

1. Introduction

1. COPING WITH COMPLEXITY

Comprehension of the interconnectedness of human behaviour and the natural environment poses a crucial challenge in our efforts to govern global environmental problems such as climate change, biodiversity loss, deforestation and ozone depletion. Although the causes and consequences of, and responses to, these problems are inevitably linked with each other and with other issue areas, laws and policies at various levels of governance have largely developed in isolation. This has led to a mismatch between the simplified way in which humans govern their relationship with the environment and the complexity of biogeophysical systems. In an era of globalization, governing human behaviour not only has to account for the world's ecological interconnectedness but also for social, economic and political interdependence.¹ In essence, this book is about coping with the resulting socio-ecological complexity in global environmental governance.

The challenge of dealing with socio-ecological complexity is especially profound in the governance of global climate change. Climate change can be considered a 'wicked problem' *par excellence*.² In part, this is because there is no clear definition of what the 'problem' is. Is it, for instance, about reducing greenhouse gas emissions, about phasing out fossil fuel use, or is the problem bigger than that, for example the continued insistence on economic growth?³ Similarly, there is no simple 'solution' for the climate change problem, as solving the problem of climate change will depend on how one defines the problem in the first place. Any solution will thus be subject to value judgements. Moreover, solutions to wicked problems like climate change are likely to have a ripple effect, potentially causing new problems in the process. Once a

¹ O.R. Young *et al.* 2006.

² Rittel and Webber 1973, 160–169.

³ For a discussion of different framings of the climate problem, see Hulme 2009.

solution has been chosen, it is difficult to reverse the effects and the (unintended) consequences.

In addition to these general features of wicked problems, climate change is also characterized by more specific traits that make it a ‘super’ wicked problem.⁴ First, the causes and impacts of, and responses to climate change cut across all sectors of society. Various human activities and sectors of society contribute to increased concentrations of greenhouse gases in the atmosphere, but at the same time may also be affected by the impacts of climate change. Second, if we wish to avoid large-scale, irreversible impacts, an urgent response is necessary. Third, resolving climate change is made difficult by the fact that international and national decision makers cannot fully control the choices of actors who have an impact on addressing climate change. Fourth, climate change is a transboundary problem, and may indeed be ‘the greatest collective action problem the international community has yet faced’.⁵ This exacerbates tensions between different countries, especially because those who are in the best position to take action have little incentive to do so.⁶ Fifth, climate change has an undeniably inter-temporal dimension: to mitigate impacts in the future, action now is needed.⁷ Finally, the problem is characterized by various types of scientific uncertainty, including uncertainty regarding the future development of greenhouse gas emissions as well as the impacts (and associated costs) of climate change in the long term.⁸

By its very nature, the climate change problem thus covers a broad range of narrowly defined issue areas, and its resolution inevitably requires a variety of responses. At the international level, this means that the problem is governed by a multitude of regimes with overlapping jurisdictions. It is this fragmented state of global climate governance that forms the point of departure for this book.

2. THE OBJECTIVES OF THIS BOOK

Due to the wickedness of the climate change problem, and given the fragmentation of global climate governance, there are interrelationships

⁴ Levin *et al.* 2007, 4–9; Lazarus 2009, 1159–1183.

⁵ Cole 2008, 232.

⁶ Levin *et al.* 2007, 9; Lazarus 2009, 1160.

⁷ Lazarus 2009, 1174–1176.

⁸ IPCC 2007, 72–73.

between the climate regime established by the United Nations Framework Convention on Climate Change (UNFCCC) and the wide variety of governance arrangements initiated outside of it. This means that to understand and appraise the totality of global climate governance, it is no longer apposite to focus on the UN climate regime in isolation; instead, the institutional environment of a regime needs to be taken into account.⁹ It is necessary to move away from the myopic view of environmental regimes that has been deemed one of the 'intellectual blind spots' in international environmental law scholarship.¹⁰ Tackling this blind spot first of all requires an acknowledgement of the relevance of other institutions in addressing a certain policy problem. Beyond this initial mapping exercise, scholars will also need to examine the nature and consequences of the relationships between the different institutions.

Some degree of overlap between the UN climate regime and non-UNFCCC institutions is likely to be inevitable given the scope of the phenomenon, and may even be necessary for integrated efforts to limit greenhouse gas emissions and adapt to the detrimental impacts of a changing climate. Indeed, the fragmentation of global environmental governance more generally is said to 'reflect the high political salience of environmental issues and their particular problem structure'.¹¹ Moreover, such overlap can also result in synergies between different elements of a governance architecture. Yet, on a systemic level, the multiplicity of institutions and regimes, and subsequent interactions between them, could also pose a threat to the coherence of global climate governance.

This brings us to the first objective of this book, which is to provide new insights into the *consequences* of the fragmentation of global climate governance and subsequent interactions between different regimes related to climate change. There is a growing number of scholarly contributions on this subject in the field of international relations. These contributions have moved away from an initial focus on typologies of interactions¹² towards more detailed analyses of the consequences of interactions in specific issue areas, and comprise studies on a wide variety of international environmental institutions.¹³ International law scholarship has also elaborated on the possible consequences of conflicts between different branches of international law. Although the focus of these

⁹ Biermann 2007, 332.

¹⁰ E. Fisher *et al.* 2009, 28.

¹¹ Oberthür and Gehring 2004, 369.

¹² E.g., O.R. Young 1996; Rosendal 2001; Stokke 2001; Oberthür and Gehring 2006a.

¹³ See, in particular, the contributions in Oberthür and Gehring 2006b.

studies largely overlaps with the international relations research on institutional interactions, legal studies have been framed primarily by the discussion on the consequences of the 'fragmentation of international law'.¹⁴

Both bodies of literature have contributed to knowledge on the consequences of interactions between different regimes, but to date there have not been any in-depth studies into the various consequences of regime interactions in the area of global climate governance. There are various detailed case studies examining specific interactions involving the UN climate regime and usually one other issue area (e.g., biodiversity, ozone layer depletion, human rights and trade),¹⁵ but detailed studies involving the climate regime and several other regimes are rare. The literature on the fragmentation of international law is also limited in that its focus has been primarily on international economic law and human rights law,¹⁶ even though some contributions have also taken up the issue in the context of international environmental law¹⁷ and climate change law.¹⁸ Still, there is as of yet no comprehensive study on the consequences of the fragmentation of international climate change law. Furthermore, both international lawyers and international relations scholars have largely overlooked interactions involving non-legally binding agreements, even though their use is becoming increasingly important in global climate governance (as well as global environmental governance more broadly).

Awareness of regime interactions and their consequences raises the possibility of their *management*. The second objective of this book therefore is to examine strategies for dealing with regime interactions in global climate governance. More specifically, I aim to analyse the advantages and drawbacks of different ways of managing interactions, in terms of effectiveness and feasibility.

Such management would generally be aimed at capturing the synergies between different regimes and minimizing potential or actual conflicts. There is a growing body of research on the management of regime

¹⁴ ILC 2006.

¹⁵ E.g., Werksman *et al.* 2003; K. Scott 2005; Burns 2009; S. Humphreys 2009; Rosenthal and Watson 2011.

¹⁶ E.g., Cassimatis 2007; Orakhelashvili 2008; van Aaken 2008; Delimatsis 2011.

¹⁷ M.A. Young 2011b; K. Scott 2011; Anton 2012.

¹⁸ Carlarne 2008; van Asselt *et al.* 2008; M.A. Young 2011a.

interactions, especially in global environmental governance.¹⁹ These studies have shed light on the various ways and means of interaction management, as well as the diverse set of actors involved. Existing research also provides a first indication of how legal and political strategies may be suitable for managing different regime interactions,²⁰ pointing to a potentially complementary role for legal techniques and political approaches in managing regime interactions. However, no study has focused on the variety of formal and informal responses to institutional diversity in one specific issue area.

These questions regarding the consequences and the management of regime interactions are not merely of academic significance. Most states participate in a multitude of regimes and will generally seek to ensure that complying with the commitments under one regime does not undermine compliance with others. Phrased more positively, it makes sense for actors participating in several regimes simultaneously to ensure that activities in one regime contribute to achieving the goals of another. These considerations may be influenced by the pursuit of an overarching goal, such as normative coherence, mutual supportiveness, or sustainable development. They may equally be influenced by the more pragmatic desire to increase efficiency: how to make better use of existing human, financial, and technological resources to implement a variety of agreements. There are at least three challenges for actors participating in different regimes in this regard: (1) to comply with commitments stemming from various regimes; (2) to actively participate in different regimes; and (3) to monitor and report the implementation of various agreements.²¹ Hence, there are genuine reasons for regime participants, especially from developing countries, to be concerned about the fragmentation of global climate governance, and to find ways of coping with the variety of institutional arrangements at the international level.

3. AN INTERDISCIPLINARY APPROACH

This book adopts an interdisciplinary, problem-driven approach, taking into account both legal and political aspects of global climate governance. The approach therefore includes elements of international law and

¹⁹ Oberthür 2009; Oberthür and Stokke 2011b; van Asselt 2011b; Zelli 2011b.

²⁰ Wolfrum and Matz 2003.

²¹ Anton 2012.

international relations research.²² The attraction and rationale of this interdisciplinary approach lies in its ability to address questions that go beyond the international lawyer's comfort zone. For international lawyers, the proliferation of sites of governance, the increasing presence of non-state actors in global governance or the use of formal or informal means of international cooperation are not so much phenomena that need to be explained, but rather lead to descriptive and prescriptive questions about the role of international law vis-à-vis such developments. In the context of this book, this has led to questions about the up- and downsides of the fragmentation of international law (e.g., how can international law avoid or resolve conflicts between different norms and treaties?); the deformalization of international law (e.g., what is the status of 'soft' law under international law?); and the rise of global administrative law (e.g., how can international law deal with autonomous activities of international organizations and other non-state actors, and secure their accountability and legitimacy?). Although international legal scholars thus certainly have sought to deal with the new phenomena that have puzzled international relations scholars, these debates are taking place on a rather systemic level, reflecting the uncertain nature of what international law is (and should be) today.

An interdisciplinary approach presents some inherent challenges. In the case of work bridging the gap between international relations and international law, it should be kept in mind that there is no single school of thought that represents the whole of either discipline.²³ Furthermore, it is imperative to pay attention to the specificities of both disciplines. For international lawyers, this means it is important to identify what makes international law 'law'. From a practical perspective, an added challenge is to reconcile often-diverging vocabularies.²⁴ For instance, the concepts of 'regime' and 'institution' do not always have the same meaning in both disciplines.²⁵ Similarly, experts in different disciplines may examine the same phenomena but use diverging vocabulary to describe them.²⁶

²² On the relationship between international law and international relations, see Abbott 1989; Slaughter-Burley 1993; Keohane 1997; Slaughter *et al.* 1998; Beck 2009; Hafner-Burton *et al.* 2012; Dunoff and Pollack 2013a; Dunoff and Pollack 2013b.

²³ Klabbers 2005, 37–38.

²⁴ Cf. E. Fisher *et al.* 2009, 21.

²⁵ M.A. Young 2011b, 19–20.

²⁶ For a critical analysis of this development, see Koskeniemi 2009, 406–410.

I would not go as far as to say that the pursuit of interdisciplinarity in the case of international law and international relations boils down to an 'American crusade' that 'cannot but buttress the justification of American hegemony in the world', as Martti Koskenniemi put it provocatively.²⁷ It is not (or is at least no longer) possible to capture international relations research in simple 'America *versus* the rest of the world' dichotomies.²⁸ Moreover, even though American-dominated (neo-)realism may still be a major school of thought in international relations, other schools of thought (e.g., institutionalism and constructivism) that provide sufficient counterbalance have emerged over time.²⁹ Furthermore, the dialogue with international relations scholars forces international lawyers to more clearly argue the distinguishing characteristics of (international) law, and could therefore also strengthen the discipline of international law.³⁰ I argue that interdisciplinary research that keeps its limitations in mind offers a fruitful way of exposing different angles of the same problem.

In the context of this book, the discipline of international law provides valuable insights on determining the existence of a conflict between norms; examining the possibilities for addressing such conflicts through the law of treaties; and identifying the scope for legal techniques to address conflicts and enhance synergies between international agreements. The discipline of international relations helps by, among other things, shedding light on the driving forces behind regime interactions; identifying causal mechanisms for interactions; and assessing the impacts of interaction management on regime effectiveness. Both disciplines address different, yet related, questions and can thus present complementary insights and lessons for each other.

4. CASE STUDIES

A methodology needs to be 'best suited' for the type of question asked.³¹ The methodology for this book is to a large extent empirically driven and follows a case study approach. The primary reason for using case studies is to provide insights into the different types of interactions and the different types of interaction management. The three case studies thereby

²⁷ Koskenniemi 2000, 29–30.

²⁸ Beck 2009, 21–22.

²⁹ Beck 2009, 18.

³⁰ Hurrell 2000, 332–333.

³¹ E. Fisher *et al.* 2009, 15.

allow for a comprehensive analysis of the various forms of regime interaction in global climate governance.

For the first objective (the consequences of regime interactions) I analyse various interactions between climate-related regimes with a view to determining the effects of interactions on the 'target' regimes. The interactions are analysed according to the interacting objects, the causal mechanisms driving interactions, intentionality and the effects of interactions.

For the second objective, I examine the effectiveness and feasibility of legal techniques and institutional coordination to address regime interactions. To this end, I identify distinguishing characteristics of the three case studies to determine how legal techniques and institutional coordination can complement each other, and how conflicts can be avoided and resolved and synergies enhanced. In particular, employing the emerging body of literature on 'interplay management',³² I draw comparisons between the management efforts in each of the cases to identify opportunities and limitations of different ways of interaction management.

The three cases are selected from the wider universe of international regimes in the area of climate change. The size of the issue area of 'climate change' depends on how one draws the boundaries around it, an inherently subjective exercise. Notwithstanding this subjectivity, it is evident that several international institutions outside of the UNFCCC are of clear and immediate relevance to addressing climate change (either from the perspective of reducing emissions or adapting to the impacts of climate change). These institutions include not only regimes that directly aim to tackle climate change and regimes that concern environmental problems physically linked to climate change, but also other regimes that may have non-environmental policy objectives but which can still be considered as highly important for responding to the climate problem, including regimes in the areas of international trade and investment, human rights, agriculture and security. While one can also construct links between climate change and, to name but a few issue areas, children's rights, maritime piracy, space-faring, telecommunications and terrorism, these links will tend to be less direct and the interactions are likely to be less visible. So while I do not generally discard the relevance of any particular regime for climate change (and vice versa), my focus is on three cases that belong to a subset of international regimes that are of

³² Oberthür 2009; Stokke and Oberthür 2011.

clear and immediate relevance for addressing climate change. Moreover, given the different problem structures of climate change mitigation and adaptation, the book focuses primarily on regime interactions related to climate change mitigation.

The three cases each represent a different sphere of global climate governance.³³ They thereby not only display the breadth of regime interactions, but also illustrate the different ways in which interactions have been or can be managed. Moreover, in each case there have been contentious interactions, which have drawn significant political and academic attention and spurred rule development at different levels of governance. This, in turn, means that there is a significant empirical base to draw from.

The first case addresses the *institutional diversity within the issue area of international climate change law and governance*, looking at interactions between regimes that explicitly aim to combat climate change: the multilateral climate regime, established by the UNFCCC and the Kyoto Protocol, on the one hand, and the Asia–Pacific Partnership on Clean Development and Climate (APP) as an example of a ‘minilateral’ regime promoting clean technologies on the other. The APP is representative of a number of non-legally binding governance arrangements that have been initiated outside the UN framework, consisting of only a limited number of participating countries. Initial studies indicated that the APP may have detrimental effects. The research complements these studies by relating the interactions to the legal nature of the UNFCCC (as ‘hard law’) and the APP (as ‘soft law’).

The second case relates to the *institutional diversity within international environmental law and governance*, examining the interactions between the UN climate regime and the biodiversity regime established by the Convention on Biological Diversity (CBD). The CBD is part of the increasingly autonomous subsystem of international environmental law,³⁴ and shares important principles (e.g., the principle not to cause transboundary harm) and instruments (e.g., national reporting systems) with the climate regime. Given these commonalities, one would anticipate little conflict between the climate and biodiversity treaties and rather expect to find potential for synergies. Nevertheless, existing literature has identified potential conflicts between the implementation of the climate treaties and the objectives of the CBD. The book builds on these studies by examining regime interactions related to forest carbon.

³³ Cf. Zelli 2011a.

³⁴ E.g., Bodansky 2006; Bodansky *et al.* 2007.

The third case tackles *overlaps between different branches of international law and governance*, examining interactions between the World Trade Organization (WTO) and the climate regime. The international trade regime has been chosen for its suitability as an example of how regimes with very different objectives and principles interact. The relationship between climate change and international trade law has received increasing attention, focusing mainly on potential conflicts. I expand on this literature by analysing the variety of regime interactions at the climate–trade nexus, with a focus on unilateral climate-related trade measures.

5. SOME LIMITATIONS

Like any product of research, this book is not without its limitations. First of all, I am concerned with law and governance at the *international* level rather than the national or sub-national level. Consequently, this book deals with questions of ‘horizontal’ rather than ‘vertical’ interactions.³⁵ This is not to deny the importance of other levels of governance. As scholars working on multi-level governance will be quick to point out, the different levels of governance are intrinsically related.³⁶ I also do not wish to downplay the importance of implementation processes at the domestic level in managing overlapping commitments from different agreements.³⁷ However, in line with regime theorists,³⁸ I am primarily interested in the role of international regimes and particularly their interrelationships. Furthermore, the role of governments as well as non-state actors is highlighted in discussions of ‘autonomous interaction management’, in which I examine interaction management beyond the interacting regimes.

Second, while I acknowledge the importance of enhancing understanding of the wide variety of transnational governance arrangements that have emerged beyond the state (and beyond the individual regime), this book is first and foremost concerned with interactions of regimes mainly created by states, for states. Although new forms of private and public–private governance have emerged in recent decades, I argue that regimes created by states continue to play a central role in international law and governance. Nevertheless, the book touches upon the role of non-state

³⁵ O.R. Young 2002, 83–138.

³⁶ See, e.g., Hooghe and Marks 2003; Cash *et al.* 2006.

³⁷ Velasquez and Piest 2003.

³⁸ E.g., Levy *et al.* 1995; Hasenclever *et al.* 1997; O.R. Young 1999a.

actors in the case study chapters, notably by discussing their role in managing regime interactions.

A third caveat, which holds for each of the case studies to at least some extent, is that this book does not present a purely *ex post* view of regime interactions, in contrast to most other studies.³⁹ The simple observation that a regime interaction has not (yet) taken place does not mean that its analysis is irrelevant or impossible. Interactions themselves are often ‘moving targets’ that may only manifest themselves over time.⁴⁰ This calls for attention to *potential* interactions. The risk of discussing potential interactions is that it could lead to (over)speculation. One could argue, for instance, that the identified potential effects of the APP on the UNFCCC are irrelevant, as the APP has ceased to exist (see Chapter 6). Such a criticism, however, would disregard possible lessons that can be learned. More specifically, the case study could shed light on the conditions under which non-UNFCCC institutions might be in conflict with, or enhance synergies with, the climate regime.

Finally, I do not pretend to offer ideal-type solutions for the various regime interactions. As I argue in this book, doing so would require the definition of an objective standard against which solutions could be evaluated. However, for super wicked problems like climate change there is unlikely to be such an objective standard. And even if it could somehow be objectively derived, a solution would likely lead to unexpected and possibly unwanted ripple effects. Nevertheless, I seek to provide practical recommendations on how state and non-state actors could address specific interactions identified in the case study. Furthermore, the conceptual insights from this book go beyond individual cases of interactions, and provide more in-depth knowledge about the usefulness of specific forms of interaction management.

6. PLAN OF THE BOOK

This part of the book proceeds with an overview of the global response to the climate change problem, in which I show how the UN climate regime has increasingly been flanked by other governance arrangements (Chapter 2).

Building on the relevant literature in international law and international relations, Part II of the book presents the analytical framework employed in the subsequent chapters. To place the conceptual discussions in the

³⁹ E.g., the contributions in Oberthür and Gehring 2006b.

⁴⁰ Zelli 2011b, 202.

book in a wider context, I first introduce the concept of ‘fragmentation’ to describe the situation of multiple overlapping regimes and critically discuss various interpretations of the concept. Furthermore, I examine whether the phenomenon of fragmentation should be seen as benign or not (Chapter 3). I then move on to show how the debate on fragmentation in international law is essentially connected to discussions on institutional interactions among international relations scholars. I distinguish various types of regime interactions and zoom in on the consequences of such interactions, introducing the notions of ‘conflict’ and ‘synergy’ used in the book (Chapter 4). In a further step, I introduce strategies for dealing with regime interactions under the heading of ‘interaction management’. I discuss various types of legal techniques for avoiding or resolving conflicts and provide an overview of political approaches to interaction management, in particular institutional coordination (Chapter 5).

Part III comprises the three case studies in which this framework is applied. First, I examine the interactions between the UN climate regime and unilateral clean technology agreements, focusing on interactions with the ‘soft law’ APP (Chapter 6). The next chapter focuses on the interactions between the climate treaties and the CBD, discussing in particular the pertinent and policy-relevant interactions related to forests (Chapter 7). In the third case study I investigate the interactions between the climate regime and the world trading system, focusing on the highly controversial issue of climate-related trade measures at the border (Chapter 8).

To put the case studies back in perspective, Part IV starts with a cross-cutting synthesis and analysis of the consequences and management of regime interactions in global climate governance (Chapter 9). In the final chapter, I present the main conclusions and discuss ways forward from the perspectives of policymaking and further academic inquiry (Chapter 10).