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The architecture of global climate governance: setting the stage

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2.1 Introduction

This chapter introduces the first main part of this volume, on the overarching ‘architecture’ of global climate governance beyond 2012.¹ In particular, the central question that guides all chapters in this part is about the causes and consequences of fragmentation versus integration of governance architectures. We ask which type of governance architectures promises a higher degree of institutional performance in terms of social and environmental effectiveness, and in particular: whether a well-integrated governance architecture is likely to be more effective than a fragmented governance architecture. This question of increasing fragmentation of systems of global governance and of its relative benefits and problems has become a major source of concern for observers and policy-makers alike. Yet there is little consensus in the academic literature on this issue: in different strands of academic research, we find different predictions that range from a positive, affirmative assessment of fragmentation to a rather negative one (Zelli *et al.*, this volume, Chapter 3).

A key example is global climate governance, where advantages and disadvantages of a fragmented governance architecture have become important elements in proposals and strategies for future institutional development. Several proposals for a future climate governance architecture have been put forward that explicitly assert the value of fragmentation or diversity, or at least implicitly accept it. Others, however, remain supportive of a more integrated overall architecture. And yet, political science lacks a conceptual framework for the comparative study of different types and degrees of fragmentation of global governance architectures.

In this chapter, we attempt to help resolving this problem, thereby guiding the analyses in the following chapters under the ‘architecture’ theme. We first conceptualize the notion of global governance architectures and of different types and

¹ See in more detail Biermann *et al.* (forthcoming).

degrees of their fragmentation (Section 2.2) and then illustrate these concepts in global governance in response to climate change (Section 2.3). The following chapters substantiate our discussion by detailed assessments of specific questions within this larger analytical framework.

2.2 Conceptualization

There is no commonly agreed definition of the term ‘global governance architecture’. We define the term in this book as the overarching system of public and private institutions – that is, organizations, regimes and other forms of principles, norms, regulations and decision-making procedures² – that are valid or active in a given issue area of world politics. Architecture can thus be described as the meta-level of governance.

Through its focus on a particular issue area – such as climate policy – the concept of governance architecture is narrower than the notion of order. Both concepts share a focus on the overarching governance structures that reach beyond single regimes. Yet while international order reflects the organization of the entire system of international relations (Bull 1977), architecture is a more appropriate concept for distinct issue areas of global governance. Moreover, the concept of international order often implies an optimistic bias regarding the coherence and internal coordination of the international system. Architecture, on its part, is more neutral and accounts for dysfunctional and non-intended effects too. Architecture, in this book, does not presuppose order in a normatively loaded understanding.

Instead, a degree of fragmentation is a frequent characteristic of global governance architectures. Conceptualizing governance architectures in different issue areas allows for the comparative analysis of different degrees and types of fragmentation. We advance the notion of global governance architecture in particular for this reason: because it allows for the analysis of (the many) policy domains in international relations that are not regulated, and often not even dominated, by a single international regime in the traditional understanding. Many policy domains are instead marked by a patchwork of international institutions that are different in their character (organizations, regimes and implicit norms), their constituencies (public and private), spatial scopes (from bilateral to global) and subject matters (from specific policy fields to universal concerns). These situations we understand as *fragmented* global governance architectures. As discussed in the following chapters in more detail, climate governance is a prime example of such situations.

² International regimes are usually defined as ‘sets of implicit or explicit principles, norms, rules, and decision-making procedures around which actors’ expectations converge in a given area of international relations’ (Krasner 1983: 2). International institutions, as the more generic term, comprise international regimes, international organizations and implicit norms and principles (Keohane 1989: 3–4).

The notion of fragmentation is widely employed in international legal literature (for example Hafner 2000, 2004; Koskenniemi and Leino 2002; International Law Commission 2006). Some see fragmentation here as a sign of the expansion of international law to previously unregulated fields, such as international commerce, human rights or the environment (Lindroos and Mehling 2005). Increasingly, also scholars in international relations and international economics refer to the ‘fragmentation’ of arrangements, especially regarding environmental governance (for example Andresen 2001; Bernstein and Ivanova 2007; Kanie 2007). Similar phenomena are captured at times under different terminology, including ‘multiplicity’ of global environmental governance (Ivanova and Roy 2007), ‘division of labour’ among international norms and institutions (Siebert 2003; Haas 2004: 8), or, with a more negative connotation, ‘treaty congestion’ (Brown Weiss 1993: 697).

Regarding the conceptualization of fragmentation in this book, we emphasize three points. First, we use the term fragmentation as a relative concept: All global governance architectures are fragmented to some degree; that is, they consist of distinct parts that are hardly ever fully interlinked and integrated. Non-fragmented, ‘universal’ architectures are theoretically conceivable as opposites of fragmentation; an architecture would be universal if all countries relevant in an issue area are subject to the same regulatory framework; participate in the same decision-making procedures; and agree on a core set of common commitments. Empirically, however, such a situation is difficult to trace in current world politics. For instance, even one of the most widely supported international treaties, the Convention on the Rights of the Child, has been ratified by 193 parties yet not by the United States and Somalia, and its optional protocols on children in armed conflicts and on child pornography and prostitution lack ratification by all nations. Fragmentation, in other words, is ubiquitous. Yet the degree of fragmentation varies from case to case. The concept of architecture allows for the comparative analysis of issue areas and policy domains and for the study of overarching phenomena that the more restricted concepts of regimes could not capture.

Second, we use the concepts of both architecture and fragmentation value-free. We assume neither an *a priori* existing state of universal order nor a universal trend towards order. In most empirical cases, architectures are likely to result from incremental processes of institutionalization in international affairs that are decentralized and hardly planned. In other words, the concept of architecture does not assume the existence of an architect.

Third, empirical research on fragmentation of global governance architectures depends on the perceived scale of the problem. The larger the perceived scale of the problem, the higher the degree of fragmentation is likely to be. Fragmentation is evident in more narrowly defined global governance architectures, that is, between parallel policies and regimes in the same issue area, such as climate governance or

Table 2.1 *Typology of fragmentation of governance architectures*

	Synergistic	Cooperative	Conflictive
Institutional nesting	One core institution, with other institutions being closely integrated	Core institutions with other institutions that are loosely integrated	Different, largely unrelated institutions
Norm conflicts	Core norms of institutions are integrated	Core norms are not conflicting	Core norms conflict
Actor constellations	All relevant actors support the same institutions	Some actors remain outside main institutions, but maintain cooperation	Major actors support different institutions

governance of plant genetic resources (Raustiala and Victor 2004; McGee and Taplin 2006; van Asselt 2007). It is here where the concept of architecture and the comparative analysis of different degrees and types of fragmentation are likely to be most fruitful. Yet fragmentation is likely to be more significant the broader issues areas are defined, for example with a view to the entire domain of global environmental governance or economic governance.

To assess degrees of fragmentation, we employ the following three criteria to differentiate between degrees of fragmentation: degree of institutional nesting and of overlaps between decision-making systems; existence and degree of norm conflicts; and type of actor constellations. Based on these criteria, we distinguish three types of fragmentation (Table 2.1): (1) synergistic fragmentation; (2) cooperative fragmentation; and (3) conflictive fragmentation. In empirical research, boundaries between these three types will not be clear-cut; the criteria and types are meant as a conceptual tool to determine and compare degrees of fragmentation of different issue areas in comparative research. Likewise, long-term analyses might find that an architecture has shifted from one type of fragmentation to another.

- (1) We speak of a situation of *synergistic fragmentation* when the core institution includes (almost) all countries and provides for effective and detailed general principles that regulate the policies in distinct yet substantially integrated institutional arrangements. An example is the 1985 Vienna Convention and its 1987 Montreal Protocol on Substances that Deplete the Ozone Layer and its amendments from London (1990), Copenhagen (1992), Montreal (1997) and Beijing (1999) (United Nations Environment Programme 2007). Each amendment to the protocol adds new substances to the regulative system, including decision-making procedures on further policies on these substances. The governance architecture on ozone depletion comes close to a system of five concentric circles, with the 1987 Montreal Protocol having the most parties, and each of the four amendments a more restrictive reach. However, the overarching Vienna Convention and Montreal Protocol govern all amendments in every important aspect,

serving as integrative umbrella and authority in linking the different amendments and political processes. No significant institutions exist on this issue outside the framework of the Vienna Convention and the Montreal Protocol, which shows a high degree of integration within this governance architecture.

- (2) We speak of a situation of *cooperative fragmentation* when an issue area is marked by: (a) different institutions and decision-making procedures that are loosely integrated; (b) when the core institution does not comprise all countries that are important in the issue area; and/or (c) when the relationship between norms and principles of different institutions is ambiguous. Policies in the same area are then defined, decided and monitored through different institutions, or through core institutions, on the one hand, and individual countries that are not part of this institution on the other. However, overall integration within the governance architecture in the issue area is sufficient to prevent open conflicts between different institutions. One example is the relationship between the United Nations Framework Convention on Climate Change ('climate convention') and its Kyoto Protocol, which we discuss in Section 2.3 in more detail (see also Zelli *et al.*, this volume, Chapter 3).
- (3) We speak of a situation of *conflictive fragmentation* when an issue area is marked by different institutions that: (a) are hardly connected and/or have different, unrelated decision-making procedures; (b) have conflicting sets of principles, norms and rules; and (c) have different memberships and/or are driven by actor coalitions that accept, or even advance, these conflicts. One prominent example is the regulation of access and benefit sharing of plant genetic resources. Here, two regimes attempt to regulate this issue, the Convention on Biological Diversity and the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) under the World Trade Organization (WTO). The latter seeks to strengthen and harmonize systems of intellectual property rights, whereas the former reaffirms sovereign rights of states over biological resources. The negotiations of both regimes, which partly took place in parallel, were marked by intense conflicts between developing and industrialized countries. Consequently, the relevant rules of the biodiversity convention remain rather abstract and imprecise, and the United States did not ratify the convention. As Rosendal (2006: 94) suggests, a virtual 'arms race' has taken place through additional agreements that try to flesh out the regulations of both regimes.

In empirical research, the boundaries between these three ideal types of fragmentation in global governance architectures may remain difficult to ascertain in specific cases. In addition, the three types are not mutually exclusive, but may coexist within the same architecture. The three types are thus meant to serve as a conceptual tool for comparative empirical analysis in order to advance understanding of the causes and consequences of fragmentation in global governance architectures. Based on the conceptualization of these three ideal-types of governance fragmentation, comparative empirical research can shed light on the core question of the relative costs and benefits of different types and degrees of fragmentation. In addition, it becomes

possible to analyze in much more detail possible political, legal and institutional solutions to problems of fragmentation, which may depend on the types and degrees of fragmentation at hand.

2.3 The case of global climate governance

How can this typology be applied on the case of global climate governance? We now show that the governance architecture in this area has elements of all three types of fragmentation – synergistic, cooperative and conflictive – but that the overall situation is best described as a case of cooperative fragmentation.

- (1) First, the core of the climate governance architecture has elements of *synergistic fragmentation*. The institutional core of the architecture is the climate convention, ratified by almost all nations. The convention lays down a number of fundamental principles. These include the ‘ultimate objective’ of climate governance to prevent ‘dangerous anthropogenic interference with the climate system’ (article 2), the principle of common but differentiated responsibilities and respective capabilities and a precautionary approach (article 3). In addition, the convention provides for a sizeable international bureaucracy for administrative support, data collection and policy development, as the organizational nodal point of the governance architecture in this area (Busch 2009). The 1997 Kyoto Protocol is part of the larger climate convention and shares its basic principles.
- (2) Yet in addition, the climate governance architecture has strong elements of *cooperative fragmentation*, which is the most fitting overall description. The Protocol provides for quantified emissions limitation and reduction obligations only for industrialized countries. Moreover, one of the world’s largest greenhouse gas emitters, the United States, is party only of the Convention and not to the Protocol, which creates a higher degree of fragmentation within the regime. This fragmentation has become obvious in the negotiations on future climate governance, which occur in separate negotiating tracks for the Convention and the Protocol (Cléménçon 2008). The 2007 and 2008 Conferences of the Parties showed the increased complexity, with dozens of agenda items discussed in numerous contact groups and informal negotiations, and many items postponed to later sessions of subsidiary bodies.

In addition to the UN climate regime, there are an increasing number of additional institutional governance arrangements at different levels. Some arrangements, such as the Methane to Markets partnership, are public–private partnerships registered with the UN Commission on Sustainable Development after the 2002 World Summit on Sustainable Development. Other initiatives, such as the Carbon Sequestration Leadership Forum and the International Partnership for a Hydrogen Economy, are not registered with the Commission on Sustainable Development, even though their form is similar. Other initiatives are high-level ministerial dialogues, such as the Dialogue on Climate Change, Clean Energy and Sustainable Development, initiated by the meeting

of the Group of Eight in Gleneagles, Scotland, in July 2005. The start of the European emissions trading scheme in 2005 marked the launch of another UN-independent initiative. Although based on the Kyoto Protocol, the trading scheme's start did not depend on the protocol's entry into force (Flachsland *et al.*, this volume, Chapter 5). Finally, there are sub-national initiatives such as California's Global Warming Solution Act and the Regional Greenhouse Gas Initiative in the United States, as well as private institutions that attempt to regulate issue areas relevant for climate governance, such as the Carbon Disclosure Project (Pattberg and Stripple 2008; Pattberg and Stripple, this volume, Chapter 9).

In sum, some arrangements explicitly relate to the institutional core, such as the EU emissions trading scheme (which in 2008 connected to the transaction log of the climate convention) (Flachsland *et al.*, this volume, Chapter 5; van Asselt 2010) or public-private partnerships to implement the climate convention. Other initiatives are connected to the UN regime mainly through the participation of key actors in various forums. Most initiatives acknowledge the UN process, even though many do not provide for a coordination mechanism that could ensure mutual compatibility.

- (3) In addition, the climate governance architecture shows indications of *conflictive fragmentation*. Notably, the 2005 Asia-Pacific Partnership on Clean Development and Climate departs from key features of the UN climate regime, including the consideration of climate change impacts and differentiation between industrialized and developing countries (McGee and Taplin 2006; van Asselt 2007). At the same time, while not comparable to the UN regime in terms of financial endowment or membership, the partnership still provides an alternative to international climate action that may reduce incentives for complying with, or signing up to, international legally binding commitments. A similar initiative is the Major Economies Process on Energy Security and Climate Change launched by the United States in 2007. This Process includes 17 of the world's largest economies and aims at a long-term greenhouse gas emissions reduction goal (White House 2007); its relation to the UN climate regime is ambiguous and partially conflictive. For example, during the 2007 Conference of the Parties to the Climate Convention, the delegation of the European Union threatened to boycott the next session of the US-initiated Major Economies Process. Representatives from the Group of 77 and China, too, argued that the UN climate regime should remain the central platform for addressing action on climate change (International Institute for Sustainable Development 2007).

Importantly, these instances of fragmentation in climate governance are intentional (on the problems of intentional interplay see Young 2008). The Asia-Pacific Partnership and similar proposals – backed by the United States – were created not out of ignorance of the climate regime but *because* of it, at a time when the climate convention and the Kyoto Protocol were well established and in force. In addition, the emergence of numerous initiatives outside of the climate regime indicates that the global climate governance architecture may become more fragmented over time. Many new initiatives include the United States, which has rejected the Kyoto

Protocol; most are not or only loosely linked to the UN climate regime; and the compatibility of some norms and principles with those of the core institution is often ambiguous at best.

Nonetheless, the overall architecture of climate governance, at present, can be best characterized as an example of cooperative fragmentation.

2.4 Conclusions

In this chapter, we have introduced the term architecture as the overarching system of public and private institutions in a given issue area. We have conceptualized governance fragmentation as a situation of multiple international institutions in an issue area that differ in character, constituencies, spatial scope and subject matter. We have argued that fragmentation is an inherent structural characteristic of international policy – in other words: when comparing the international architectures of different issue areas, fragmentation is a matter of degree. Based on a threefold typology of fragmentation, we characterized the global climate governance architecture as a case of cooperative fragmentation: apart from one core institution, which does not comprise all relevant countries, an increasing number of other organizations, regimes and arenas are addressing climate change, while the relationship among these different institutions remains often ambiguous, but by and large cooperative.

Having identified this advanced degree of fragmentation, the following chapters address the implications of fragmentation of global climate governance beyond 2012. While assessing different scenarios of a future climate governance architecture, they attend to our core appraisal question for this first part of this volume: is an almost universal, strongly integrated governance architecture likely to be more effective than a heavily fragmented, heterogeneous governance architecture? Moreover, the chapters explore policy options to address the increasing fragmentation of global climate governance. They approach this phenomenon from different disciplinary backgrounds, namely: qualitative policy assessment in Chapters 3, 6, 7 and 8, quantitative analysis and modelling in Chapters 4 and 5, and participatory assessment in Chapters 6 and 8.

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