic comparative analysis. Therefore, a timely farewell was bid to an all-inclusive model. Several simplifications and restrictions were built in which should secure the applicability of the framework:

- The dependent variable has been confined to the comparative change in the *output* effectiveness of the involved regimes. This has narrowed the framework's validity scope, blanking out potential impacts on the compliance rates or problem-solving records of the affected regimes. This limited validity scope also entails a bias towards independent variables pertinent to decision- and rule-making, while leaving out explanatory factors which are rather geared to other levels of effectiveness, e.g. the legitimacy or compliance pull of regime rules (Franck 1990; Stokke 2001a: 16ff.).
- As figure 2 illustrates, the framework has been rooted in a cause-effect-epistemology. This makes it particularly difficult to include constructivist determinants which assume a mutual constitution of agents and structures.
- The framework has been designed to explain a particular consequence of a regime conflict, namely the prevalence of one regime. However, not every conflict allows for a clear distinction between prevailing and deferring regimes – for instance, negotiation impasses can make all sides lose equally.
- Finally, the above figure only presents a static picture. Like any interaction, a conflict is a moving target whose features can change over time, e.g. by involving additional contested issues and further regimes. To the extent possible, the analysis should keep track of such conflict dynamics, since they might alter the status of other variables in the framework. Ultimately, unless a conflict has ended (e.g. through successful management), any ascertainment of regime prevalence is tentative.

Bearing these qualifications and caveats in mind, the suggested framework certainly does not provide a silver bullet to analyze the full range and depth of interaction effects. This notwithstanding, it might offer a useful step towards such an account for complexity and embeddedness: it is placed on a “middle ground” which opens the door for fundamental determinants while keeping research manageable.

The limited validity scope of the framework insinuates that there is still much theoretical ground to be covered by further research. This research should not only relate to the explanation of regime prevalence, but also to other aspects of regime conflicts, e.g. causes for their emergence, or conditions for successful conflict management. The challenges should not deter, but rather attract scholars, since the theoretical and empirical rewards are equally tempting. Insights from conflict analyses can help identify strategies to strengthen environmental regimes, or to enhance synergies among free trade and global environmental protection. The further consideration of core determinants from social theories, as suggested in this paper, can be an important prerequisite for developing such successful strategies.

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