
Institutional Interaction in Global Environmental Governance

Synergy and Conflict among International and EU Policies

edited by Sebastian Oberthür and Thomas Gehring
with a Foreword by Oran R. Young

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Series Foreword

A new recognition of profound interconnections between social and natural systems is challenging conventional constructs and the policy predispositions informed by them. Our current intellectual challenge is to develop the analytical and theoretical underpinnings of an understanding of the relationship between the social and the natural systems. Our policy challenge is to identify and implement effective decision-making approaches to managing the global environment.

The series *Global Environmental Accord: Strategies for Sustainability and Institutional Innovation* adopts an integrated perspective on national, international, cross-border, and cross-jurisdictional problems, priorities, and purposes. It examines the sources and the consequences of social transactions as these relate to environmental conditions and concerns. Our goal is to make a contribution to both intellectual and policy endeavors.

Nazli Choucri

Foreword

First published in 1999, the Science Plan of the long-term research project on the Institutional Dimensions of Global Environmental Change (IDGEC) states that “the effectiveness of specific institutions often depends not only on their own features but also on their interactions with other institutions” (Young et al. 1999, 49). This observation, which gave rise to the development of an analytic theme known to the IDGEC community as the problem of interplay, struck a responsive chord and launched what has become an important stream of research on interactions between and among distinct institutions that influence the course of human-environment relations. We can say with some certainty at this stage that the results of this stream of research will make up a significant component of IDGEC’s scientific legacy.

No one has made a larger contribution to this line of inquiry than Thomas Gehring and Sebastian Oberthür, two German political scientists who have addressed the problem of interplay in a number of individual papers and who have now joined forces in producing this major contribution to the literature on institutional interplay. Funded by the European Commission and endorsed by IDGEC, *Institutional Interaction in Global Environmental Governance* brings together a sizable collection of case studies of interplay occurring both at the international level and at the European Union level and subjects the findings from the cases to rigorous comparative analysis. The result is a book that sets the standard for all those seeking to produce new insights pertaining to the dynamics of institutional interactions.

Three things make this volume especially noteworthy. First, Oberthür and Gehring adopt what amounts to a reductionist approach to the study of institutional interplay. Thus, they disaggregate interplay to focus on a single source institution, a single target institution, and a unidirectional causal pathway as their basic unit of analysis. They argue that the route to understanding institutional interactions lies in this reductionist approach. Once we understand interplay in its simplest form,

we can proceed to build up an understanding of more complex interactions featuring two-way flows and more than two institutions. Others have argued that we need to focus directly on the more complex forms of interaction on the assumption that some of the things we want to understand arise as emergent properties of institutional complexes. We do not know at this stage what approach to institutional interplay will ultimately prove most fruitful. But Oberthür and Gehring have done us all a distinct service by flagging this issue and laying out their own approach in a clear and rigorous manner.

A second distinctive feature of the volume is its sustained examination of causal mechanisms. What is at stake here is an effort to identify the pathways and mechanisms through which interactions between distinct institutions can affect the course of human-environment relations. Using the familiar distinction among outputs, outcomes, and impacts, Oberthür and Gehring began by differentiating among several causal mechanisms in constructing the analytic framework for this project. They devoted particular attention to cognitive interaction, which highlights interinstitutional learning; interaction through commitment, which features the effects of commitments on the part of members of the source institution on the preferences of those associated with the target institution; and behavioral interaction, which centers on ways that behavior taking place within the source institution affects the operation of the target institution. Of course, exploring the nature of these causal mechanisms is a priority concern. But equally important in the context of institutional analysis is the fact that they spelled out these mechanisms in considerable detail in advance of the project's empirical phase. As a result, the mechanisms function as theoretically derived expectations to be tested or at least explored systematically through the case studies conducted by all the participants in the project.

Third, as Gehring and Oberthür point out, there is a need to think more carefully about the circumstances under which institutional interplay produces synergistic outcomes in contrast to disruptive or conflict-ridden outcomes. Without doubt, many of those who have become interested in institutional interplay have been concerned about the potential for interference associated with institutional interaction. The contributors to this volume do not deny that interference does occur or that it may sometimes be serious in terms of its consequences. But their studies provide evidence that synergistic interactions are common, perhaps more common than disruptive interactions. This is especially true when the relevant institutions operate within the same policy field. The results are certainly not all in with regard to the

incidence of synergistic and disruptive interactions. But the findings reported in this volume regarding the importance of synergy certainly constitute food for thought.

The study of institutional interplay remains an infant industry. The findings we have been able to generate so far are only first steps toward an understanding of this pervasive phenomenon; much work remains to be done. Nevertheless, we have already learned some important things about institutional interplay. Equally important, the research conducted so far has established this subject as a fruitful area for institutional analysis. No one deserves more of the credit for achieving these results than the leaders of the project whose findings are presented in this volume.

Oran R. Young

Chair, Scientific Steering Committee

Institutional Dimensions of Global Environmental Change

Reference

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This book is the result of a collaborative European research project that involved four institutes from three countries: Ecologic—Institute for International and European Environmental Policy in Berlin, Germany; the Foundation for International Environmental Law and Development (FIELD) in London, UK; the Fridtjof Nansen Institute in Lysaker, Norway; and the Institute for European Environmental Policy (IEEP) in London, UK. The project, titled “Institutional Interaction—How to Prevent Conflicts and Enhance Synergies between International and EU Environmental Institutions,” was conducted between the end of 2000 and the beginning of 2003. More information about the project and its results can be found at <http://www.ecologic.de/projekte/interaction>.

We are particularly grateful to the European Community for providing funding for our project under the Specific Research and Technological Development Programme “Energy, Environment and Sustainable Development” of the Fifth Framework Programme for Research (Contract no. EVK2-CT2000-00079). We are also thankful for the endorsement of the project by the Institutional Dimensions of Global Environmental Change (IDGEC). This volume is intended to make a contribution to this long-term international research project, which operates under the auspices of the International Human Dimensions Programme on Global Environmental Change (IHDP). The editors would like to extend special thanks to Ecologic—Institute for International and European Environmental Policy and the Otto-Friedrich University Bamberg for enabling us to continue working on the book after the official end of the research project cofunded by the European Community.

We also owe special thanks to the members of the project team for patiently responding to recurring requests for revisions. Furthermore, we are indebted to a number of individuals who have helped bring about this book in a number of

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Finally, we would like to express our appreciation to The MIT Press for their excellent cooperation in producing this volume. Needless to say, responsibility for the contents remains solely with the authors.

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1

Introduction

Thomas Gehring and Sebastian Oberthür

International and EU environmental governance is affected by the interaction of numerous sectoral legal instruments. *International environmental regimes and EU environmental instruments do not exist in isolation from each other or from institutions in other policy fields. While they are usually targeted at specific issue areas, their effects are not limited to their own domains. Frequently, they exert influence on the development and effectiveness of other policy instruments, and are themselves influenced by other such instruments, both within the same policy field and beyond (“institutional interaction”). This influence may create synergy by supporting the policy of the affected institution or it may undermine and disrupt its effectiveness. Hence, interinstitutional influence may be employed to enhance international and EU environmental governance, but it also aggravates the difficulties of governance.*

This book seeks to understand how institutional interaction can occur and what its governance effects are. It is based on a coherent analytic approach to the relatively novel subject of institutional interaction and explores interaction phenomena in international and EU environmental governance from a comparative perspective. We focus on the investigation of the causal mechanisms that drive individual cases of interaction in which *one international institution or EU legal instrument affects another’s effectiveness or institutional development. Our empirical investigation covers a broad range of interaction phenomena in EU and international environmental governance and reaches beyond the ad hoc study of individual cases or limited “nests” of interacting institutions prevailing in the field to date.*

The Relevance of Institutional Interaction

The heavily fragmented institutional structure of international environmental governance has contributed to an increasing political salience of issues of interinstitutional

coordination and cooperation. Over the last decades, states have entered into a growing number of international environmental agreements, and they have tended to establish them separately from each other. To date, more than two hundred agreements have been concluded. While on average one treaty was adopted per year until the 1970s, this number has grown to five since the 1980s (Beisheim et al. 1999). Whenever a new international treaty is adopted, it enters an institutional setting that is already densely populated. The growing number of separately established international environmental institutions suggests the rapidly increasing relevance of institutional interaction. Accordingly, conferences of parties of multilateral environmental agreements increasingly address issues of interinstitutional coordination and cooperation. Problems of institutional interaction support suggestions to “cluster” multilateral environmental agreements—that is, to integrate groups of such agreements or certain of their parts (Oberthür 2002), as discussed within the framework of the UN Environment Program (UNEP). Calls for the creation of a “world environment organization” have partly been justified with reference to an increasing demand for interinstitutional coordination within the field of the environment and beyond, and to a growing potential for duplication of work (German Advisory Council on Global Change 2001; Biermann and Bauer 2005).

Likewise, EU environmental policy consists of a patchwork (Héritier 1996) of numerous instruments with diverse regulatory approaches, which has reinforced efforts at improved policy integration. To date, the EU has produced more than two hundred environmental legal instruments, primarily directives and regulations (Krämer 1999; Haigh 2003). Some of them set quality standards, while leaving the mode of implementation to the member states. Others envisage emission control limits and detailed technical regulations. Yet others prescribe particular procedures for the assessment of environmental risks and impacts, or establish crosscutting mechanisms such as environmental liability. In any given problem area, environmental governance rests on several of these instruments and is also influenced by instruments from other policy fields. Enhancing synergies and coherence between different policy instruments has therefore been a central element in the debate launched by the European Commission’s White Paper on European Governance (European Commission 2001) as well as in discussions on an EU Sustainable Development Strategy started in 2001. Since 2003, the European Commission is required to examine all significant economic, social, and environmental impacts of a proposed measure, both within and beyond the EU’s borders (European Commission 2002; in general, Haigh 2003; Wilkinson 1998; Lenschow 2002).

We find both synergistic and disruptive cases of institutional interaction in international and EU environmental governance. The global regime on the trans-boundary movement of hazardous wastes has been strengthened as a result of the establishment of a number of regional regimes addressing the same environmental problem (Meinke 2002). And the EU Nitrates Directive has contributed to the implementation of the North Sea Declarations. This “surprisingly effective” relationship has allowed the EU to act as an international leader in this area (Vogler 1999, 24). In contrast, incentives for establishing fast-growing monocultural tree plantations provided by the 1997 Kyoto Protocol to the UN Framework Convention on Climate Change in order to maximize carbon sequestration from the atmosphere are potentially at odds with the 1992 Convention on Biological Diversity (CBD) that aims at preserving the biological diversity of forest ecosystems (Pontecorvo 1999).

Institutional interaction also occurs across the boundaries of policy fields. Perhaps the most prominent example in international environmental governance concerns the relationship between the World Trade Organization (WTO) that promotes free international trade and several multilateral environmental agreements that establish new trade restrictions, such as the 1973 Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and the 1987 Montreal Protocol on Substances That Deplete the Ozone Layer. The WTO has constrained the options available to environmental policymakers in these cases and may have limited the effectiveness of the environmental agreements concerned (chapter 8). Also, the EU Structural Funds that provide financial support to economic development projects have undermined the effectiveness of EU nature conservation policies enshrined, in particular, in the EU Habitats Directive. In this case, Structural Fund rules have been revised so as to provide incentives for the implementation of the Habitats Directive (chapter 10).

Political actors increasingly recognize the constraints, and employ the opportunities, arising from the growing institutional density and interdependence at both the international and EU levels. On the one hand, institutional interaction provides opportunities for forum shopping and purposive policy development (Raustiala and Victor 2004). It may also be employed to overcome obstacles that hinder policy development within another institution. The International North Sea Conferences were exclusively established to enhance the momentum of pollution-abatement activities in an area already governed by an existing international institution with very similar membership (chapter 5). On the other hand, environmental policymakers are

utterly aware of the constraints imposed by WTO rules and have adapted relevant multilateral environmental agreements to make them WTO-compatible. The tensions between the world trade system and various multilateral environmental agreements are addressed in the Doha Round of trade negotiations launched in 2001 (chapter 8).

Issues of institutional interaction have increasingly attracted the attention of the scientific community. Whereas the analysis of international institutions has for a long time started from the fiction that institutions exist in isolation from and do not significantly interfere with the performance of each other (Keohane 1984; Rittberger 1993), research on the broader consequences of international institutions has intensified more recently (Gehring 2004). As part of this shift in perspective, initial steps have been made to examine the side effects of international institutions beyond their own issue areas. Contributions have particularly built on the analytic framework established to assess the effectiveness of international institutions (Young et al. 1999; Young 2002; Underdal and Young 2004; Stokke 2001a). Legal scholars and political scientists have identified a risk of “treaty congestion” (Brown Weiss 1993, 679) and a growing “regime density” (Young 1996). Empirically, much of the increasing literature on the phenomena of institutional interaction has focused on instances of interinstitutional conflict that had raised political interest, while cases resulting in synergy have received far less attention (e.g., Rosendal 2000, 2001; Andersen 2002; Chambers 1998, 2001; Oberthür 2001; Stokke 2001b). Institutional interaction has also been identified as a key issue for future research—for example, by the Institutional Dimensions of Global Environmental Change (IDGEC) project of the International Human Dimensions Programme on Global Environmental Change (IHDP) (Young et al. 1999) and by the Concerted Action on the Effectiveness of International Environmental Agreements sponsored by the EU (Breitmeier 2000).

A diversity of terms is employed in the literature to denote phenomena of interinstitutional influence, including *interplay*, *linkage*, *interlinkage*, *overlap*, and *interconnection* (e.g., Herr and Chia 1995; King 1997; Young 1996, 2002; Young et al. 1999; Chambers 1998; Stokke 2001b). The term *interaction* appears to us particularly suitable because it emphasizes that interinstitutional influence is rooted in decisions taken by the members of one of the institutions involved. It is thus action that triggers interaction.

The present volume attempts to generate a more comprehensive picture of the largely uncharted territory of institutional interaction in international and EU envi-

ronmental governance by presenting the results of a large comparative exploration of relevant interaction phenomena. It intends to advance our knowledge about institutional interaction by focusing on the causal influence of governance institutions on each others' normative development and performance. Empirically, it analyzes a wide range of interaction incidents of varying political salience, different outcomes, and distinct causal pathways in different areas of environmental governance beyond the nation-state.

Conceptual Foundations

The development of the conceptual foundations for the investigation of institutional interaction is at an early stage. Existing approaches mainly constitute typologies and attempts to categorize phenomena of institutional interaction, which differ significantly in form and substance (see Stokke 2001a, 1–8). They do not provide a sufficient basis for the systematic analysis of the causal mechanisms and driving forces of institutional interaction. The concept of institutional interaction on which the present volume rests, relies on the following three components. Accompanied by an overview of existing approaches, it is fully elaborated in chapter 2.

The Notion of International and EU Institutions The inquiry of the present volume focuses exclusively on negotiated sectoral legal systems because we are generally interested in capturing institutions that are established for the purpose of governance. Only negotiated institutions may be used instrumentally to bring about collectively desired change in the international system. Scholars exploring the effectiveness of international institutions have focused their attention on such negotiated institutions (e.g., Haas, Keohane, and Levy 1993; Young 1999; Miles et al. 2002). International institutions can be defined as “persistent and connected sets of rules and practices that prescribe behavioral roles, constrain activity, and shape expectations” (Keohane 1989, 3). Usually they include a separate communication and decision-making process from which their norms and rules emerge (Gehring 1994). Both international regimes based on international treaties and international organizations qualify as specific international institutions.

We identify EU legal instruments, in particular directives and regulations, as the suitable functional equivalent of specific international institutions at the EU level. Like international institutions, they constitute distinct systems of norms negotiated to balance the interests of the member states and other actors involved. They also focus on limited functionally defined issue areas and possess separate

communication processes. EU member states and the European Commission decide on their establishment and development separately from other instruments. Frequently, so-called comitology committees related to a particular instrument prepare amendments of that instrument or take implementing decisions. This is not to deny that the EU has a particularly sophisticated overarching institutional framework for lawmaking and implementation, which includes the EU and EC Treaties as well as the European Court of Justice, the European Commission, and the European Parliament. Whereas this framework has to be taken into account, EU legal instruments are sufficiently similar to international institutions so as to serve as functional equivalents in our study of institutional interaction.

Specific international institutions (international regimes and specific international organizations) and EU legal instruments (directives, regulations, decisions) constitute the prime governance instruments in international and European affairs. The choice of these institutions as the principal units of institutional interaction relates the inquiry of this volume to the extensive literature on international and European governance. It also provides a suitable foundation for investigating the ramifications of institutional interaction for the system of international and EU governance.

The Meaning of Institutional Interaction Generally, institutional interaction will exist, if one institution affects the institutional development or the effectiveness (performance) of another institution. In essence, *institutional interaction* refers to a causal relationship between two institutions, with one of these institutions (“the source institution”) exerting influence on the other (“the target institution”). In the absence of causal influence, we would be faced with mere coexistence of two or more institutions. In studies on the emergence and development of institutions, the institution constitutes the dependent variable to be explained. In studies on institutional effectiveness, it constitutes the independent variable that explains observed effects. In the case of institutional interaction, both the independent and the dependent variables are institutions.

Our concept of institutional interaction does not imply that influence runs back and forth between the institutions involved. On the contrary, causal influence implies that influence runs unidirectionally from the source to the target. Accordingly, a causal relationship between the institutions involved will be established, if we identify (1) the source institution and, more specifically, the relevant rules/decision(s) from which influence originates; (2) the target institution and, more specifically, the relevant parts of the institution itself or the issue area governed by it

that are subject to the influence of the source institution; and (3) a unidirectional causal pathway connecting the two institutions.

This concept of institutional interaction requires that complex interaction situations are analytically disaggregated into a suitable number of individual cases so that clear causal relationships between pairs of institutions can be identified. In real-world situations, a clear-cut causal relationship between two institutions may be difficult to identify—be it because interaction involves more than two institutions, or because influence runs back and forth between two institutions, or because two institutions influence each other in various ways. Complex situations are difficult to analyze rigorously unless we disaggregate them into a suitable number of cases comprising a single source institution, a single target institution, and a single, clearly identifiable causal pathway. Emergent properties of more complex situations are then expected to result from particular forms of the coexistence of, and interplay between, several cases of interaction. They may be examined by carefully recombining the individual cases.

This concept expands the study of the effectiveness of environmental institutions to the investigation of institutional interaction. We share with the established research on the effectiveness of international institutions the interest in cases in which the “output” of an institution (i.e., its norms and decisions) results at least potentially in behavioral changes of relevant actors (“outcome”)—changes that have actual or potential effects on the environment or another target of governance (“impact”; on these categories of effectiveness, see Underdal 2004). In the present volume, we do not examine cases of institutional interaction with little or no implications for the performance of the institutions involved, such as attempts to increase the bureaucratic efficiency of institutions, for example through streamlining or coordinating reporting requirements.

Causal Mechanisms of Institutional Interaction Causal mechanisms help us understand how, and under which conditions, governance institutions are capable of exerting influence on each other. They elucidate the driving forces of institutional interaction beyond a mere description of coevolution processes or of the density of institutional settings in particular areas such as marine pollution or nature conservation. Causal mechanisms not only structure the multifaceted realm of institutional interaction and explain variations in cases, but also demonstrate which actors are indispensable for the emergence of interinstitutional influence. The empirical analysis of the present study relies on three of four causal mechanisms that were derived

from theories of international institutions, cooperation theory, and negotiation theory and that we believe are exhaustive. The way the target institution is affected by a decision of the source is particularly important for the identification of the causal mechanisms, because no interaction occurs without a noticeable effect on the target institution or the issue area governed by it. Causal mechanisms of interaction identified on this basis differ in particular with respect to how source and target are linked.

In two of the four causal mechanisms, interaction affects the decision-making process of the target institution. First, a case of interaction may be based on a transfer of knowledge (Cognitive Interaction). This causal mechanism follows from the complexity of the world and the fact that actors have limited information and information processing capacities at their disposal. Cognitive Interaction may occur between any two institutions, since “learning” can take place without any overlap in issues or in the memberships of the institutions involved. Moreover, it can be triggered by states and nonstate actors, such as nongovernmental organizations and secretariats of international institutions. Second, a case of interaction may also be based on commitments agreed on within the source institution that affect the constellation of interests and the decision-making process within the target institution by influencing the payoffs of available options (Interaction through Commitment). In this case, conditions are much more restrictive. The issues dealt with by the institutions involved must overlap somewhat, because otherwise commitments under one institution could not affect options considered in the other institution. Memberships of the institutions must also overlap somewhat, because otherwise no participant in the policymaking process within the target institution would be subject to the commitments of the source institution. It follows that member states are the most important actors for Interaction through Commitment.

In the other two causal mechanisms, interaction affects the effectiveness of the target institution within its own domain. First, the source institution may induce behavioral changes of actors within its own issue area that are relevant for the effectiveness of the target institution within its issue area (Behavioral Interaction). Such interaction occurs outside the decision-making processes of the two interacting institutions and usually involves nonstate actors such as companies and citizens that are active within the issue areas concerned. It affects the performance of the target institution directly without requiring a decision from the latter. Finally, a case of interaction may be based on effects on an institution’s ultimate target of governance (such as international trade or the ozone layer) induced by the source institution at the im-

pact level (Impact-Level Interaction). In this case, the effect on the target is a direct spillover of the effects of the source institution on its target of governance that may occur due to the “functional interdependence” (Young 2002, 23) of the issue areas concerned.

Apart from their value as a basis for systematic and meaningful research and accumulation of knowledge, the causal mechanisms of institutional interaction help distinguish between different conditions of governance existing in the realm of institutional interaction. They differ with respect to the actors who might initiate them and the purposes for which they might be employed, as well as the forums in which options to enhance synergy or mitigate conflict might primarily be pursued. A careful analysis of the underlying causal mechanism of a case of interaction will therefore also facilitate systematic thinking about effective policy options so as to enhance international and European governance.

The Design of the Empirical Investigation

Our empirical analysis of institutional interaction starts from eleven environmental or environmentally relevant international regimes and environmental EU directives. The analysis explores the cases of interaction in which these “core institutions” are involved and investigates how each core institution interacts with other international institutions and pieces of EU legislation. Three criteria guided the selection of the core institutions. First, we aimed at covering varying environmental media or policy areas at both the international and the EU level (i.e., atmosphere, protection of biodiversity, marine pollution/water policy, management of living resources). Second, we focused on institutions with a demonstrated political relevance for international or EU environmental governance. Third, we selected institutions that could, according to preliminary expert judgment, reasonably be expected to interact with other international and EU institutions in significant ways. We believe that our selection of core institutions covers a broad range of international and EU environmental governance.

Chapters 3–8 each start from an environmental or environmentally relevant international institution. The climate change regime based on the UN Framework Convention on Climate Change and its Kyoto Protocol serves as the core institution of institutional interaction explored by Sebastian Oberthür in chapter 3. In chapter 4, G. Kristin Rosendal takes the Convention on Biological Diversity as the point of departure for her investigation. Jon Birger Skjærseth analyzes in chapter 5 the institutional interactions in which the international regime for the protection of the

Northeast Atlantic has been involved. Olav Schram Stokke and Clare Coffey examine in chapter 6 the global fisheries regime composed, in particular, of the UN Fish Stocks Agreement and a number of FAO regulations. Chapter 7, authored by John Lanchbery, is devoted to the examination of institutional interactions involving the *Convention on International Trade in Endangered Species of Wild Fauna and Flora* (CITES). In chapter 8, Alice Palmer, Beatrice Chaytor, and Jacob Werksman explore the interactions between the World Trade Organization and a number of multilateral environmental agreements.

Environmental EU directives serve as core institutions of chapters 9–12. In chapter 9, Andrew Farmer covers the institutional interactions of the EU Water Framework Directive and the Directive on Integrated Pollution Prevention and Control (IPPC Directive) related to industrial plants. Chapter 10, authored by Clare Coffey, explores the manifold interactions in which the EU Habitats Directive on nature conservation is involved. Ingmar von Homeyer discusses in chapter 11 interactions with the EU Deliberate Release Directive on genetically modified organisms. Finally, in chapter 12, Jørgen Wettestad investigates institutional interactions of the EU Air Quality Framework Directive.

Reflecting the first step of the empirical analysis in our project, each chapter attempts to provide a comprehensive overview of the most significant cases of institutional interaction in which each of the core institutions has been involved. Authors searched for empirical cases of interaction irrespective of their political salience and were thus able to ascertain cases that may not have caught the attention of policymakers. This approach promises to elucidate the network of institutional interactions in which the core institutions are involved. Networks of interaction relate both to horizontal interaction between international institutions or between EU legal instruments (depending on the core institution) and vertical interaction between international institutions and EU legal instruments.

Of particular relevance for the identification of cases of institutional interaction is the problem of remote causation and long causal chains (Underdal 2004). In our project, we prioritized obvious cases of interaction with short causal chains over less obvious ones with longer causal chains. Thus, we focused on cases in which influence runs directly from the source institution to the target institution, not on constellations in which it passes through numerous intermediate steps. Moreover, we concentrated on identifying cases driven by three of the four general causal mechanisms mentioned above, namely, *Cognitive Interaction*, *Interaction through Commitment*, and *Behavioral Interaction*. The empirical analysis does not consider

Impact-Level Interaction because it is frequently based on complicated natural science links and requires investigation of long causal chains with many intervening variables.

In the second step, each chapter examines a smaller number of cases of interaction in more detail. The in-depth analysis especially focuses on elucidating the causal influence exerted by the source institution on the target institution, and on investigating the causal mechanism driving the case of interaction in question and examining its momentum and effects. Cases for in-depth analysis were selected so as to ensure that horizontal interaction at the international level, horizontal interaction between EU legal instruments, and vertical interaction between international institutions and EU instruments were roughly equally represented.

In the third step, we engage in a comparative analysis of institutional interaction. Case-study authors were asked to codify the cases according to a number of criteria presented in chapter 13. The resulting database covering all identified 163 cases of interaction is reflected in the appendix to this volume. It provides a comparatively broad picture of the diversity and variety of institutional interaction in international and EU environmental governance. The database enabled us to aggregate data on individual cases and to identify dominant patterns of institutional interaction. Inductively derived patterns provided the basis for elaborating Weberian ideal types of institutional interaction that follow distinct rationales. These ideal types further differentiate our general causal mechanisms and may provide a kit of standard forms of interaction (see also Gehring and Oberthür 2004). Chapter 13 provides a comparative evaluation of our codification data and elaborates ideal types of institutional interaction.

Empirical Findings and Conceptual Development

Our analysis of institutional interaction leads to a wealth of general and case-specific findings. In this section, we highlight findings relating to two complexes, namely, the empirical analysis of our sample of more than 150 cases of institutional interaction, and the development of Weberian ideal types of institutional interaction designed to fine-tune the general causal mechanisms. The general results are elaborated in more detail in chapter 13.

Empirical Findings The comparative examination of a larger set of cases of interaction enables us to derive aggregate insights about the patterns of institutional interaction and thus supports the generation of policy-relevant knowledge. Given

the methodology of case selection, we are confident that our results at least roughly reflect the overall situation in international and EU environmental governance, although figures may be expected to differ to some extent for other samples. The empirical conclusions constitute inductively generated hypotheses, which might be tested against other samples of cases. However, we caution that the sample is not statistically representative and therefore does not allow for the generalization of insights to other populations of cases. In particular, we do not claim that the empirical results hold for interaction phenomena beyond international and EU environmental governance.

All three general causal mechanisms on which the empirical inquiry was based were represented in our sample, but distribution varies considerably. Cognitive Interaction was comparatively rare, whereas Behavioral Interaction accounted for about half and Interaction through Commitment for about 40 percent of all cases. Cases of Cognitive Interaction may be underrepresented in our sample because “learning” may be a tacit process, which is not easy to detect. However, we see that institutional interaction is a multifaceted phenomenon that cannot be reduced to a single causal mechanism.

A clear majority of the cases of interaction identified by us created synergy, while only about one-quarter resulted in disruption. Whereas disruption was somewhat more frequent at the international level, synergy dominates at all levels, namely, in horizontal interaction between international institutions, in horizontal interaction between EU legal instruments, and in vertical interaction between international and EU instruments. This finding contrasts with conventional wisdom. Much of the existing literature has focused on the problems arising from institutional interaction. According to our sample, this focus does not provide a full picture of the interaction phenomenon. It may be a consequence of the fact that conflict attracts significantly higher political and scientific attention than harmonious or synergistic situations, because people react more strongly to the risk of losses (conflict) than to the promise of additional benefits. This finding further suggests that institutional interaction may not primarily be a bad thing that ought to be diminished as far as possible. The prevailing institutional fragmentation of international and EU environmental governance as well as substantive overlap do not predominantly result in conflict or undesirable “duplication of work.” They may provide a valuable asset for skillful policymaking to enhance environmental governance. Policies to minimize allegedly undesirably interaction could risk sacrificing this asset.

Disruption prevails in interaction across the boundaries of policy fields, while synergy dominates within the field of environmental policy. Interaction staying within environmental affairs has supported the effectiveness of governance in more than 80 percent of the relevant cases in our sample, whereas conflicts prevailed in interaction with institutions from other policy fields. Most cases of disruption in our sample related to interaction across policy fields, and a majority of cases of interaction across policy fields resulted in disruption. Once again, this pattern holds true for horizontal interaction between international institutions and between EU instruments as well as for vertical interaction. This finding might not come as a surprise because institutions belonging to different policy fields will frequently have considerably diverging objectives and may be supported by different constituencies.

Whereas more than a third of the unintentionally triggered cases of interaction in our sample resulted in disruption, intentionally triggered cases of disruption appear to be particularly rare. It may not be surprising that disruptive interaction is virtually absent from the environmental policy field; we may expect that it plays a more prominent role in more competitive policy fields such as security affairs. It is more noteworthy that disruptive interaction is occasionally employed intentionally even in environmental governance to bring about change within other institutions, in particular those belonging to other policy fields. It is also remarkable that roughly half of our synergistic cases were unintentionally triggered. Moreover, a majority of the disruptive cases have been responded to, whereas roughly 80 percent of the synergistic cases have not drawn a collective political response. This may be explained by the fact that conflicts leave some actors aggrieved who may then struggle for improvement, whereas synergy tends to be simply “consumed.” Overall, significant opportunities exist for enhancing international and EU environmental governance by an intensified political management and use of institutional interaction.

Weberian Ideal Types of Institutional Interaction Our sample of cases also provided a solid basis for the development of Weberian ideal types of institutional interaction, which subdivide and specify the general causal mechanisms and elaborate their distinctive features. Thus, we move beyond the three basic causal mechanisms and develop a more sophisticated framework for the analysis of individual cases of interaction so as to be able to better explain and understand the strikingly different properties of cases of interaction driven by the same causal mechanism. Ideal types are abstract and deductively generated models, which reflect mutually exclusive rationales inherent in different social-interaction phenomena, to which real-world

cases can be compared. We identified two ideal types of Cognitive Interaction and three types of Interaction through Commitment, while we were unable to identify ideal types of Behavioral Interaction.

Intentionality is the crucial distinction between the two types of Cognitive Interaction. While “learning” cannot be imposed, it may or may not be intentionally triggered by the source institution. If Cognitive Interaction is not intended, members of the target institution use an institutional arrangement or policy idea of the source institution as a policy model. For example, the compliance system under the Montreal Protocol for the protection of the ozone layer influenced the negotiations on the compliance system under the Kyoto Protocol on climate change because it provided a model of how to supervise implementation and deal with cases of possible noncompliance. If Cognitive Interaction is intentionally triggered, the source institution largely frames the learning process by requesting assistance from the target, ultimately in order to trigger a feedback case of Behavioral Interaction furthering its own effectiveness. For example, the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) requested assistance from specialized international institutions such as the World Customs Organization (WCO) and Interpol because it expected this assistance to facilitate the effective implementation of CITES obligations (chapter 7).

The three ideal types of Interaction through Commitment are characterized by a key difference in the objectives or memberships or means of governance of the institutions involved. Cases of Interaction through Commitment that are driven by differences in objectives create a demand for jurisdictional delimitation. Due to their underlying rationale, they will usually cause disruption and restrain the effectiveness of both institutions involved. Consider that international trade is regulated within the WTO with the purpose of liberalizing trade and thus removing obstacles to international trade. At the same time, the Cartagena Biosafety Protocol to the Convention on Biological Diversity (CBD) governs international trade in genetically modified organisms (GMOs) predominantly with the purpose of protecting the environment of the importing countries. In this situation of contentious interdependence, the governance challenge consists in arriving at a delimitation of jurisdictions. However, it might occasionally prove useful as a political strategy to deliberately raise (potential) jurisdictional conflict.

Interaction through Commitment may also take place between two institutions that differ exclusively with respect to their membership, while pursuing identical objectives and employing the same means. Under these circumstances, interested

actors may promote governance by establishing a smaller “pilot” institution in order to affect decision making in a larger institution addressing a similar range of issues. For example, the establishment of the Natura 2000 system of nature conservation sites under the EU Habitats Directive led to the creation of the similar Emerald network under the pan-European Bern Convention. In such cases, interaction relies on the fact that agreement reached within the smaller institution significantly changes the situation and interest constellation facing actors in the larger institution. If rules are applied regionally, the leading coalition within the broader institution will be strengthened and acceptance costs will decrease so that opposition against equivalent measures may wane—a mechanism that may be purposefully exploited by political actors.

Skillful reinforcement of international or European governance through institutional interaction will also be promising, if interested actors manage to activate additional means to realize their desired objectives. Frequently, international and EU institutions do not control the full spectrum of possible governance instruments but differ in the means available to them. Interaction will regularly raise the effectiveness of both institutions involved if the diffusion of an obligation from one institution to another one with identical objectives and memberships activates an additional means of implementation. For example, the ministerial North Sea Conferences were established in the 1980s in order to reinforce the existing OSPAR Convention for the protection of the Northeast Atlantic. They raised the political salience of the issues at stake, but resulted in “soft-law” agreements. Transformation into binding international law under the OSPAR Convention and into EU supranational law subsequently increased the originally low degree of obligation and mobilized additional enforcement mechanisms that enhanced the effectiveness of all institutions involved (chapter 5).

Obviously, this volume does not resolve all issues of institutional interaction; it may even raise more questions than it was able to answer. An important area for future research is the systematic analysis of more complex settings of institutional interaction. Eventually, we will not be content with knowing how and why a particular case of institutional interaction matters. The conceptual framework of this volume can be employed and further developed to systematically explore more complex settings and their emergent properties by recombining individual cases. We identify two particular ways individual cases might be recombined so as to account for more complex interaction situations. Cases of interaction may form sequential chains so that an individual case gives rise to a subsequent case that feeds back on

the original source institution or influences a third institution. Cases of interaction may also cluster around certain issues and institutions, so that a number of institutions jointly address a particular problem and contribute to the effectiveness of governance of a certain area. Whereas our study has hardly been able to delve into pertinent aspects of these more complex interactional situations, it has made a start that demonstrates the potential of the effort. On this basis, we may over time be able to gain a clearer picture of the interlocking structure of international governance institutions and EU legal instruments.

References

- Andersen, Regine. 2002. The Time Dimension in International Regime Interplay. *Global Environmental Politics* 2 (3): 98–117.
- Beisheim, Marianne, Sabine Dreher, Gregor Walter, Bernhard Zangl, and Michael Zürn. 1999. *Im Zeitalter der Globalisierung? Thesen und Daten zur gesellschaftlichen und politischen Denationalisierung*. Baden-Baden: Nomos.
- Biermann, Frank, and Steffen Bauer, eds. 2005. *A World Environment Organization: Solution or Threat for Effective International Environmental Governance?* Aldershot: Ashgate.
- Breitmeier, Helmut. 2000. “Complex Effectiveness”: Regime Externalities and Interaction (Working Group III). In Jørgen Wettestad, ed., *Proceedings of the 1999 Oslo Workshop of the Concerted Action Network on the Effectiveness of International Environmental Regimes*, 45–48. Oslo: Fridtjof Nansen Institute.
- Brown Weiss, Edith. 1993. International Environmental Issues and the Emergence of a New World Order. *Georgetown Law Journal* 81 (3): 675–710.
- Chambers, Bradnee W., ed. 1998. *Global Climate Governance: Inter-Linkages between the Kyoto Protocol and Other Multilateral Regimes*. Tokyo: United Nations University.
- Chambers, Bradnee W., ed. 2001. *Inter-Linkages: The Kyoto Protocol and the International Trade and Investment Regimes*. Tokyo: United Nations University Press.
- European Commission. 2001. *European Governance: A White Paper*. Doc. COM(2001) 428 final, 25.7.2001. Brussels: European Commission.
- European Commission. 2002. *Communication from the Commission on Impact Assessment*. Doc. COM(2002)276 final, 5.6.2002. Brussels: European Commission.
- Gehring, Thomas. 1994. *Dynamic International Regimes: Institutions for International Environmental Governance*. Frankfurt/Main: Peter Lang.
- Gehring, Thomas. 2004. Methodological Issues in the Study of Broader Consequences. In Arild Underdal and Oran R. Young, eds., *Regime Consequences: Methodological Challenges and Research Strategies*, 219–246. Dordrecht: Kluwer.
- Gehring, Thomas, and Sebastian Oberthür. 2004. Exploring Regime Interaction: A Framework for Analysis. In Arild Underdal and Oran R. Young, eds., *Regime Consequences: Methodological Challenges and Research Strategies*, 247–269. Dordrecht: Kluwer.

- German Advisory Council on Global Change. 2001. *World in Transition: New Structures for Global Environmental Policy*. London: Earthscan.
- Haas, Peter M., Robert O. Keohane, and Marc A. Levy, eds. 1993. *Institutions for the Earth: Sources of Effective International Environmental Protection*. Cambridge, MA: MIT Press.
- Haigh, Nigel, ed. 2003. *Manual of Environmental Policy: The EU and Britain*. Leeds: Maney Publishing and Institute for European Environmental Policy.
- Héritier, Adrienne. 1996. The Accommodation of Diversity in the European Policy-Making Process and Its Outcomes: Regulatory Policy as a Patchwork. *Journal of European Public Policy* 3 (2): 149–167.
- Herr, Richard A., and Edmund Chia. 1995. The Concept of Regime Overlap: Toward Identification and Assessment. In B. Davis, ed., *Overlapping Maritime Regimes: An Initial Reconnaissance*, 11–26. Hobart: Antarctic CRC and Institute of Antarctic and Southern Ocean Studies.
- Keohane, Robert O. 1984. *After Hegemony: Cooperation and Discord in the World Political Economy*. Princeton, NJ: Princeton University Press.
- Keohane, Robert O. 1989. *International Institutions and State Power: Essays in International Relations Theory*. Boulder, CO: Westview.
- King, Leslie A. 1997. Institutional Interplay: Research Questions. Paper Commissioned by Institutional Dimensions of Global Environmental Change and International Human Dimensions Programme on Global Environmental Change. Burlington VT: Environmental Studies Programme, School of Natural Resources, University of Vermont.
- Krämer, Ludwig. 1999. Bilanz und Perspektiven der europäischen Umweltpolitik unter besonderer Berücksichtigung der Erweiterung, Presentation at the Forum Constitutionis Europae of the Humboldt University Berlin on July 15, 1999 (FCE 6/1999). Available at <http://www.rewi.hu-berlin.de/WHI/deutsch/fce/fce699/index.htm>.
- Lenschow, Andrea, ed. 2002. *Environmental Policy Integration: Greening Sectoral Policies in Europe*. London: Earthscan.
- Meinke, Britta. 2002. *Multi-Regime-Regulierung: Wechselwirkungen zwischen globalen und regionalen Umweltregimen*. Darmstadt: Deutscher Universitäts-Verlag.
- Miles, Edward L., Arild Underdal, Steinar Andresen, Jørgen Wettestad, Jon Birger Skjærseth, and Elaine M. Carlin. 2002. *Environmental Regime Effectiveness: Confronting Theory with Evidence*. Cambridge, MA: MIT Press.
- Oberthür, Sebastian. 2001. Linkages between the Montreal and Kyoto Protocols: Enhancing Synergies between Protecting the Ozone Layer and the Global Climate. *International Environmental Agreements: Politics, Law and Economics* 1 (3): 357–377.
- Oberthür, Sebastian. 2002. Clustering of Multilateral Environmental Agreements: Potentials and Limitations. *International Environmental Agreements: Politics, Law and Economics* 2 (4): 317–340.
- Pontecorvo, Concetta Maria. 1999. Interdependence between Global Environmental Regimes: The Kyoto Protocol on Climate Change and Forest Protection. *Zeitschrift für ausländisches öffentliches Recht und Völkerrecht* 59 (3): 709–749.

- Raustiala, Kal, and David G. Victor. 2004. The Regime Complex for Plant Genetic Resources. *International Organization* 58 (2): 277–309.
- Rittberger, Volker, ed. 1993. *Regime Theory and International Relations*. Oxford: Clarendon Press.
- Rosendal, G. Kristin. 2000. *The Convention on Biological Diversity and Developing Countries*. Dordrecht: Kluwer Academic.
- Rosendal, G. Kristin. 2001. Impacts of Overlapping International Regimes: The Case of Biodiversity. *Global Governance* 7 (1): 95–117.
- Stokke, Olav Schram. 2001a. The Interplay of International Regimes: Putting Effectiveness Theory to Work. FNI Report 14/2001. Lysaker, Norway: Fridtjof Nansen Institute.
- Stokke, Olav Schram, ed. 2001b. *Governing High Seas Fisheries: The Interplay of Global and Regional Regimes*. Oxford: Oxford University Press.
- Underdal, Arild. 2004. Methodological Challenges in the Study of Regime Effectiveness. In Arild Underdal and Oran R. Young, eds., *Regime Consequences: Methodological Challenges and Research Strategies*, 27–48. Dordrecht: Kluwer.
- Underdal, Arild, and Oran R. Young, eds. 2004. *Regime Consequences: Methodological Challenges and Research Strategies*. Dordrecht: Kluwer.
- Vogler, John. 1999. The European Union as an Actor in International Environmental Politics. *Environmental Politics* 8 (3): 24–48.
- Wilkinson, David. 1998. Steps towards Integrating the Environment into Other EU Policy Sectors. In Timothy O’Riordan and Heather Voisey, eds., *The Transition to Sustainability: The Politics of Agenda 21 in Europe*, 113–129. London: Earthscan.
- Young, Oran R. 1996. Institutional Linkages in International Society: Polar Perspectives. *Global Governance* 2 (1): 1–24.
- Young, Oran R., ed. 1999. *The Effectiveness of International Environmental Regimes: Causal Connections and Behavioral Mechanisms*. Cambridge, MA: MIT Press.
- Young, Oran R. 2002. *The Institutional Dimensions of Environmental Change: Fit, Interplay, and Scale*. Cambridge, MA: MIT Press.
- Young, Oran R., Leslie A. King, Arun Aggarwal, Arild Underdal, Peter H. Sand, and Marilyn Wasson. 1999. *Institutional Dimensions of Global Environmental Change (IDGEC): Science Plan*. Bonn: International Human Dimensions Programme on Global Environmental Change.