



Mapping the fragmentation of the international forest regime complex: institutional elements, conflicts and synergies

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Accepted: 11 March 2019 / Published online: 18 March 2019
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Abstract

In the field of global environmental governance, a plethora of international regimes have emerged over the past decades. In some issue areas, multiple regimes aim to govern the issue, sometimes reinforcing, oftentimes conflicting with each other. Consequently, international regime complexes are an empirical phenomenon, which are inherently characterized by specific degrees of fragmentation. For any given issue area, one of the key questions is whether the institutional fragmentation encountered in such regime complexes is synergistic or conflictive in nature. Scrutinizing this question poses methodological challenges of how to delineate a regime complex and how to assess its fragmentation. Drawing on the highly fragmented case of the international forest regime complex, this paper aims to map its institutional fragmentation and to analyse the degrees to which it is conflictive or synergistic. For this we conceptualize the notion of institutional elements and develop a novel method for mapping regime complexes based on their core institutional elements. We then employ tools from the sub-discipline of policy analysis on the complex's institutional elements for analysing in detail, which of the elements are mutually synergistic and conflictive with other elements of the regime complex. Our results indicate that synergistic relations mostly exist among rather vague elements, often built around sustainability as a core principle. On the contrary, conflictive relations prevail as soon as the elements are designed in more concrete and substantial ways. We conclude that the forest regime complex displays only degree of seemingly synergistic fragmentation through a number of non-decisions and the use of “sustainability” as an empty formula. De facto, conflictive fragmentation prevails among elements of concrete subject matter. This raises questions on whether vast parts of regime complexes merely serve symbolic functions, while conflicts on substance are being camouflaged.

Keywords Global forest governance · International forest policy · Forest policy analysis · Conflictive/synergistic fragmentation · Goals · Core institution method (UNFF)

Abbreviations

CBD Convention on Biological Diversity

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CEDAW	Convention on the Elimination of all Forms of Discrimination Against Women
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CMS	Convention on the Conservation of Migratory Species of Wild Animals
ECOSOC	Economic and Social Council of the United Nations
FCPF	Forest Carbon Partnership Facility
FIP	Forest Investment Program
FSC	Forest Stewardship Council
GATT	General Agreement on Tariffs and Trade
IAF	International Agreement on Forests
IE	Institutional Element
IFF	Intergovernmental Panel on Forests
IR	International Regime
IFRC	International Forest Regime Complex
ILO	International Labour Organization
IPF	Intergovernmental Panel on Forests
IR	International Regime
ITTA	International Tropical Timber Agreement
ITTO	International Tropical Timber Organization
NLBI	Non-legally Binding Instrument on All Types of Forests
PEFC	Programme for the Endorsement of Forest Certification
REDD+	Reducing Emissions from Deforestation and Forest Degradation in Developing Countries
SFM	Sustainable Forest Management
TBT	Agreement on Technical Barriers to Trade
TRIPS	The Agreement on Trade-Related Aspects of Intellectual Property Rights

1 Introduction

In recent decades, globalization and internationalization have led to an increase in the number of international policies and regimes on multiple environmental issues, including forests (Humphreys 1996, 2006). This includes the creation of new forms of governance, also based on voluntary agreements, attempting to influence national behaviour over many different issues (Pattberg 2012; Burns et al. 2016). As a result, a growing number of current governing arrangements are no longer represented by single-issue regimes with only states as actors, but rather by a mixture of mechanisms including legal, non-legal, governmental and non-governmental arrangements (Bernstein and Cashore 2012). This new global governance presents itself as a complex web of multiple and interacting actors, networks and institutions (Biermann and Pattberg 2012; Maryudi et al. 2018), most notably of international regimes of global and regional scales (Bezerra et al. 2018). As a result, environmental regime complexes emerged, aiming to regulate an issue area based on multiple regimes of origin (Biermann et al. 2009; Keohane and Victor 2011; Giessen 2013).

International regimes formally claim to identify problems of international concern and, through goal-setting and the provision of policy means, to formulate goal-oriented contributions for addressing these problems. During the processes in which international actors and institutions aim to influence political outcomes in accordance

with these formal goals, however, a plethora of formal and informal options exists for individual actors to adapt the political effects of international actors and institutions to their interests and preferences (Bernstein and Cashore 2012). This interest-driven phenomenon has been described as *customizations* of international regimes, resulting policies and their political consequences (Thomann 2015).

Empirically, questions about the effects of international regimes as well as the detailed pathways along which they influence domestic policies resonate well in the field of international land use governance where research mainly splits into scholarship on individual land uses, such as on *forests* (Humphreys 1996, 2006; Rayner et al. 2010), *environment* (Biermann and Pattberg 2012; Falkner 2016), and *agriculture* (Sikor et al. 2013; Robinson and Carson 2015). Most land uses, including a number of environmental issues and nature conservation, at least in spatial terms, relate to questions of maintaining, removing or rebuilding forests (Giessen et al. 2016). Thus, inquiry into the wide array of international regimes aiming to govern forests may provide for insightful results on international land use governance.

The international forest regime is a good example of a complex and fragmented regime without a single legally binding agreement, but rather a set of different instruments dealing directly or indirectly with different aspects of the world's forests (Humphreys 1999, 2006; Arts and Babili 2012; Giessen 2013). The complexity of this regime has led scholars to introduce the term international forest regime complex (IFRC) (Glück et al. 2010; Howlett and Rayner 2010; Rayner et al. 2010). Looking at the IFRC is particularly insightful, because of the exceptionally high abundance of various international regimes addressing forests in multiple ways and the resulting fragmentation of the regime complex (Giessen 2013). At the core of the regime complex lays the issue of tropical deforestation and forest degradation (Humphreys 1996, 2006), around which a highly complex compilation of international institutions as well as institutional elements from multiple policy sectors has gradually evolved. These issue-specific institutional elements of the forest regime complex stem from multiple regimes of origin and from different policy sectors of international relations (Humphreys 2006; Cadman 2009, 2011; Giessen forthcoming), including trade, environment, human rights, industry, forestry and agriculture.

The relation between those elements of regime complexes has been addressed by the research programme on institutional and regime interplay (Rosendal 2001; Oberthür and Stokke 2011; Stokke 2013). Despite individual case studies, however, no comprehensive account exists mapping the interplay of all elements of a regime complex, particularly not on forests. According to Biermann et al. (2009) a core analytical question is whether such fragmented overall governance architectures are rather synergistic or conflictive in nature. In very specific issue areas, however, more in-depth knowledge about the synergies and conflicts among individual elements are important to know in greater detail based on broader governance architectures as the unit of analysis. Hence, this study aims to (1) map the institutional fragmentation of the international forest regime complex based on all its detailed institutional elements and (2) analyse which of the elements are mutually synergistic and conflictive with other elements of that regime complex. In so doing, the study uses the forest regime case to develop a fine-grained general methodology for mapping institutional elements of regime complexes and to assess their detailed degrees of conflicts and synergies.

2 Theoretical framework

An international regime is defined as a “set of implicit or explicit principles, norms, rules and decision-making procedures around which actors’ expectations converge in a given area of international relations” (Krasner 1982, 186). Although originally these regimes aimed at constraining or modifying the external behaviour of states, a new generation of international regimes, which grew especially after the Rio Summit in 1992, attempt to influence domestic practices, policies and policy-making processes (Bernstein and Cashore 2012).

While international regimes thrived, a new form of governance based on voluntary agreements was created. This new form of private governance has been referred to as transnational regimes. The main difference between international and transnational regimes is that in the latter, non-state actors generate the set of norms and rules instead of states (Pattberg 2012). The resulting new complexity led scholars to introduce the term Regime Complex that has been defined as arrangements of a loosely coupled variety. “Regime complexes are marked by connections between the specific and relatively narrow regimes but the absence of an overall architecture or hierarchy that structures the whole set” (Keohane and Victor 2011, 8). This phenomenon has been described as a fragmented global governance architecture or institutional fragmentation of global governance (Biermann et al. 2009; Zelli and Van Asselt 2013). Fragmentation can be defined as “a patchwork of international institutions that are different in their character (organizations, regimes, and implicit norms), their constituencies (public and private), their spatial scope (from bilateral to global), and their subject matter (from specific policy fields to universal concerns)” (Biermann et al. 2009, 16).

By using the case of the climate change regime complex and without detailed conceptualization, Keohane and Victor (2011) refer to the regimes and other institutions constituting a regime complex as institutional elements. However, not all institutional elements are necessarily *fully* within the institutional setup of the complex (Keohane and Victor 2011). This is, because they are not *fully* related to the issue at the heart of a given regime complex and, hence, not within the issue area addressed by it. Consequently, the authors’ concept of an institutional element remains ambiguous because they do not clearly conceptualize it as distinct, genuine building block of a regime complex, which in its *entirety*, is an integral part of the complex. Our approach to fragmentation is based on the concept of institutional elements, and argues that an international regime complex is formed by a more or less complicated patchwork of these institutional elements, which constitute our basic unit of analysis. The institutional elements are then a distinct building block of a regime complex, which in its entirety is an integral part of the complex. This includes the possibility of a regime complex made up of a number of institutional elements, which originate around issues that are far from the issue being addressed by the regime complex at hand (Giessen 2013). Whereas the findings by Biermann et al. (2009) regarding the framework for analysis of fragmentation are very useful at a macro-level (architectures), the notion of institutional element as the basic unit of analysis provides with an improved framework to study fragmentation at a micro-level, therefore a deeper understanding of conflicts and synergies within regime complexes.

Our concept allows for more fine-grained analyses of a regime’s aspiration towards a particular issue, especially if this issue is not the core issue of the element’s regime of origin. Instead of using the broad, often very general institutional provisions of the regime of origin, institutional elements of a regime complex are capable of drawing the analyst’s

attention to those aspects, which are directly, and in concrete detail relevant for the very issue and the related regime complex he or she is interested in. Consequently, our notion of an institutional element serves as actor-centred, yet structural (institutional) link between the *structures* provided by a regime complex and the issue-specific *plan of action as well as course of action* developed under (or within) a regime.

For studying the international face of a regime complex the IFRC serves as an insightful case which has so far been described as fragmented (Humphreys 1999, 2006; Rayner et al. 2010), hollow (Dimitrov 2005; Dimitrov et al. 2007), ineffective (Humphreys 1999, 2006; Dimitrov 2005) and a failure (Dimitrov 2005; Giessen 2013). However, Giessen (2013) claims that the main characteristic of the IFRC is its fragmentation, which also explains the other three attributes. It entails a remarkably wide array of conflictive interests (McDermott et al. 2010; Humphreys 2006), ranging from complete conservation of forests to the replacement of forests for development through agricultural, infrastructure and settlement activities. Serious political efforts have been undertaken to consolidate the IFRC under a global and recently under regional forest conventions which mainly failed (e.g. Forest Europe, with the exception of the Central America Convention on Forest Management and Conservation). Hence, influential interests must be assumed to be at work benefiting from and maintaining this particular degree of institutional fragmentation. Consequently, the forest case is not an instance of a fragmented regime complex which exists due to a mere lack of political will. It rather is a case in which specific actors must be assumed to actively benefit from the institutional design as well as from its ineffectiveness, resulting both from the design and from multiple customizations of its elements during the long way of multi-level implementation.

Using policy analysis terminology, the IFRC is a programme consisting of issue-specific policy goals, measures or instruments, as well as implementing actors (Howlett and Ramesh 2003; Krott 2005). Likewise, each forest institutional element entails policy goals, measures, and implementing actors (Giessen 2013). We define forest institutional element as: “international (beyond regional scope) and multilateral, treaties and/or agreements which directly address forests, either focusing on sustainable forest management (SFM) or more specific goals, such as biodiversity conservation or climate change mitigation; and have achieved, or have the potential to achieve, significant effects on forests at a global scale”, after the definition of Rayner et al. (2010) on “core components”.

Against this theoretical background we formulated the following propositions:

P1: Institutional elements forming the IFRC stem from diverse regimes of origin from many different policy sectors that go beyond purely forest-focused issue areas.

P2: Synergies between elements of the regime complex will be limited to vague institutions with little policy substance.

P3: Conflicts between elements of the regime complex will prevail among substance-rich elements, which formulate clear policy goals and instruments.

3 Methodology

3.1 Mapping the international forest regime complex through a core institution method

In order to identify the institutional elements forming part of the IFRC, a two-step method was applied aiming at reducing a potential bias. Since the number of elements changes over time, a specific date was established at the end of 2014. As a first step, based on Giesen (2013), a review on the most relevant literature on the subject was carried out, including Downes (1999), Humphreys (2006), McDermott et al. (2010), Glück et al. (2010), Holmgren (2010) and Paoloni and Onorati (2014).

The institutional elements found were then compared to our definition of institutional element, excluding all elements which did not fit the definition. As a result, a preliminary list of the institutional elements forming the IFRC was obtained.

Second, an actor-based method was developed and applied by identifying the United Nations Forum on Forests (UNFF) as the most comprehensive global institution (Singer and Giessen 2017) with regular and transparent reporting on forest issues. This central key position of UNFF was used in order to identify other relevant institutional elements of the IFRC, based on their relevance as demonstrated by the (non-) consideration in UNFF deliberations. A qualitative content analysis of the reports of each of the UNFF sessions was carried out, identifying additional actively discussed and referenced international institutions. All newly identified elements which fit our definition of forest institutional elements were then added to the preliminary list resulting in the final list of all the institutional elements forming part of the IFRC.

Hierarchy among the institutional elements was not considered, even in cases where an institutional element had been built upon another on (e.g. the United Nations Framework Convention on Climate Change and the Kyoto Protocol, or the Convention on Biological Diversity and the Cartagena Protocol) since countries can be part of a Convention while not being part of the Protocol. Not considering hierarchy allowed for a more comprehensive and in-depth view of each element forming part of IFRC with their individual goals allowing for a clearer view of the conflicting or reinforcing areas.

3.2 Policy analysis performed on the institutional elements: synergies and conflicts among their goals

Following Krott (2005) a policy analysis of all institutional elements previously identified was carried out by identifying goals, instruments and actors of each institutional element.

The identification of the nature of the synergistic or conflictive relation between the goals of the different institutional elements was done by qualitatively comparing them one to one. After a preliminary analysis revealed an extremely low degree of actual policy instruments as well as a lack of specificity in the implementing actors, we limited our study to the goals of the institutional elements.

Following Biermann et al. (2009), the nature of the interaction among all the institutional elements was classified in three categories: synergistic, neutral or conflicting. An interaction was classified as synergistic when the accomplishment of the goals of the one would help the accomplishment of the goals of the other. These positive interactions were understood as (1) having a shared objective, (2) a citation of one of the elements in the

text of the other or (3) a step towards the same overarching objective. On the other hand, a conflict was identified when in order to achieve the goals of one element, the goals of the other element were weakened. A third type of interaction was the neutral or non-interaction (1) when the fields of action of the two institutional elements analysed were considered far-fetched, and none of the two elements mentioned the other, (2) when the link between the two institutional elements was too far, either because the wording was ambiguous, or because the focus was given to different aspects, and lastly (3) when the scope according to the text of one of the two elements was very different from the scope of the other.

According to Biermann et al. (2009), the *overall* fragmentation of a regime complex may be assessed as being synergistic, cooperative or conflictive in character. We adapted this concept in two ways: first, by only using the two extreme ends of the continuum, i.e. conflictive and synergistic, facilitating clear analytical findings; and second, by further developing the fragmentation concept towards our notion of *individual* institutional elements of a regime complex and applying it to the interplay among each of the institutional elements of the IFRC found.

4 Results

4.1 Mapping the international forest regime complex

Our results show that the international forest regime complex is composed of 41 institutional elements (Fig. 1). These elements were observed as mainly stemming from the following policy fields or sectors: sustainable development, climate change, forestry, trade, biodiversity, species and habitat conservation and human rights. The forest institutional elements are, as it has been argued before, developed and employed by different actors in different arenas, making the IFRC highly fragmented. The negotiating processes within the IFRC are for dealing with a wide range of issues which are usually not exclusive to the forest regime, but rather pertaining, or more directly related, to other international regimes. In many cases, it was hard to grasp at first glance how it could possibly influence forest policy. However, once examined in more detail, the connection to forests became more explicit.

Within the seemingly less forest-related elements, the Universal Declaration of Human Rights (UDHR 1948), core to the human rights regime, was identified. Human Rights are to be respected in all UN processes, and are among the international norms which all countries are expected to respect. Article 17 of the UDHR states that “*No one shall be arbitrarily deprived of his property*” (UN General Assembly 1948). This article relates to the land-grabbing phenomena occurring nowadays, mainly in Africa, and which is a subject matter of work of international institutions such as FAO, leading to the development of “*Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the context of national food security*” (2012), another institutional element featuring in the map.

Along the same lines, we find the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW 1979), the International Labour Organization’s (ILO) Declaration on Fundamental Principles and Rights at Work (1998), as well as the two main existing conventions protecting the rights of Indigenous Peoples, the Indigenous and Tribal Peoples Convention (ILO C169, 1989) and the United Nations Declaration on the Rights of Indigenous Peoples (2007). The extent to which these conventions are relevant to forests is slightly easier to see. In the case of women, several studies report on the

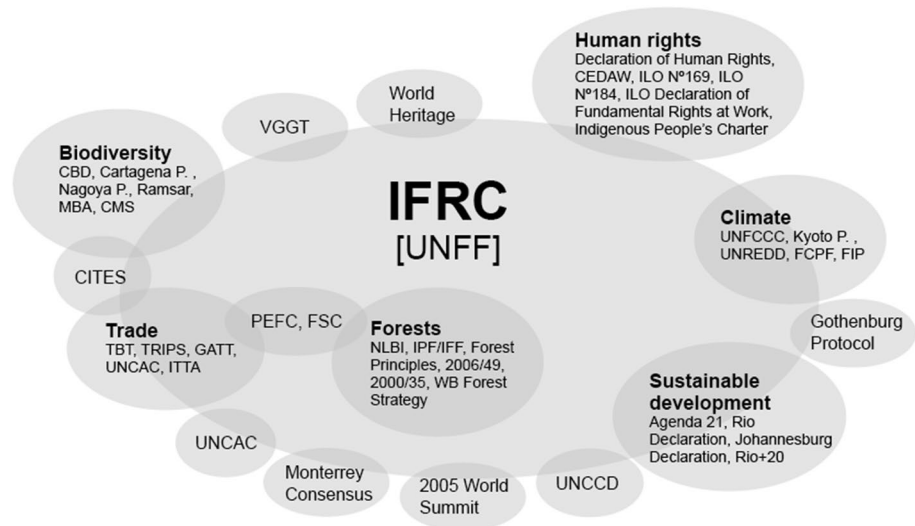


Fig. 1 Mapping the institutional elements of the international forest regime complex. List of elements; (1947) General Agreement on Tariffs and Trade; (1948) Universal Declaration of Human Rights; (1971) Convention on Wetlands of International Importance especially as Waterfowl Habitat. (Ramsar Convention); (1971) Man and the Biosphere Programme; (1972) Convention concerning the protection of the World Cultural and Natural Heritage; (1973) Convention on International Trade in Endangered Species of Wild Fauna and Flora; (1979) Convention on Long-Range Transboundary Air Pollution. (Gothenburg Protocol); (1979) Convention on the Conservation of Migratory Species of Wild Animals; (1979) Convention on the Elimination of All Forms of Discrimination against Women; (1983) International Tropical Timber Agreement; (1989) C169 Indigenous and Tribal Peoples Convention 1989; (1992) Agenda 21; (1992) Convention on Biological Diversity; (1992) Non-legally binding authoritative statement of principles for a global consensus on the management, conservation and sustainable development of all types of forests (Forest Principles); (1992) Rio Declaration on Environment and Development; (1992) United Nations Framework Convention on Climate Change; (1993) Forest Stewardship Council; (1994) United Nations Convention to Combat Desertification in those countries experiencing serious drought and/or desertification, particularly in Africa; (1995) Agreement on Technical Barriers to Trade; (1996) Agreement on trade-related aspects of intellectual property rights; (1997) Kyoto Protocol to the United Nations Framework Convention on Climate Change; (1998) ILO Declaration on Fundamental Principles and Rights at Work; (1999) Programme for the Endorsement of Forest Certification; (2000) Cartagena Protocol on biosafety to the Convention on Biological Diversity to the CBD; (2000) Economic and Social Council Resolution 2000/35; (2000) Proposals for Action IPF/IFF; (2001) C184 Safety and Health in Agriculture Convention; (2002) Johannesburg Declaration on Sustainable Development; (2002) Monterrey Consensus of the International Conference on Financing for Development; (2002) The World Bank Forest Strategy; (2003) United Nations Convention Against Corruption; (2005) 2005 World Summit Outcome; (2006) Economic and Social Council Resolution 2006/49; (2007) Non-Legally binding instrument on all types of forests. (Forest instrument); (2007) United Nations Declaration on the Rights of Indigenous Peoples; (2008) United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries; (2009) Forest Investment Program; (2010) Nagoya Protocol on access to genetic resources and the fair and equitable sharing of benefits arising from their utilization to the Convention on Biological Diversity; (2012) “The Future We Want”; (2012) Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the context of national food security; (2013) The Forest Carbon Partnership Facility

differences observed in forest management associated with women being in charge (e.g. CPF 2012; Colfer and Minarchek 2013).

Also affecting forest's people, but in a slightly different way, is the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising

from their Utilization (2010), which purports to achieve the equitable sharing of the benefits of the genetic resources between the rightful owners of the land and the companies which develop products. This protocol is a supplement to the CBD, the most important international treaty on biodiversity conservation, and core to the biodiversity regime. Also a complement to the CBD is the Cartagena Protocol on Biosafety (2003) when handling genetically modified organisms. The Gothenburg Protocol to Abate Acidification, Eutrophication and Ground-level Ozone (1999) to the Convention on Long-Range Transboundary Air Pollution is also relevant, as it has led to the monitoring of this type of pollution in the 31 signatory countries across the world, and its successful implementation would eventually lead to better conserved forests.

Within the biodiversity and ecosystem regimes, several institutional elements relevant for forests were identified. Among them are the Convention on Wetlands (Ramsar Convention 1971), the Convention on the Conservation of Migratory Species of Wild Animals (CMS 1983) and the Man and Biosphere Program (MAB 1971) hosted by UNESCO. Another forest-relevant convention within UNESCO is the World Heritage Convention (1972). Its linkage to forests is embodied through their "Natural" side, including many forests across the globe in the World Heritage List (Law and Kriwoken 2017). Lastly, the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES 1973) regulates the trade of plant and animal across the contracting States. This is a good example of an institutional element which connects to two clearly differentiated areas, such as biodiversity and trade.

In the case of trade processes, the World Trade Organization (WTO) is one of the main institutions hosting agreements that encourage and facilitate free trade worldwide, such as the General Agreement on Tariffs and Trade (GATT 1947), the Agreement on Technical Barriers to Trade (TBT 1995) and the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS 1995). While they are not forest-focused, they affect the global trade of timber and non-timber forest products. Moreover, the IFRC has two elements which clearly combine forest management and timber trade: the International Tropical Timber Agreement (ITTA 2006), which constitutes the base of the International Tropical Timber Organization (ITTO); and forest certification schemes that, with the ultimate formal goal of achieving sustainable management of forests, employ markets as a tool. The two main certification schemes at the international level are the Forest Stewardship Council (FSC 1993) and the Programme for the Endorsement of Forest Certification (PEFC 1999).

Another powerful international institution hosting processes affecting forests is the World Bank. The World Bank has a forest strategy which aims at tackling the world's poverty by funding forest-related projects. Among the same lines, but without such a powerful institution, we find the Monterrey Consensus adopted by the International Conference on Financing for Development in 2002, whose main goal is to eradicate poverty and promote sustained economic growth, including forests as a resource to achieve this objective. Both elements include sustainable forest management (SFM) tools which are directly related to institutional elements that may be considered as purely forest-related. Namely, the United Nations Economic and Social Council Resolutions that establishes the UNFF (ECOSOC 2000/35) and sets the four global objectives on forests (ECOSOC 2006/49), the set of 270 proposals for action of the IPF/IFF Process, the Forest Principles (1992) and the Non-Legally Binding Instrument (2007). These institutional elements have the concept of SFM as a common core element. The elements revolving around the concept of sustainable development are also part of the IFRC. These elements are the Agenda 21 (UN 1992), the Rio Declaration (1992), the Johannesburg Declaration on Sustainable Development (2002),

the 2005 World Summit Outcome and “The Future We Want”, which is the outcome of the Earth Summit in Rio in 2012, also known as Rio+20.

Another important issue area which, due to its complexity, encompasses many others is the climate change regime (Keohane and Victor 2011). The core element of this regime is the United Nations Framework Convention on Climate Change (UNFCCC 1992), and its extension, the Kyoto Protocol (1997) that limits the developed countries emissions of greenhouse gases. Complimentary to this convention, the forest-oriented Reducing Emissions from Deforestation and Forest Degradation in Developing Countries (REDD+) initiatives are found, including the UN-REDD, the Forest Investment Program (FIP) and the Forest Carbon Partnership Facility (FCPF). Additionally, the United Nations Convention to Combat Desertification (UNCCD 1992) engages with many issues, such as forests, given its holistic approach. Somehow transverse to all institutional elements is the United Nations Convention against Corruption (UNCAC 2003).

4.2 Synergies and conflicts among the goals of the institutional elements

The total number of conflicts between forest institutional elements found is 29 (Table 1). This might be considered as a relatively small number of conflicts, given the large number of elements, and the fact that each of them is discussed in completely different circumstances. The most conflictive element is the CBD, with 9 conflicts, followed by the two certification schemes, the ITTA and the NLBI. The CBD encounters most conflicts with those institutional elements focused on sustainable forest management. ITTA, on the other hand, finds conflict areas with the REDD+ strategies and the CBD. These examples show

Table 1 Conflicting relationships identified among the goals of the institutional elements of the international forest regime complex

	WTO-GATT	WORLD HERITAGE	OTIS	CD/WHK	ITTA	ILO N°184	CBD	FOREST PRIORITIES	PEC	WTO/TRIPS	PEFC	NABU	UN/INDIG. PEOPLES	UN-REDD	FIP	NAGOYA P.	VEGT	FCPF	
WTO-GATT	■																		
HUMAN RIGHTS			X																
RAMSAR																			
MAB																			
WORLD HERITAGE		■																	
CITES	X		■							X								X	
GOTHEBURG																			
CMS																			
CEADW						X							X						
ITTA					■		X							X	X				X
ILO N°169				X		■	X					X							
AGENDA21																			
CBD					X	X	X	X		X	X	X	X						
FOREST PRINCIPLES							X	X											
RIO DECLARATION								X											
UNFCCC																			
PEC								■											
UNCCD											X			X	X				X
WTO-TBT																			
WTO-TRIPS				X						■									
KYOTO							X										X		
ILO FTAL RIGHTS@WORK																			
PEFC							X		X		■			X	X				X
CARTAGENA P. 2000/35																			
PROPOSAL FOR THE FIFTH																			
ILO N°184																			
JHB DECLARATION																			
MONTERREY C.																			
WB FOREST STRATEGY							X												
UNCAC																			
2005 WS 2006/49																			
NLBI						X	X					X	X						
UN-INDIG. PEOPLES				X			X					X	■						
UN-REDD					X				X		X			■					
FIP					X				X		X				■				
NAGOYA P.										X						■			
RIO+20																			
VEGT		X																	■
FCPF				X				X		X									■

how conflicts arise among those elements which are clearer in their approaches while having opposite goals. As an example, the CBD intends to be a powerful conservation policy, therefore encountering fields of conflict with those institutional elements focusing on sustainable forest management. However, conflicts can be also found within the CBD with its main goals “the conservation of biological diversity” and “the sustainable use of its components” (CBD 1992).

In general terms, as the goals of an institutional element get more precise (CBD, ITTA) and better defined (FSC, PEFC), the more conflicts the institutional element encounters.

The total number of synergistic interactions found among the 41 institutional elements is 820 (Table 2). It may be observed that the broader the spectrum the institutional element covers, the more synergies it has. As a result, those elements evolving around terms such as sustainable development (Agenda 21, 2005 World Summit, Rio + 20 Declaration), or sustainable forest management (Proposals for Action IPF/IFF, Forest Principles), have an especially high number of synergies. It may be noted as well that all institutional elements have at least one field of synergy with another institutional element.

The institutional elements with the highest number of synergies are those which encompass a wider number of topics, or those that refer explicitly to forests such as the ECOSOC Resolution 2006/49 or the IPF/IFF Proposals for Action which try to harmonize the

Table 2 Synergistic relationships among the goals of the institutional elements of the international forest regime complex

	WTO-GATT	HUMAN RIGHTS	RAMSAR	MAB	WORLD HERITAGE	OTES	GOTHENBURG P.	CMS	CEDAW	ITTA	ILO NP169	AGENDA21	CBD	FOREST PRINCIPLES
WTO-GATT										X				
HUMAN RIGHTS								X			X	X		
RAMSAR								X				X	X	
MAB				X	X			X				X	X	X
WORLD HERITAGE				X		X		X			X		X	X
CITES					X			X					X	
GOTHENBURG												X		X
CMS			X	X	X	X	X						X	
CEDAW		X										X		
ITTA	X											X		X
ILO NP169		X			X							X		X
AGENDA21		X	X	X			X	X	X	X	X		X	X
CBD			X	X	X	X		X				X		
FOREST PRINCIPLES				X	X		X			X	X	X		
RIO DECLARATION	X		X			X	X	X	X		X	X	X	X
UNFCCC								X				X		
FSC	X							X	X		X	X		X
UNCCD									X			X		X
WTO-TBT	X									X				
WTO-TRIPS	X									X				
KYOTO								X				X		
ILO FTAL RIGHTS@WORK		X							X			X		
PEFC	X							X			X	X		X
CARTAGENA P. 2000/35			X	X	X							X		
PROPOSALS for action IPF/IFF	X									X	X	X	X	X
ILO N°184								X				X		
JHB DECLARATION			X					X				X	X	
MONTERREY C.	X							X				X		
WB FOREST STRATEGY								X	X	X	X			
UNCAC		X										X		
2005 WS	X	X				X		X	X		X	X	X	X
2006/49								X	X			X		X
NLBI						X				X		X		X
UN-INDIG. PEOPLES		X			X						X	X		X
UN-REDD												X		
FIP												X		
NAGOYA P.											X	X		X
RIO+20	X	X				X			X		X	X	X	X
VGGT		X							X		X	X	X	
FCPF												X		

Table 2 (continued)

	RIO DECLARATION	UNFCCC	FSC	UNCCD	WTO-TBT	WTO-TRIPS	KYOTO	ILO FTAL RIGHTS@WORK	PEFC	CARTAGENA P.	2000/35	PROPOSALS for action@IFF	ILO N°184	JHB DECLARATION
WTO-GATT	X		X		X	X			X			X		
HUMAN RIGHTS								X						
RAMSAR	X													X
MAB										X				
WORLD HERITAGE										X				
CITES	X													
GOTHENBURG	X													
CMS	X	X	X				X		X					
CEDAW	X		X	X				X						X
ITTA					X	X						X		
ILO N°169	X		X						X			X		
AGENDA21	X	X	X	X				X	X	X		X	X	X
CBD	X									X		X		X
FOREST PRINCIPLES	X		X	X					X		X	X		
RIO DECLARATION	X	X		X	X	X				X	X	X	X	X
UNFCCC	X	X		X			X					X		
FSC	X		X		X			X			X		X	
UNCCD	X	X		X			X					X		
WTO-TBT	X		X		X				X			X		
WTO-TRIPS	X				X	X						X		X
KYOTO		X		X			X					X		
ILO FTAL RIGHTS@WORK			X					X						X
PEFC					X			X	X			X	X	
CARTAGENA P.	X									X	X		X	
2000/35	X		X								X	X		X
PROPOSALS for action@IFF	X	X	X	X	X	X	X	X	X		X	X	X	X
ILO N°184			X						X	X			X	
JHB DECLARATION	X					X		X			X	X		X
MONTERREY C.					X	X								X
WB FOREST STRATEGY			X					X	X					
UNCAC			X											X
2005 WS	X	X	X	X	X	X	X		X	X		X	X	X
2006/49	X		X	X					X		X	X		X
NLBI		X	X	X					X			X		X
UN-INDIG. PEOPLES	X		X						X			X		
UN-REDD	X	X												
FIP	X	X												
NAGOYA P.	X											X		X
RIO+20	X	X	X	X	X	X	X		X		X	X	X	X
VGGT			X										X	
FCPF	X	X												

international forest regime. The Rio Declaration (1992) and “The Future We Want” (2012), together with the Agenda 21 and the 2005 World Summit are also elements with a high number of synergies that can be explained by the wide range of topics included.

5 Discussion

5.1 Mapping the fragmentation of the international forest regime complex

As Biermann et al. (2009) argue, fragmentation exists in basically all areas of international governance or regimes, and the international forest regime complex is no exception. If anything, the forest regime is a good example of a highly fragmented regime, mainly probably due to the absence of a global agreement on forests. This notion is not new and has already been thoroughly discussed by various scholars (Humphreys 2006; Glück et al. 2010; McDermott et al. 2010; Giessen 2013). However, our results show that actually the IFRC is much more fragmented than it was assumed. Through the mapping of the forest institutional elements, 41 elements were identified (Fig. 1). This is twice the amount previously described by other authors like Humphreys (2006), Glück et al. (2010) and McDermott et al. (2010). The reason for these differences might lie in the methodology applied in this

study which understands the IFRC as a wide institution engaging not only with the forest-focused issue areas, but also with the forest-related and forest-relevant areas (Giessen et al. 2016). The employment of the finer-grained concepts from policy analysis also accounts for the detection of more elements than previous studies.

Our study exclusively addressed the *global* level where we found the IFRC consisting of 41 forest-focused and forest-related institutional elements stemming from the seven policy fields or sectors (Fig. 1). This result confirms our proposition (P1) that the elements forming the IFRC stem from other regimes of origin such as climate change, trade, biodiversity and human rights, among others. It must be expected that the observed fragmentation will further increase in the future, as no unifying, integrative force is in sight and adjacent policy fields and sectors such as agriculture, water and transport/ infrastructure do or soon will develop institutional elements also touching upon forests (e.g. Sahide et al 2016 RSPO). The findings on the utility of fragmentation for transnational policy sectors imply that the main line of conflict within the IFRC not only runs, as so far suggested (e.g. Humphreys 2006; Chan and Pattberg 2008), between the interests of states from the global North and South. Rather, the conflicting interests and strategies of broader transnational policy sectors such as forestry, nature conservation, human and especially indigenous peoples' rights, trade and agriculture are major factors and important supplementary explanations for fragmentation based on a utility of fragmentation argument. This interpretation of our results points towards the fact that multiple sectors institutionally and physically aim to get access to global forests.

5.2 Seemingly synergistic fragmentation through non-decisions and empty formulas

Our results show that the high degree of fragmentation seems to be of a rather synergistic character. We found the goals of each of the 41 institutional elements to display multiple formal, programmatic synergies with many of the other elements. Upon closer inspection, however, this synergistic appearance is mainly due to the high abundance of very general, content-poor, unspecific, non-concrete, yet high-level, politically well-visible institutional elements of the regime complex. These results support our proposition (P2) that synergies between elements of the regime complex will be limited to vague institutions with little policy substance such as the Agenda 21, the Rio and Rio +20 Declarations, the 2005 World Summit Declaration, the Rio Forest Principles and the IPF/IFF Proposals for Action. Based on an analysis of each of the goals of the regime's institutional elements we found that the above-mentioned very general elements display remarkably high frequencies of formal programmatic synergies with other institutional elements of the IFRC. These synergies among very general goals without any backing from instruments merely provide the IFRC a *seemingly* synergistic character.

These findings illustrate that the broader the scope of an institutional element, the more potential synergies can be observed in its formal programme. In this conjunction, broad and rarely defined concepts such as Sustainable Development and Sustainable Forest Management can function as an "empty formula" (Krott 2005), entailing a number of non-decisions about conflictive issues on substance matter. By this a consensual agreement on the respective element is enabled at high political level, safeguarding that multiple institutional elements of the IFRC may later be customized by powerful actors. These results illustrate that *formally* such empty formulas do not conflict much with other elements of the regime complex, but promise a plethora of potential synergies

amongst them and enable compromise, as proposed by proposition (P2). *Informally*, however, those overly synergistic elements of the IFRC are so weakly equipped in terms of organizational mandates, and measurable goals, that they are unlikely to develop *any* meaningful, i.e. persuasive, hence potentially conflictive or synergistic capacity. Thus, by formally employing empty formulas in high-level, global institutional elements of the regime complex, no *realistic* options for synergies among elements are created.

An alternative way of finding and explaining possible synergies within the IFRC would be zooming out on more abstract aspects of the regime complex, beyond the high-resolution institutional elements. This would entail looking into the broader norms and principles, rather than the detailed procedures only. McDermott et al. (2010), Humphreys (2006), as well as Gale and Cadman (2014) indeed find fields of synergies at the level of norms and principles, especially concerning Sustainable Forest Management. Agreement on such principles, however, does not usually entail assigning clear responsibilities, budgets and staff for supporting any institutional element or organization from the outset. It is a discursive manner of paving the way for the next steps towards more detailed and operational regime elements (Burns and Giessen 2016), which is also highly political and conflictive, as demonstrated by the fight over the principle of Sustainable Forest Management vs. sustainable management of forests (Negi and Giessen 2018). We see the original contribution of the present analysis exactly in providing such fine-grained detail, which suggests that especially the conflictive aspects among institutional elements need to be put at the heart of analysis.

5.3 De facto conflictive fragmentation in concrete subject matters

Complementary to the above-mentioned findings, we discerned that the more concrete the objectives and instruments of an institutional element are, the more conflictive it is with other elements, already at the formal level of formulation as proposed in P3. We found clear conflicts in at least four ways: *First*, conflicts were observed between free-trade-related elements such as WTO-GATT, WTO-TRIPS and ITTA on the one hand, and biodiversity, species and habitat conservation elements, such as CITES and the CBD, on the other hand. *Second*, strong conflicts between their formal goals were found amongst elements explicitly supporting the roles of indigenous peoples as *civic* actors and those explicitly strengthening national *governmental* actors. In this vein the state-driven CBD and UNFF-NLBI regimes are conflicting with the goals of the ILO 169 as well as the UN Indigenous Peoples regimes, which especially in post-colonial settings aim to provide civic groups with land title rights. This attempt to empower forest-related civic actors *vis-a-vis* state actors also supports hypotheses on the rivalry between government and new governance approaches claimed by several authors (Cashore and Stone 2012; Burns et al. 2016). *Third*, clear conflicts were observed among all REDD+ elements of the IFRC (UN-REDD, FCPF, FIP), turning forests into tradable units of carbon (McDermott 2014), and the established forest certification schemes of FSC and PEFC, promoting sustainable forest management based upon more comprehensive goals. *Last*, important conflicts among the formal goals can be found *within* individual elements of the IFRC themselves. Such *internal goal conflicts* were observed within the UNFF-NLBI and the CBD. They entail the option for a regime of easily being customized by actors from either of the conflicting camps, or of resulting in a stalemate as observed earlier in the case of the IFRC.

5.4 Fragmentation useful for multiple actors and policy sectors

The above findings of the IFRC consisting of 41 institutional elements further suggest that the regime complex offers some beneficial institutional elements to any actor with an interest related to global forests. We find that this makes the regime complex a “menu to choose from”, especially for domestic actors (Singer and Giessen 2017). This “serve yourselves!” nature of the IFRC creates political access to forests for multiple actors and policy sectors at the global level, yet with quite diverging capacities and institutional backing, depending on the institutional elements. This flexible option in turn is an important asset especially for domestic bureaucracies, who in their logics of domestic bureaucratic rivalry prefer having “their” own sectoral institutional element at global level.

Despite being useful for specific domestic state administrations the fragmentation of the IFRC also serves the broader interests of specific transnational policy sectors, first and foremost the forestry sector. By establishing UNFF as a core institution of the IFRC at a remarkably high level within the UN system, with a resulting high visibility of forests and sustainable forest *management* as the leading concept (Singer and Giessen 2017), the forestry sector profited from the image of global forests being helped and forestry practices being improved, as well as from the legitimizing effect this political attention to forests at global level had for usual timber harvesting and use practices. At the same time, and more importantly, our results show that the sector further benefited from the non-legally binding and non-regulatory character of the regime, i.e. from not passing any *substantial* regulation, goals, or instruments on forest management practices, from the lack of financial means of the regime to support meaningful implementation of the few, vague commitments made, and from the empty formula-nature of SFM as a political concept. This non-regulation benefit for the forestry sector was later further enhanced by continuously increasing fragmentation through establishing a plethora of other forest-focused and forest-related institutional elements, and by keeping almost all norms and procedures of the IFRC voluntary, unspecific and underequipped in terms of means for implementation (Eikermann 2015). This illustrates that fragmentation at global level is quite useful for key forestry actors and institutions in order not to force competing forestry-related interest from between and within different countries into a compromise, but establishing core regime elements, such as ITTA, UNFF and SFM, which are in line with these prevailing economic interests.

At the same time and besides forestry, also other forest-related policy sectors succeed in deriving benefits from the fragmentation of the IFRC. In line with forestry, the trade sector, with its strong affiliations to the free trade ideology, benefits from forests remaining a largely non-regulated policy field. However, only few studies have addressed this link. A reason for the lack of these studies might be the strong trade sector’s general strategy of avoiding terminology on specific commodities, but claiming universal application of trade rules. This is especially important when considering forests and their products, because timber in global trade is the commodity which displays the highest trade volume (i.e. cubic metres, Kastner et al. 2011). Thus, international trade in timber has far-reaching implications even regarding, for example, general international trade logistics, overseas transport capacities, multiple customs procedures, as well as harbour and subsequent rail, road and milling infrastructures. Consequently, while timber trade physically dictates a number of trade-related international rules, the trade sector will never formally relate its policies to timber or even forests for maintaining its

all-embracing claim of regulating across all commodities and hence in all policy sectors with principled priority. This camouflaging strategy makes it difficult for analysts to formally identify elements of international trade regimes which informally (mainly) aim at forests, forest products or related trade and trade logistics issues. Our methodology proved strong in this sense, identifying institutional elements from the trade sector that were forest relevant.

The nature conservation sector also benefits from the fragmentation, yet to a lesser extent: First and politically substantial, it benefits from a plethora of political avenues to forest policy processes. Second and less substantially, it benefits from a legitimizing effect, especially stemming from the *discourse* around specific, publicly recognized elements of the IFRC.

6 Conclusions

The analysis identifies more than 40 institutional elements formulating specific goals towards forests and making up the international forest regime complex. These elements stem from many policy sectors, including forest management, trade, biodiversity, climate change, human rights. This makes the IFRC a case of exceptionally high degrees of fragmentation.

The analysis further reveals synergies and conflicts among the goals of these institutional elements. Synergistic relations are found between many elements, which are, however, limited to very general, content-poor, yet high-level, politically well-visible institutional elements of the regime complex. Largely, they seem to be the result of active non-decisions within the elements as well as of the use of sustainability (or sustainable development) as an empty formula.

In contrast, quite conflictive relations are found between institutional elements of the regime complex, which are of a concrete subject matter. In particular, goal conflicts are revealed among (1) trade and conservation-related elements, (2) elements explicitly in support of civil society and those in strong support of state actors and (3) components giving credit to forest carbon sequestration through REDD+ and forest certification for sustainable management. Lastly, internal goal conflicts within individual elements were found for CBD as well as the UNFF–NLBI.

While the vague and mostly synergistic elements provide for useful platforms for continued exchange, due attention and political backing are necessary if the concrete and meaningful elements are to achieve tangible impacts beyond their formulation.

The analysis further suggests that the exceptionally high degree of fragmentation renders the international forest regime complex a case, in which a multitude of political actors will find ways of utilizing specific regime elements in the pursuit of their diverse interests. In contrast, developing the regime complex into a coherent direction, supported by the decisive elements, seems an overambitious endeavour.

On a methodological note, the study develops an innovative, and self-referential methodology for identifying institutional elements pertaining to a given regime complex. This core institution method has proven being suitable and empirically fruitful for analysing regime complexes, whose delineations might not always be clear. In particular, this method avoids biased decisions by researchers as to whether some specific institutional elements are or aren't counted into a given regime complex.

This study only revealed regime elements of a global nature. In order to fully map the IFRC, regional as well as bilateral regimes will need to be addressed and accounted for in future research. Also, the analysis only scrutinized the goals of institutional regime elements, without considering their instruments and their (possible) implementation. Such potential conflicts and trade-offs along with the associated international and domestic politics are very likely to occur in the implementation stages and should be subject to detailed future research.

Acknowledgements We thank EFI colleagues Albert Garduño and Alba Pueyo for their help with the graphics, Yitagesu Tekle for his support as well as Adeline Dontenville for her comments. We would also like to thank the reviewers for their constructive comments. We further acknowledge financial support provided by the German Research Foundation (DFG).

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