



Carbonizing forest governance:

Analyzing the consequences of REDD+
for multilevel forest governance

Marjanneke J. Vijge



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Thesis committee

Promotor

Prof. Dr A.P.J. Mol
Professor of Environmental Policy
Wageningen University

Co-promotor

Dr A. Gupta
Associate professor, Environmental Policy Group
Wageningen University

Other members

Prof. Dr M.N.C. Aarts, Wageningen University
Prof. Dr B.J.M. Arts, Wageningen University
Prof. Dr J. Gupta, University of Amsterdam
Prof. Dr M. Lederer, Westfälische Wilhelms-Universität Münster, Germany

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Marjanneke J. Vijge

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Contents

Acknowledgements	V
Contents	IX
List of figures	XIII
List of tables	XIII
List of abbreviations	XIV

CHAPTER 1: Introduction	1
1.1 The problem of global deforestation	2
1.2 The carbonization of forest governance	3
1.3 The consequences of carbonizing forest governance	4
1.4 Analyzing the consequences of carbonizing forest governance	7
1.4.1 Complexity of the governance domain	7
1.4.2 Sites of authority	9
1.4.3 Production and use of knowledge	11
1.4.4 Use of policy instruments	14
1.4.5 Homogenization of environmental governance?	16
1.5 Research objective and research questions	17
1.6 Research methodology	18
1.6.1 Discourse analysis as an analytical tool	18
1.6.2 Multilevel analysis and case study selection	19
1.6.3 Data collection	22
1.6.4 Data analysis	23
1.6.5 Research reliability and validity	24
1.7 Outline of the thesis	26

CHAPTER 2: Making REDD+ transparent: The politics of measuring, reporting, and verification systems	29
2.1 Introduction	31
2.2 Embracing transparency	32
2.3 Institutionalizing transparency	35
2.3.1 Institutionalizing the scope of MRV systems: Disclosure about what?	35
2.3.2 Institutionalizing the modalities of MRV systems: How and by whom?	39
2.4 Effects of transparency	41

2.4.1	REDD+ MRV systems: Who is empowered?	41
2.4.2	REDD+ MRV systems: Fueling environmental improvements?	43
2.5	Conclusion	43
CHAPTER 3: Framing REDD+ in India: Carbonizing and centralizing Indian forest governance?		45
3.1	Introduction	47
3.2	Governing the climate-forest interface in India: The Green India Mission	50
3.2.1	India's REDD+ strategy and development of the GIM	50
3.2.2	Putting REDD+ into practice in India	51
3.3	Carbonization and centralization: Promoted by the GIM?	56
3.3.1	Carbonization and its prospects: The GIM framing of carbon and non-carbon benefits	56
3.3.2	Centralization and its prospects: The GIM framing of sites of governance authority	59
3.4	Conclusion	62
CHAPTER 4: Competing discourses on REDD+: Global debates versus the first Indian REDD+ project		65
4.1	Introduction	67
4.2	Case study and methodology	68
4.2.1	Case study of the first REDD+ project in India	68
4.2.2	Methodology	69
4.2.3	Theoretical approach: Discourse analysis	70
4.3	Identifying storylines around REDD+	71
4.3.1	What should REDD+ achieve: Carbon or non-carbon objectives?	71
4.3.2	Who should monitor REDD+ outcomes: Technical experts or local communities?	72
4.3.3	How should REDD+ be financed: Market-based or fund-based?	74
4.3.4	The three sets of storylines	75
4.4	Storylines around REDD+ at the project level	75
4.4.1	What should REDD+ achieve?	76
4.4.2	Who should monitor REDD+ outcomes?	79
4.4.3	How should REDD+ be financed?	80
4.5	Conclusion	82

CHAPTER 5: Framing REDD+ in the national political arena: A comparative discourse analysis of Cameroon, Indonesia, Nepal, PNG, Vietnam, Peru and Tanzania	85
5.1 Introduction	87
5.2 Analytical framework and storylines around REDD+	87
5.3 Research methodology	90
5.4 Prominent views among national policy actors	93
5.5 Storylines reflected in national REDD+ policy documents	94
5.5.1 What should REDD+ achieve?	94
5.5.2 Who should monitor REDD+ outcomes?	98
5.5.3 At what level should REDD+ be governed?	100
5.5.4 How should REDD+ be financed?	102
5.6 Discussion	103
5.7 Conclusion	106
 CHAPTER 6: Conclusion	 107
6.1 Introduction	108
6.2 Carbonizing forest governance and its consequences	109
6.2.1 Carbonization at the global level	109
6.2.2 Carbonization at the national level	111
6.2.3 Carbonization at the project level	115
6.2.4 The diverse manifestations of carbonization and their consequences	117
6.3 Homogenization of environmental governance?	120
6.3.1 Shifting sites of authority	121
6.3.2 Diversity as well as homogenization in environmental policies and practices	123
6.4 Methodological reflections	125
6.4.1 External validity	125
6.4.2 The use of discourse analysis	127
6.5 A decade of REDD+: Taking stock and future outlook	127
 References	 130
 Appendices	 145
Appendix I: Number of interviews	145
Appendix II: List of interviewees	146
Appendix III: Interview guides and surveys	150

Summary	161
Samenvatting	167
WASS education certificate	173
About the author	175
List of publications by the author	177

List of figures

Figure 4-1:	Conceptualization of the storylines as spectra of answers to the three identified questions.	76
Figure 4-2:	Identification of stakeholders' storylines and reflection of storylines in the Khasi hills REDD+ project design.	83
Figure 5-1:	Percentages of national policy actors (dis)agreeing with the stance "All REDD schemes aimed at reducing CO2 emissions should also require the realization of other key benefits like poverty reduction and biodiversity conservation".	94
Figure 5-2:	Percentages of national policy actors (dis)agreeing with the stance "Scientific experts are the best and final authority on REDD".	94
Figure 5-3:	Percentages of national policy actors (dis)agreeing with the stance "All REDD accounting and payments should go through the national governments".	95
Figure 5-4:	Percentages of national policy actors (dis)agreeing with the stance "REDD schemes should only be financed through funds".	95
Figure 5-5:	Overview of storylines reflected in the countries' R-PPs.	103

List of tables

Table 1-1:	Hypotheses regarding the consequences of carbonization for the four dimensions of multilevel forest governance.	16
Table 1-2:	The four dimensions of multilevel forest governance as analyzed in the separate chapters.	27
Table 3-1:	Institutional architecture for REDD+ and the GIM in India.	52
Table 4-1:	Storylines regarding what REDD+ should achieve, who should monitor REDD+ outcomes, and how REDD+ should be financed.	76
Table 5-1:	Storylines related to the four questions.	90
Table 5-2:	Stances used to identify policy actors' positions related to the four questions.	92

List of abbreviations

CDM	Clean Development Mechanism
CFI	Community Forestry International
CIFOR	Center for International Forestry Research
ER-PINs	Emission Reduction Program Idea Notes
FAO	Food and Agriculture Organization of the United Nations
FCPF	Forest Carbon Partnership Facility
FRA	Forest Rights Act
GIM	Green India Mission
GOFC-GOLD	Global Observation for Forest Cover and Land Dynamics
IPCC	Intergovernmental Panel on Climate Change
JICA	Japan International Cooperation Agency
LULUCF	Land use, land use change, and forestry
MoEF	Ministry of Environment and Forests, India
MRV	Measuring, reporting and verification
NABARD	National Bank for Agricultural and Rural Development, India
NGO	Non-governmental organization
Norad	Norwegian Agency for Development Cooperation
PDD	Project Design Document
PES	Payment for ecosystem services
PNG	Papua New Guinea
R-PPs	Readiness Preparation Proposals
RED	Reducing Emissions from Deforestation
REDD	Reducing Emissions from Deforestation and forest Degradation
REDD+	Reducing Emissions from Deforestation and forest Degradation and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries
SBSTA	Subsidiary Body for Scientific and Technological Advice
SESA	Strategic Environmental and Social Assessment
UK	United Kingdom
UN	United Nations
UN-REDD	United Nations REDD Programme
UNFCCC	United Nations Framework Convention on Climate Change
US	United States
USAID	United States Agency for International Development
VCS	Verified Carbon Standard

CHAPTER 1

Introduction

1.1 The problem of global deforestation

One of the many intractable environmental challenges is global deforestation and forest degradation. Since 1990 the total net area of deforestation was 129 million hectare, representing a net annual loss of an area the size of South Africa (FAO, 2015). Deforestation and forest degradation occur mainly in the tropics, with many adverse consequences. Nearly 2 billion people depend on forests for their survival, employment and/or livelihood. Forests contain a large share of the world's biodiversity; about 70% of the terrestrial animal and plant species reside in forests. Forests are also a major source and sink of carbon dioxide and can thus contribute to or mitigate climate change. In addition, forests are often important to people's and nature's ability to adapt to climate change (Rayner et al., 2010; Arts and Babili, 2013).

Already for half a century, forests have been an issue of concern to the international community. Since the mid 1940s, the Food and Agriculture Organization of the United Nations (UN) has discussed and assessed international forestry issues. In the 1980s, the International Tropical Timber Organization was established to facilitate cooperation between timber producing and consuming countries. It was not until the 1990s, however, that the international community became concerned with sustainable forest management to maintain the multiple benefits that forests provide rather than timber production alone. Nevertheless, while the 1992 UN Conference on Environment and Development led to three conventions to address the issues of global climate change, desertification and biodiversity loss, countries failed to reach an agreement on a legally binding treaty to combat deforestation. The conference did, however, lead to a set of non-legally binding principles. From 1995 to 2000, the Intergovernmental Panel and Forum on Forests were mandated to discuss the implementation of those principles, carry out forestry assessments, and discuss options for a legally binding treaty. These discussions nowadays continue under the UN Forum on Forests, which resulted in a non-legally binding instrument on forests in 2007 (Rayner et al., 2010; Arts and Babili, 2013).

Despite the long history of debates in high-level political fora, the global forest regime is often considered unsuccessful or even non-existent due to the absence of a legally binding treaty (see e.g. Dimitrov et al., 2007, p. 243 on the forest "non-regime"). Indeed, global deforestation is still happening at great scale. Though the global rate of deforestation has slowed, the *net* annual decrease in forest area between 2010 and 2015 was still 3.3 million hectare, with a *total* annual loss of 7.6 million hectare (FAO, 2015).

Given the absence of an international forest treaty, there has been a massive search in these past decades for alternative ways to address the persistent problem of global deforestation. Multiple state and non-state initiatives have been introduced at the global, regional and national level, some of which build on the above-mentioned non-legally binding instrument and principles. These include initiatives by international institutions to support the development of National Forest Programmes; bilateral agreements like

the Forest Law Enforcement, Governance and Trade initiative; private certification schemes, the most prominent being the Forest Stewardship Council; and public-private partnerships such as the Round Table of Sustainable Palm Oil and the Collaborative Partnership on Forests. Given the plethora of public and private initiatives, non-legally binding forest instruments and principles, bilateral agreements, as well as legally binding treaties that (indirectly) address the issue of deforestation, some scholars talk of a forest “regime complex” rather than a failed or non-existent forest regime (see e.g. Rayner et al., 2010; Arts and Babili, 2013).

Of all these forest governance initiatives, however, the initiative that has by far raised most expectations, galvanized most attention, and mobilized most resources to combat global deforestation is Reducing Emissions from Deforestation and forest Degradation (REDD+¹), negotiated under the United Nations Framework Convention on Climate Change (UNFCCC). Never before has the international community embarked on such a large collaborative effort to reduce global deforestation and simultaneously address climate change. Through REDD+, developed countries can compensate developing countries for reducing their carbon emissions by avoiding deforestation and engaging in other forest-related activities. REDD+ is widely seen as a win-win solution not only to provide (renewed) impetus and resources to the worldwide conservation of forests, but also to mitigate climate change in a (cost-)effective way.

1.2 The carbonization of forest governance

Forests as sink and source of greenhouse gas emissions have been acknowledged very early on by the UNFCCC. Parties to the in 1997 adopted Kyoto Protocol were allowed to use forestry activities to meet their targets. The use of such activities was, however, restricted to enhancing forest carbon sink in *developed countries*. It was not until 2005 that the idea to reduce emissions from deforestation in *developing countries* was placed on the negotiation agenda of the UNFCCC (Gupta et al., 2015; Pistorius, 2012). Since 2005, the scope of Reducing Emissions from Deforestation (RED) has significantly expanded. In expert workshops under the auspices of the UNFCCC, scientists and civil society groups pushed to add forest degradation to the scope of RED, arguing that this was also a major source of forest-related carbon emissions. This resulted in another D being added to RED in UNFCCC negotiations in 2007, transforming RED into Reducing Emissions from Deforestation and forest Degradation (REDD). In subsequent years, India, supported by China, pushed for a further widening of the scope of REDD in order to also compensate countries (like India and China) that had already successfully reversed their net loss of forest area. As a result, the “+” was added to REDD in 2009 to include activities related to forest conservation, the sustainable management of forests, and the enhancement of forest carbon stocks (Dutschke and Pistorius, 2008; Pistorius,

1 In full: Reducing Emissions from Deforestation and forest Degradation and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries.

2012; Gupta et al., 2015; Fogel, 2004).

With the coming of REDD+, forest governance is being recast in a climate perspective. Governing forests for their carbon content is what I call a “carbonization” of forest governance. REDD+ is currently the most dominant and far-reaching policy instrument that embodies such a carbonization of forest governance. Never before have forests been governed for their carbon content on such a large scale. Carbonizing forest governance changes the object of governance; while previously forests were governed for their timber, non-timber forest products, and other ecosystem services, forests are now (also) governed for their carbon content. What are the consequences of such a carbonization? Does it enhance the (cost-)effectiveness, (global/local) equity, and performance of forest governance? Or does it lead to a mono-functional perspective on forests, a control over forests at higher levels of governance, and the disempowerment of forest-dependent communities? The aim of this thesis is to analyze the consequences of carbonization for multilevel forest governance.

1.3 The consequences of carbonizing forest governance

The carbonization of forest governance, represented by REDD+, can have many different consequences. From a climate perspective, REDD+ has arguably been the climate mitigation option with the most progress within UNFCCC negotiations in the past decade. From a forest perspective, combining the imperatives of climate change and forest governance may create a more holistic view on ecosystem management, and the huge attention given to climate change may provide the much-needed worldwide attention and resources to address deforestation (Visseren-Hamakers et al., 2012a; Phelps et al., 2012). REDD+ is seen as an opportunity to finally address some of the causes of the limited success to combat global deforestation by paying developing countries for the opportunity costs of forest conservation while still maintaining their sovereignty over the management of their forests (McDermott, 2014). From a development perspective, a global REDD+ mechanism has been lauded as a way to operationalize the contested principle of common but differentiated responsibilities in a post-Kyoto climate agreement in a manner that may well be acceptable to all countries. In addition, REDD+ may promote so-called “good governance” in developing countries by making participation in REDD+ schemes conditional on minimum standards for, inter alia, national and sub-national legal and policy frameworks, monitoring and enforcement frameworks, participation by local communities, local forest (user) rights, and decentralized forest management (Visseren-Hamakers et al., 2012a; Angelsen et al., 2012; Gupta, 2012). Furthermore, REDD+ may provide additional income for local forest-dependent communities (Cowie et al., 2007).

By contrast, the carbonization of forest governance may also have many adverse consequences. The rising attention to carbon storage in forests may lead to the disregard of other forest services, and hence to direct and indirect risks for local livelihoods and

the conservation of forest biodiversity (Visseren-Hamakers et al., 2012a; Pistorius et al., 2011; Levin et al., 2008; Angelsen, 2008). REDD+ may also be a threat to, rather than an opportunity for, local communities and “good governance” in case it incentivizes land grabbing by local elites or the private sector. REDD+ initiatives may even lead to (increased) corruption in forest management schemes or centralize government control at the cost of sub-national authorities or local communities (Visseren-Hamakers et al., 2012a; Phelps et al., 2010; Angelsen, 2008; Gupta, 2012). In contrast to the idea of common but differentiated responsibilities, some see the carbonization of forest governance as a form of global “carbon control”, whereby actors from developed countries determine how climate and forests should be governed in developing countries (Bäckstrand and Lövbrand, 2006, p. 61-62; Fairhead and Leach, 2003, p. 49; see also Lohmann, 2005; Gupta, 2012). Critics argue that such a carbon control is likely to coincide with a prominence of high-tech methods and scientific knowledge, leaving little room for the use of context-specific knowledge or the involvement of local communities in the governance of REDD+ (Bäckstrand and Lövbrand, 2006; Fairhead and Leach, 2003; Lohmann, 2005).

While the initial idea of Reducing Emissions from Deforestation was to develop a simple mechanism to simultaneously mitigate climate change and combat deforestation, the broadened scope of REDD+ has significantly increased what is at stake in the process of carbonizing forest governance. The expanded range of forest-related activities included under REDD+, for example, substantially increased the area of land (potentially) affected by carbonizing forest governance. In addition, REDD+'s broadened scope - particularly the addition of the enhancement of forest carbon stocks - considerably amplified already existing concerns regarding the potential negative effects of REDD+ on so-called non-carbon or co-benefits² that forests can provide. As a response to this, the Conferences of the Parties to the UNFCCC adopted a set of safeguard guidelines in 2010 to prevent, among others, severe loss of biodiversity and harm to local and indigenous communities (Pistorius, 2012; Visseren-Hamakers et al., 2012a; Gupta et al., 2015).

In addition to these safeguard guidelines, and in an attempt to augment REDD+'s positive consequences and curtail its adverse consequences, a number of guidelines and frameworks have been developed under the auspices of the UNFCCC. These include, among others, the Bali Action Plan and the Warsaw Framework. The 2007 Bali Action Plan raised collective hopes that a global climate agreement would be negotiated and adopted by Parties to the UNFCCC, with REDD as an integrating and crucial element. This also brought to the fore the need to build national capacities and strategies within developing countries to participate in a potentially soon-to-come REDD mechanism (Gupta et al., 2015). In 2013 Parties agreed on the Warsaw framework, which outlines necessary conditions in terms of national capacities and strategies for countries to be eligible for REDD+ results-based finances. These conditions include, inter alia, having

2 In this thesis, I use the terms co-benefits and non-carbon benefits interchangeably.

in place systems for national forest monitoring (including forest reference emissions levels, or baselines against which forest carbon stock changes can be assessed); for measuring, reporting and verification (MRV) necessary to generate information about the amount of carbon stored in forests; for providing information on safeguards (through so-called safeguard information systems); and for monitoring the drivers of deforestation (UNFCCC, 2013). Since 2012, guidelines for national forest monitoring and MRV systems have mainly been negotiated within the UNFCCC's Subsidiary Body for Scientific and Technological Advice (SBSTA). These deliberations draw, in turn, upon the Intergovernmental Panel on Climate Change (IPCC) good practice guidelines for carbon emissions related to land use, land use change and forestry activities (IPCC, 2003). The above-mentioned guidelines and frameworks are fairly broad and open to application in diverse contexts, leaving countries relatively free to interpret safeguard provisions in line with their national priorities (Gupta et al., 2015; Visseren-Hamakers et al., 2012a).

Not only have UNFCCC policy developments around REDD+ increased *what* is at stake in the carbonization of forest governance, developments in the REDD+ governance domain - both within and outside the confines of the UNFCCC - have also influenced *who* have a stake in carbonizing forest governance. The last decade has seen a rapid increase in the number of organizations and institutions that seek to operationalize, build capacity for and implement REDD+. Important are the multilateral REDD+ readiness initiatives that support countries to build their technical and political capacity in order to participate in REDD+ programs and activities, such as the UN-REDD Programme and the World Bank Forest Carbon Partnership Facility and the Forest Investment Program. Also bilateral programs are active in the field of REDD+, the most prominent being the Norwegian Agency for Development Cooperation through its Climate and Forest Initiative (Streck, 2012; Thompson et al., 2011). In addition, and encouraged by the Bali Action Plan and other policy developments within the UNFCCC, hundreds of REDD+ projects have been and are being developed around the world (Wertz-Kanounnikoff and Kongphan-apirak, 2009; Cerbu et al., 2011; Seeberg-Elverfeldt and Gordes, 2013; Simonet et al., 2014). While some of these projects serve as demonstration activities to further develop REDD+ policies at the national level, others are implemented by the corporate sector or non-governmental organizations in order to sell carbon credits on the private voluntary carbon market. To accredit such projects, a variety of non-state schemes have been set up to develop REDD+ standards, such as the Verified Carbon Standard, the Climate, Community and Biodiversity Standard, the CarbonFix Standard, and Plan Vivo, to name a few (Gupta et al., 2015). The number of state and non-state REDD+ initiatives is staggering and ever-growing. The Voluntary REDD+ database alone lists 1,922 REDD+ arrangements initiated by multi- and bilateral institutions, which excludes the myriad of private REDD+ initiatives (VRD, 2015).

As this section showed, guidelines for the operationalization and implementation of

REDD+ have now been agreed upon within the UNFCCC. These are, however, fairly broad and open to application in diverse contexts. Given REDD+'s ambiguity and the plethora of state and non-state actors currently involved in further operationalizing and implementing REDD+ at the global, national and project level, the question of what the consequences of REDD+ are for multilevel forest governance has never been more important or timelier to study.

1.4 Analyzing the consequences of carbonizing forest governance

In analyzing the consequences of carbonizing forest governance, this thesis focuses on four dimensions of multilevel forest governance. I distilled these dimensions from the multitude of scholarly and global policy debates around the (potential) consequences of REDD+, some of which were touched upon in the previous section. The four dimensions relate to 1) the complexity of the forest governance domain; 2) the sites of authority in forest governance; 3) the production and use of knowledge in forest governance; and 4) the use of policy instruments. These dimensions were chosen not only because they are, as I show in more detail below, subject of some of the most contentious debates around REDD+, but also because they relate to wider phenomena in environmental governance. The rest of this section formulates competing hypotheses regarding the consequences that carbonization might have for the four dimensions of multilevel forest governance and explains how the dimensions are exemplary of wider phenomena in environmental governance.

1.4.1 Complexity of the governance domain

The first dimension relates to the complexity of the forest governance domain. This thesis analyzes how and in what contexts carbonization leads to a focus on governing forests for their carbon content alone - what I call a simplification - or to a complex governance domain for the generation of non-carbon as well as carbon benefits. A study of the consequences of carbonization for the complexity of the forest governance domain is timely because prominent scholarly and political debates (still) focus on what the core objectives of REDD+ should be. Should REDD+ policies and practices be kept simple with a prime focus on carbon sequestration in order to (cost-)effectively mitigate climate change, or should such policies and practices also actively aim to generate non-carbon benefits such as the conservation of biodiversity and the provision of local livelihoods? With the jury still out on what REDD+ should achieve, both a simplification and an increase in complexity of the forest governance domain are plausible consequences of a carbonization of forest governance.

Simplification

Since the idea of REDD+ is to exchange forest carbon on the market, for funds and/or for carbon offsetting purposes, REDD+ requires forests to be standardized into units

of carbon that can be quantified and commensurated (i.e. made equivalent) with other carbon units (see Gupta et al., 2012 for an overview of literature in which the author was involved; see also Boyd, 2010; Lansing, 2010, 2011, 2012; Stephan, 2012; Corbera, 2012; McDermott, 2014; Evans et al., 2014). As such, forests may be simplified and reframed so as to make them amenable to climate mitigation schemes (Gupta et al., 2012; Boyd, 2010). This may induce a mono- rather than multifunctional perspective on forests (Visseren-Hamakers et al., 2012b).

Simplification of the object of governance is a widespread phenomenon in the environmental governance realm. Indeed, some form of simplification may even be necessary for any type of governance (see e.g. Uitermark, 2005; Latour, 1987). Studies show how a strong focus on one environmental object can simplify the environment into clear-cut objects of governance in order to make it legible, manageable and easy to aggregate. In his influential book “Seeing Like a State”, for example, Scott (1998, p. 4) studies how “transformative state simplifications” and an “administrative ordering of nature” enable the governance of nature. This process of simplification is accompanied by a “decontextualization” of environmental objects (Gupta et al., 2012, p. 2). Simplification coincides with a strong focus on effectiveness, efficiency and the performance of environmental governance. Simplification, however, also creates the risk that diversity is reduced since objects that are less easily legible or manageable may become disregarded (see e.g. Gupta et al., 2012; Agrawal, 2005; Scott, 1998; Cruikshank, 1999; Boyd, 2010; Lohmann, 2005; Lovell and Liverman, 2010; Lansing, 2010; Litfin, 1997; Luke, 2009; Latour, 1987; Uitermark, 2005).

Complex governance domain

Rather than a simplification, carbonization might also lead to an increased complexity of the forest governance domain. While RED was introduced as a simple mechanism with a prime focus on reducing carbon emissions from deforestation, its scope has significantly expanded in the last decade, as section 1.2 and 1.3 showed. REDD+ now not only includes activities related to avoided deforestation, but also to reduced forest degradation, to the enhancement of forest carbon stocks and to the sustainable management of forests. In addition, safeguard provisions have been and are being developed to prevent negative impacts on non-carbon forest services. Nowadays, many REDD+ initiatives also focus on the generation of non-carbon benefits. The expanded scope of REDD+ has significantly increased the complexity of the governance domain. For one, it has increased the technological and methodological challenges of measuring and monitoring the outcomes of REDD+ (Gupta et al., 2015; Visseren-Hamakers et al., 2012a, b). These challenges are being addressed in a variety of ways, with a growing number of (competing) standards, for example to conceptualize and operationalize safeguards and co-benefits (see Gupta et al., 2015 for an analysis of the growing institutional complexity of the REDD+ governance domain; see also Visseren-

Hamakers et al., 2012a; Pistorius, 2012; Clements, 2010; McDermott et al., 2012; Arhin, 2014; Jagger et al., 2014).

A growing complexity of the governance domain has also been witnessed in other domains of environmental governance. Rather than one simplified way of framing and standardizing the object of governance, a diversity of (sometimes conflicting) norms exists on how to conceive of and govern (or not) any one issue area (see e.g. Biermann et al., 2009; Biermann and Pattberg, 2008; Keohane and Victor, 2011; Abbott, 2012). This results in a large and growing number of (framings of) governance domains, with diverse discourses operationalized in different rules, regimes, regulations and standards, each with their own objectives (see e.g. Raustiala and Victor, 2004; Biermann et al., 2009).

1.4.2 Sites of authority

The second dimension that this thesis analyzes relates to the sites of authority in forest governance. The thesis analyzes how and in what contexts carbonization leads to a centralization or dispersion of authority in multilevel forest governance. Such a study is timely since a heated topic in scholarly and global policy debates is who should govern REDD+ and at what level of governance. The question is not only who should have decision-making authority to design REDD+, but also who should account for REDD+ carbon credits and handle the payments that accrue from these, whether at the national (central) or sub-national level. With the jury still out on who will govern REDD+, a centralization and dispersion of authority are both likely consequences of carbonizing forest governance.

Centralization of authority

A number of studies show how REDD+ is likely to (re)centralize forest governance and/or reverse the trend of decentralization³ that has taken place in many forest management schemes in the last decades. Indeed, the majority of REDD+ activities and funding is currently directed to compensating national governments for the reduction of forest-related carbon emissions, which may centralize authority to account for, manage and distribute REDD+ payments within national governments (Phelps et al., 2010; Sandbrook et al., 2010; Angelsen et al., 2009; Rantala and Di Gregorio, 2014; Buizer et al., 2014; Lahsen, 2009). Since forests are now (also) governed within the global climate governance domain, a number of scholars have argued that REDD+ might also lead to a centralization of authority within the UNFCCC and its subsidiary bodies (Nielsen,

3 As I also argue in chapter 3, the distinction between centralization and decentralization of authority is often not so clear-cut as I present it here. As studies show, for example, centralized forest management schemes may promote local communities' land use rights and participation in REDD+ activities, thereby enabling an effective devolution of authority to (state and non-state) actors at sub-national levels of governance (see e.g. Sandbrook et al., 2010).

2014; see Gupta et al., 2012 for an overview). Arguably, the UNFCCC is in many ways the (hierarchical) core when it comes to global REDD+ governance (Gupta et al., 2015).

Centralization of authority has also been witnessed in other environmental governance domains. Centralization often coincides with the earlier-mentioned simplification of the object of governance. Many even assert that simplification is a necessary precondition for governance from afar (Latour, 1987; Uitermark, 2005; see also Gupta et al., 2012; McDermott, 2014). Some explain this phenomenon by pointing to the “modern state’s desire for specific forms of order, control and reassurance” (Jasanoff, 2004, p. 33; see also Scott, 1998). Typically, studies focusing on the forest governance domain identify centralization of authority at the national level within government agencies (see e.g. Scott, 1998; Agrawal, 2005; Bose et al., 2012). Scott (1998, p. 5), for example, talks of a strong “authoritarian state that is willing and able to use the full weight of its coercive power” to govern (among others) forests. On the other hand, studies that focus on the climate governance domain often point to centralization of authority at the global level within the UNFCCC and its subsidiary bodies (see e.g. Fogel, 2004). In this latter domain, some talk of a “strongly centralized (...) apparatus” (Bäckstrand and Lövbrand, 2006, p. 62), or the earlier-mentioned global “carbon control” (Bäckstrand and Lövbrand, 2006, p. 61-62; Fairhead and Leach, 2003, p. 49).

Dispersion of authority

Rather than a centralization of authority, carbonization might also cause a dispersion of authority in forest governance. Carbonization may open up (political) space in forest governance for actors other than national state agencies, such as private market actors, civil society groups, local or indigenous communities, research groups, and sub-national (state) agencies. Indeed, multiple state and non-state actors are currently involved in operationalizing and implementing REDD+ through capacity-building initiatives, REDD+ projects and global, national and sub-national policy developments (Gupta et al., 2015; Skutsch and Van Laake, 2008; Thompson et al., 2011; McDermott, 2014; Reinecke et al., 2014; Wertz-Kanounnikoff and Kongphan-apirak, 2009; White, 2014; Visseren-Hamakers and Verkooijen, 2012; Nagendra and Ostrom, 2012). These actors are sometimes cooperating, and sometimes competing with one another. In the global REDD+ governance domain, the REDD+ Partnership - a multistakeholder forum to facilitate REDD+ action and finance - was exemplary of the diversity of actors in the sense that it brought together, in a (supposedly) non-hierarchical way, 75 countries and 100 stakeholders (i.e. non-state actors) (Gupta et al., 2015; Reinecke et al., 2014). At the country level, REDD+ is sometimes seen as an opportunity to (further) devolve authority to sub-national government agencies and/or local communities (see e.g. Toni, 2011).

A dispersion of authority is also discernible in the wider environmental governance domain, which is closely related to the above-mentioned increased complexity of the

governance domain. So-called “regime complexes” or “fragmented” governance domains (see e.g. Biermann et al., 2009; Biermann and Pattberg, 2008; Keohane and Victor, 2011; Abbott, 2012) consist of multiple autonomous public and private organizations that are at times working independently, at times competing, and at times collaborating with one another. These organizations operate at different levels of governance, often without a clear hierarchy⁴ (Biermann et al., 2009; Raustiala and Victor, 2004; Oberthür, 2009; Rosenau, 2005; Dingwerth and Pattberg, 2006). As such, a dispersion of authority happens across different levels of governance; environmental governance domains are characterized by multilevel or transnational collaborations between various state actors, civil society groups, and corporate actors engaged in policy-making, norm-setting and norm-implementation (Biermann and Pattberg, 2008; Falkner, 2003; Ostrom, 2010).

A dispersion of authority has been identified in the global climate governance domain (see e.g. Keohane and Victor, 2011; Abbott, 2012; Zelli, 2011; Biermann et al., 2009; Bulkeley and Newell, 2015; Oberthür, 2009; Cole, 2011; Okereke et al., 2009; see also Lederer, 2015 for a recent overview of literature) as well as in the global forest governance domain (see e.g. Rayner et al., 2010; Orsini et al., 2013; Reischl, 2012; Arts and Babili, 2013; Giessen, 2013; Nagendra and Ostrom, 2012; see also Dimitrov et al., 2007 on a forest non-regime). Regarding dispersion of authority at the country level, the last couple of decades have witnessed a trend of growing decentralization, both in forest management schemes and in environmental policies and practices more broadly. Agrawal and Ostrom (2008, p. 44), for example, refer to this trend as “the most significant (...) most distinctive and [most] visible shift in national environmental policies since the late 1980s” (see also Phelps et al., 2010).

1.4.3 Production and use of knowledge

The third dimension that this thesis analyzes relates to the production and use of knowledge in forest governance. The thesis analyzes how and in what contexts the carbonization of forest governance leads to the privileging of scientific knowledge and high-tech monitoring methods in forest governance, or rather to a use of diverse knowledge systems and monitoring methods that are constructed and used by multiple actors involved in REDD+. Such a study is timely since prominent scholarly and political debates circle around the question as to who should define and monitor the “success” of REDD+, and how. What degree of accuracy and consistency is required in REDD+ MRV systems for carbon to be exchanged with other carbon units or for funds? (How) does the development of such systems allow for diverse forms of knowledge to be used and non-experts to be involved?

4 Other scholars, however, argue that regime complexes are not necessarily characterized by non-hierarchical relations between the multiple organizations that are part of it (see e.g. Orsini et al., 2013; Keohane and Victor, 2011).

Technicalization

A growing body of literature, often informed by science and technology studies, has pointed to the high demand for accurate and reliable data to facilitate the exchange of forest carbon with other carbon units or funds. This demand drives the development of high-tech MRV systems for REDD+ that are based on globally agreed scientific criteria to measure carbon (and non-carbon) benefits. This might coincide with a prominent role for scientists and technical experts in the governance of REDD+ (see Gupta et al., 2012 for an overview of literature; see also Melo et al., 2014; Nielsen, 2014; Buizer et al., 2014). Some have pointed to the central role that the (scientific) Intergovernmental Panel on Climate Change and the Subsidiary Body for Scientific and Technological Advice play in REDD+ governance (Gupta et al., 2012; Buizer et al., 2014). The process of deferring decision-making on REDD+ largely to the scientific realm, with a consequently large role for scientists and technical experts in REDD+ governance, is what I call a “technicalization” of forest governance (term borrowed from Gupta, 2010a, p. 45).

Technicalization is a prominent trend in many domains of environmental governance. Scientific, global knowledge is often preferred over context-specific knowledge in order to adequately and effectively govern the environment. In this way, scientists and technical experts acquire a prominent role in defining and solving environmental problems (see e.g. Litfin, 1997; Boyd, 2010; Lansing, 2010; Fogel, 2004; Law, 2009; Mackenzie, 2004; Turnhout and Boonman-Berson, 2011; Bäckstrand and Lövbrand, 2006; Lohmann, 2005). Scott (1998, p. 4) calls this phenomenon the “high-modernist ideology”, which coincides with a “strong (...) self-confidence about scientific and technical progress”. In the area of forest governance, studies have pointed to the inception of so-called “scientific forestry” in the eighteenth century. The development of procedures for data collection and classification of forests enabled the efficient and profitable management of forests, thereby transforming these into standardized units that were amenable to centralized management schemes (Gupta et al., 2012; Scott, 1998; Agrawal, 2005). More recently, the introduction of advanced technologies to collect data on forests, such as satellite imagery, make forest management possible at an even larger scale (Gupta et al., 2012; Turnhout and Boonman-Berson, 2011; McDermott, 2014). In this vein, some authors have referred to what they call a “global gaze” (Litfin, 1997, p. 26; Fogel, 2004, p. 106). Such a global gaze typically coincides with the earlier-mentioned simplification and centralization as it allows monitoring and management at the global level by simplifying objects and aggregating them into statistical data through the use of remote-sensing techniques.

Technicalization is related to broader transformations related to the uptake of “governance by disclosure” (Gupta, 2010b, p. 128), i.e. the growing role of information - including scientific information - in assessing and enhancing performance and efficiency in environmental governance domains (and beyond). Some have referred

to the “information age” (Castells, 1996/1997) or “informational governance” (Mol, 2013, p. 134). While transparency is often associated with more democratic, legitimate, accountable, inclusive and effective governance, the outcomes of transparency are contingent on its institutionalization in specific contexts, and can at times also lead to the disempowerment of certain actors such as those who do not possess scientific knowledge or expertise, including local communities (Gupta and Mason, 2014; Gupta et al., 2012; Bäckstrand and Lövbrand, 2006).

Diversity of knowledge

Rather than a technicalization of forest governance, carbonization may also lead to a diversity of knowledge. REDD+ has fostered an unprecedented amount of research from a wide variety of disciplines (see e.g. Visseren-Hamakers et al., 2012a, b, c; Gupta et al., 2012 for overviews of scholarly literature). The multiple state and non-state actors involved in REDD+ governance construct and use diverse knowledge (systems) (see Gupta et al., 2012 for an overview of literature; see also Lahsen, 2009; Larrazábal et al., 2012). Global debates on co-benefits and safeguards for REDD+, for example, are held by separate scientific communities, focusing on different disciplinary fields (Visseren-Hamakers et al., 2012a; Pistorius, 2012). In addition, diverse standard-setting and accreditation bodies produce and draw on different knowledge systems in designing and monitoring REDD+ (see e.g. Gupta et al., 2015). Discussions within the earlier-mentioned REDD+ Partnership were also illustrative for the diversity of knowledge in REDD+ governance. Analyses of such discussions reveal the contested nature of knowledge on REDD+ and the intractable political conflicts over which information and whose knowledge is to be made transparent (Gupta et al., 2015). In specific cases of implementation, REDD+ may also produce counter-expertise to scientific and technical expertise by drawing on context-specific knowledge (see Gupta et al., 2012 for an overview of literature; see also Toni, 2011; Lahsen, 2009; Dickson and Kapos, 2012; Larrazábal et al., 2012). Many studies show, for example, how local communities can be involved in the monitoring of REDD+ outcomes through participatory MRV systems (see e.g. Gupta et al., 2012; Skutsch et al., 2014; Visseren-Hamakers et al., 2012a; Danielsen et al., 2011; Larrazábal et al., 2012). As Gupta et al. (2012, p. 4) argue for the domain of REDD+ governance: “[t]he potentially homogenizing effects of globally negotiated or spatially abstract ways of seeing the forest (...) may thus be upended in practice by diverse context-specific interpretations”.

Diverse knowledge systems also exist in other environmental governance domains. A large body of literature studies how knowledge is constructed, interpreted and used by multiple actors, each with their own interests and perspectives on how to govern the environment (or not) (Lövbrand, 2009; Miller, 2007; Gupta, 2004; Moore et al., 2011). As Fairhead and Leach (2003, p. 2) argue, for example, “the presence of non-governmental organisations, public pressure groups and ‘indigenous people’ (...)”

defies simplistic pictures of nation states and their scientists forging international orders”. Indeed, international environmental regimes increasingly pay attention to the role of indigenous knowledge and the involvement of local communities in (global) environmental governance (Jasanoff and Long Martello, 2004). Moore et al. (2011, p. 520) even refer to the “unbinding of the relationship between scientists and the authority of science”. In their view, the production of knowledge is not anymore the exclusive domain of scientists. Rather, a multitude of state and non-state actors are engaged in scrutinizing, using, and producing knowledge, often in collaboration with one another (see also Biermann and Siebenhüner, 2009; Oberthür, 2009; Gupta et al., 2015).

1.4.4 Use of policy instruments

The fourth and final dimension I examine is the use of policy instruments. The thesis analyzes whether carbonization leads to a dominant use of market instruments, or rather a mix of market and non-market instruments in forest governance. In doing so, the thesis particularly zooms in on a key outstanding question in policy debates as to whether REDD+ should be financed through market- or fund-based sources of finance. This question is linked to wider debates in global climate governance on whether, how and to what extent climate mitigation actions should rely on compliance carbon markets to offset carbon emissions. Could trading in forest carbon be an efficient, effective, and fair way to let the polluter pay for and reduce carbon emissions? Or will a market-based approach to governing forests reduce (certain values of) forests to mere commodities and empower market actors at the cost of others? With such questions still pending in policy debates, it is not yet certain whether REDD+ will become a market or non-market mechanism.

Marketization

REDD+ is often considered a market-based mechanism or a form of payment for ecosystem services⁵ in the sense that through REDD+, forest carbon can be brought on the market and paid for by interested parties (see e.g. Corbera, 2012). Some have therefore argued that REDD+ encourages a market-based logic to forest conservation (Stephan, 2012; McAfee, 2012; Corbera, 2012; Nielsen, 2014). In this sense, carbonization may lead to a marketization of forest governance, i.e. a growing reliance on market instruments such as trade in forest carbon credits.

A marketization of forest governance through REDD+ and the growing reliance on payment for ecosystem services schemes arguably fit with a broader trend of the “neoliberalization of nature”, whereby nature is commodified, standardized and economically valued. Placing a monetary value on nature enables exchange on the

5 Though not all payment for ecosystem services schemes are market-based mechanisms, they are often equated with the growing reliance on market instruments in environmental governance (see e.g. Corbera, 2012, McAfee, 2012).

(global) market (Corbera, 2012, p. 612; Gupta et al., 2012; Stephan, 2012; McAfee, 2012; Buizer et al., 2014). The neoliberalization of nature and the establishment of new markets for ecosystem services emerged as a reaction to critiques to the limited (cost-) effectiveness of command-and-control state-based regulations. Marketization coincides with an emphasis on efficiency and performance-based compensation in order to govern environmental objects (Lederer, 2012a; Duffy and Moore, 2010; Pistorius et al., 2012; Newell and Paterson, 2010). Also within the climate governance domain, the neoliberal discourse is considered a prominent one, both within and outside UNFCCC negotiations (see e.g. Fogel, 2004; Lovell and Liverman, 2010; Bäckstrand and Lövbrand, 2006; Bumpus and Liverman, 2008). In the past decade, global climate change mitigation actions have focused in large part on the development of carbon markets and emissions trading schemes (Newell and Paterson, 2010). The most prominent example of a carbon emissions trading scheme is the Emissions Trading Scheme that the European Union established to meet its Kyoto targets. While carbon markets nowadays face many challenges, they are still popular, especially in the South where carbon markets are currently being established (Lederer, 2014).

Mix of market and non-market instruments

Rather than a marketization, carbonization may also lead to a mix of market and non-market instruments in forest governance. There is as yet no consensus on how to organize results-based financing for REDD+ in the long run, whether through market- or fund-based finances. Current approaches to REDD+ financing have been characterized as “ad-hoc”, “fragmented” and “dispersed” (Davis and Daviet, 2010, p. 1, 6). Indeed, a unitary global carbon market does not yet exist, and REDD+ governance currently consists of a plethora of public and private, multi- and bilateral initiatives, supported by a large diversity of fund- and market-based sources of finance (Gupta et al., 2015; Streck, 2012).

Such a multitude of policy instruments is also discernible in the wider environmental governance domain (see e.g. Biermann and Pattberg, 2008; Bulkeley et al., 2007). Private, public and hybrid modes of governance, relying on market, command-and-control, and mixed market and non-market instruments are currently employed to govern environmental objects. As such, the boundaries between public and private governance initiatives and between market and non-market instruments have become blurred (Clapp, 2005; Falkner, 2003). While marketization is often equated with “deregulation”, in reality it often coincides with state-based regulations. Neoliberalism has even been argued to expand such state-based regulation (see e.g. Levi-Faur and Jordana, 2005, p. 7). The earlier-mentioned markets to trade environmental services, for example, often heavily rely on state-based regulations to function. This is particularly the case with (the development of) carbon markets in developing countries. The same would be the case for any future compliance carbon market in which REDD+ may be

integrated (Lederer, 2014; Lederer, 2012b).

Table 1-1 provides an overview of the competing hypotheses regarding the consequences that carbonization might have for the four dimensions of multilevel forest governance.

Table 1-1: Hypotheses regarding the consequences of carbonization for the four dimensions of multilevel forest governance.

Consequences for:	Possible consequences:	
Complexity of the governance domain	<i>Simplification</i> due to prime focus on carbon benefits	<i>Complex governance domain</i> due to focus on multiple carbon and non-carbon benefits
Sites of authority	<i>Centralization of authority:</i> authority centralized within national state agencies and/or the UNFCCC	<i>Dispersion of authority:</i> multiplicity of state and non-state actors at different levels
Production and use of knowledge	<i>Technicalization:</i> privileging of scientific knowledge and prominence of technical experts	<i>Diversity of knowledge:</i> multiple actors use and construct diverse knowledge systems
Use of policy instruments	<i>Marketization:</i> primary reliance on market instruments	<i>Mix of market and non-market instruments</i>

1.4.5 Homogenization of environmental governance?

It goes without saying that the above-mentioned dimensions are deeply inter-related. Different combinations of the four dimensions may constitute different processes in governance. Thus, analyzing the combinations of the four dimensions can offer important insights into the (changing) nature of environmental governance more generally. In his influential book “Seeing Like a State”, Scott draws (among others) on examples of national forest management schemes to explain a process of what he calls “homogenization” (Scott, 1998, p. 8) of (environmental) governance. This process is characterized by a simplification of the object of governance and a strong reliance on science and technology. According to Scott, homogenization can be driven by a powerful national government or by “large-scale capitalism” (p. 8). Hence, Scott’s idea of homogenization resembles a combination of what I call simplification, technicalization, centralization and/or marketization. Scott’s work has been highly influential in scholarly debates on the (changing) nature of environmental governance. Concepts similar to Scott’s homogenization have been coined in studies of, for example, the forest governance domain (see e.g. Agrawal, 2005 and Bose et al., 2012) and the climate governance domain (see e.g. Litfin, 1997; Fogel, 2004; Boyd, 2010).

As this section showed, however, simplification, technicalization, centralization and marketization of environmental governance are by no means predetermined. Is Scott’s concept of homogenization (still) relevant in contemporary environmental governance? Drawing on an analysis of the consequences of carbonizing forest governance, this thesis seeks to address this question. The thesis reflects on whether a homogenization, as

Scott described it, is a consequence of the carbonization of forest governance. Linking this analysis to the changing nature of environmental governance more broadly, the thesis also reflects on whether the consequences of REDD+ represent unique or widely occurring processes in environmental governance.

1.5 Research objective and research questions

As stated, this thesis analyzes the consequences of carbonization, represented by REDD+, for multilevel forest governance. Though a large and ever-growing body of literature aims to assess the effects of REDD+ policies and practices (see e.g. Angelsen et al., 2009, 2012; Gupta et al., 2013; Levin et al., 2008), only few studies analyze the multiple consequences of REDD+ at different levels of governance. This is nevertheless a timely and important area of study given that the jury is still out on what exactly constitutes REDD+, with a multitude of initiatives already operationalizing and implementing REDD+ at the global, national and local level.

The consequences of a carbonization of forest governance depend on how REDD+ is being conceptualized and operationalized in different contexts and at different levels of governance. The first research objective of this thesis is therefore to analyze how carbonization manifests itself at different levels, and with what consequences for multilevel forest governance. In analyzing the consequences of carbonization, I focus on the four dimensions that were introduced in section 1.4, namely: 1) the complexity of the forest governance domain; 2) the sites of authority in forest governance; 3) the production and use of knowledge in forest governance; and 4) the use of policy instruments.

Analyzing REDD+ at different levels of governance is essential to analyze the full complexity of the forest governance domain as well as the shifting sites of authority between state and non-state actors operating at various levels of forest governance. This thesis therefore covers analyses of REDD+ policy debates and developments at the global and the national level, as well as of the design of REDD+ at the project implementation level.

By relating the four dimensions to broader phenomena in other environmental governance domains, the second research objective of this thesis is to draw on the empirical findings to provide theoretical and empirical insights into the changing nature of environmental governance. In particular, by drawing on the case of REDD+, the thesis aims to shed light on whether and how a homogenization of environmental governance, more broadly, might be underway.

Given the two research objectives of this thesis, the research questions are as follows:

1. How does the carbonization of forest governance manifest itself at different levels, and with what consequences for multilevel forest governance?

2. What does this analysis of the consequences of carbonization reveal about the prospects of a homogenization of environmental governance?

1.6 Research methodology

1.6.1 Discourse analysis as an analytical tool

As discussed above, the consequences of the carbonization of forest governance depend on how carbonization manifests itself in specific contexts. To study this, I rely on discourse analysis as a key methodology in this thesis, as a way to analyze how REDD+ is being framed and operationalized at different levels of governance. Discourse analysis can be useful to understand how certain policy ideas gain dominance over others and become institutionalized (Hajer, 1995). Discourse analysis is a particularly relevant method to study a premature governance domain such as the one for REDD+. Most REDD+ countries are still in the so-called “readiness phase”, building technical and institutional capacity and developing policies and strategies to prepare for results-based finances for their forest-related carbon emission reductions. Given that countries are still determining how to operationalize and implement REDD+, the consequences of REDD+’s implementation are not yet fully evident. Discourse analysis can be useful to identify which framings of REDD+ gain prominence and how these are operationalized in policies and project design. Whose discourses are prominent and become reflected in REDD+ policy or project outcomes signals who has the power to decide how REDD+ should be designed, what benefits REDD+ might generate for whom, and who might bear the (financial) costs of this. As such, discourses can be important indicators for shifting sites of authority and political or institutional changes in REDD+ governance. Despite their importance, (competing) discourses around how REDD+ should be conceptualized and operationalized remain severely understudied.

In this thesis, I use the definition of a discourse by Hajer (1995, p. 44): “a specific ensemble of ideas, concepts, and categorizations that are produced, reproduced, and transformed in a particular set of practices and through which meaning is given to physical and social realities”. In order to analyze how REDD+ is being framed and designed, I operationalize discourses into storylines. A storyline is an element of a discourse, i.e. “a (...) narrative (...) to give meaning to specific physical or social phenomena” (Hajer, 1995, p. 56). Storylines upheld by key policy actors and storylines contained in policy and project documents can signal the prominence of certain discourses around REDD+ governance and can justify specific policy designs (Hajer, 1995; Den Besten et al., 2014; Hiraldo and Tanner, 2011; Sharp and Richardson, 2001; Rantala and Di Gregorio, 2014; Nielsen, 2014).

Hajer’s definitions of discourses and storylines are broadly used in discourse analysis. The wide variety of discourse theories that exists can roughly be divided into “thick” and “thin” discursive-theoretical approaches (Arts et al., 2010, p. 59). Thick approaches consider everything to be discursive and socially constructed. These approaches

view discourses as constitutive of social practices and the physical world, rather than distinguishing between discourses and (non-discursive) institutional change. Thin approaches, on the other hand, do make a distinction between the discursive and non-discursive. They focus on discourses as frames, for example by drawing on frame analysis or discursive institutionalism, and consider discourses as one among many important factors to understand institutional changes. In this latter view, discourse analysis is one of the analytical tools available to study political and institutional changes (see e.g. Arts et al., 2010; Arts and Buizer, 2009).

This thesis draws on a thin discursive approach by considering frames and storylines as indicators for (non-discursive) political and institutional changes and their consequences. I employ discourse analysis in this thesis in an instrumental manner, i.e. as an analytical tool. In doing so, my aim is not to analyze how and why discourses emerge and are shaped by historical, social and cultural contexts, or how they evolve over time. Nor is it my aim to analyze how specific discourse coalitions influence REDD+ governance (e.g. Hajer, 1995). Rather than providing explanations of (the emergence of) discourses and the process of discourse institutionalization, this thesis uses framings and storylines as proxies for how and with what consequences REDD+ manifests itself. In other words, by analyzing and comparing a specific set of discourses in a variety of cases of REDD+ debates, developments and design at different levels, I draw conclusions regarding how carbonization manifests itself and with what consequences for multilevel forest governance.

1.6.2 Multilevel analysis and case study selection

In analyzing the consequences of carbonization, this thesis carries out analyses at multiple levels. The thesis contains an analysis of REDD+ policy debates and developments at the global level; two in-depth case studies of how REDD+ is being framed and operationalized at the national and project level; and a cross-country comparative analysis of how REDD+ is framed and operationalized in the national political arena. Though REDD+ is inherently a multilevel policy instrument (see e.g. Skutsch and Van Laake, 2008; Corbera and Schroeder, 2011), multilevel discourse analyses on REDD+ are extremely rare (for exceptions, see Van der Hoff et al., 2015; Evans et al., 2014). Multilevel discourse analyses can provide important insights into the discrepancy or congruency between prominent discourses at different levels of governance, which is crucial in understanding how and with what consequences the carbonization of forest governance manifests itself at different levels of governance.

At the global level, the thesis analyzes policy debates and developments around measuring, reporting and verification systems for REDD+. REDD+ MRV systems were chosen as a focus of analysis because they are centrally implicated in UNFCCC debates, REDD+ policy developments, REDD+ readiness activities, and emerging REDD+ practices (Gupta et al., 2012). REDD+ MRV systems are important since they

influence and are influenced by what benefits REDD+ generates (e.g. whether carbon is the only value of forests that is rendered measurable); who has the authority to govern REDD+ (e.g. whether national state-based accounting systems are the only systems relied upon); and who can monitor REDD+ (e.g. whether technical experts are the only actors that are relied upon to use and interpret MRV systems). In other words, what is being monitored influences and is influenced by what is taken into account, by whom, for whom, and how (Gupta et al., 2012). A focus on MRV systems is also amenable to discourse analysis as a methodology because knowledge and the communication by which knowledge is generated and exchanged are central elements in discourse analyses (see e.g. Sharp and Richardson, 2001). Indeed, knowledge (or MRV) systems are not objective or value-free, but rather politically constructed, i.e. influenced by political debates and the framing of the object of governance. As such, a study of policy debates and developments around REDD+ MRV systems provides an important window into how and with what consequences carbonizing forest governance manifests itself at the global level.

To study discourses at the national and project level, the thesis contains two in-depth case studies. Case study research is useful to gain in-depth understandings of complex real-life phenomena that are (being) embedded in historical, cultural, institutional and/or social contexts (Yin, 2009). Hence, case studies can provide important understandings of how and with what consequences carbonization manifests itself in specific forest governance contexts. The first case study contains an in-depth analysis of how REDD+ is framed and operationalized at the national level in India, and how this influences India's long-standing forest governance policies and practices. The second case study contains an in-depth analysis of the prominence of storylines among stakeholders and in the design of the first Indian REDD+ pilot project.

India was chosen for these in-depth case studies for several reasons. India is one of the fastest growing economic regions in the world, making it the third largest country emitter of green house gasses. The country is rapidly gaining importance at the international level as an economic and political player, including in international climate negotiations. India has also been at the forefront of international debates on REDD+, pushing hard for a global embrace of REDD+ as a central climate mitigation strategy, calling for a mix of sustainable forest management, biodiversity conservation and afforestation and reforestation activities. India sees great potential in the financial incentives that REDD+ could provide for the enhancement of carbon stock through the conservation and sustainable management of forests. The country considers afforestation and reforestation an important strategy to reduce its greenhouse gas emissions, with plans to afforest and reforest 10 million hectare (!) of non-forest- and forestland (India's INDC, 2015). A number of studies show that a significant percentage of India's carbon emissions could be offset through forest-related activities in the country (Singh et al., 2012; Sharma and Chaudhry, 2013). Indeed, India is among the top ten countries

with the largest forest area as well as the largest increase in forest cover between 2010 and 2015 (FAO, 2015). India is also one of the most biodiverse countries in the world, being among the twelve so-called mega-diverse countries. The country aims to take a leadership role in biodiversity, a commitment shown, for example, by having hosted the Conference of the Parties to the Convention on Biological Diversity in 2012. Last but not least, India's long history of forest governance, which is often considered one of the best examples of decentralized forest management in the world, makes it an interesting case to study the consequences of REDD+ for multilevel forest governance. Despite all this, even as scholarly analyses on REDD+ are booming around the world, strikingly little research has been carried out on REDD+ in India. With two chapters focusing on REDD+ in India, this thesis fills an important gap in the scholarly literature on REDD+.

The selection of the project case study was based on the fact that the project is the first and only REDD+ pilot project currently operational in India. Though several other forestry carbon projects in India were visited during a scoping exercise, it was deemed important to select a designated REDD+ project to enable systematic multilevel and comparative analyses of how REDD+ (rather than carbon forestry in general) is manifesting itself and with what consequences. India was again selected for the project level case study to enable comparisons between REDD+ policies and practices at national and project level within one country.

To further gain insight into how REDD+ is framed and operationalized at the national level, the thesis contains a cross-country comparative analysis. The analysis focuses on the prominence of storylines among national policy actors and in national REDD+ policy documents in seven countries. The countries, selected from three different continents, are Cameroon, Indonesia, Nepal, Papua New Guinea, Vietnam, Peru and Tanzania. The selection of these countries was based on their relevance for and early engagement in REDD+; all of these countries are currently in the REDD+ readiness or implementation phase (Brockhaus et al., 2014). All seven countries have also finalized their Readiness Preparation Proposals, the REDD+ policy documents prepared as part of the World Bank's Forest Carbon Partnership Facility program, one of the largest REDD+ readiness programs. Focusing on these Readiness Preparation Proposals allowed for systematic comparisons between countries due to the standard template that countries are required to use. It was decided to carry out a comparative analysis of how REDD+ is framed and planned to be operationalized at the national rather than the project level because the vast majority of REDD+ activities take place at the national level in the form of institutional and technical capacity-building and policy development. In addition, national REDD+ readiness activities were more easily comparable than the wide variety of REDD+ pilot and demonstration projects around the world. Last but not least, data accessibility and availability played a crucial role in choosing for a national level analysis and in selecting the seven countries.

1.6.3 Data collection

This thesis draws on both qualitative and quantitative research methods. The most important part of the data was collected through 517 semi-structured interviews, of which 129 were conducted by the author herself (see appendix I). Interviews were mostly carried out face-to-face, though some took place via telephone or Skype and occasionally via e-mail. Interviewees included representatives of national and sub-national government agencies, non-governmental organizations, international (multi- and bilateral) organizations, foreign government agencies, research institutes, businesses, a carbon broker, and a carbon standard. In addition, interviews were carried out with independent consultants, project managers, project advisors and local people involved in the REDD+ project (see appendix II for a list of interviewees). Interviewees were purposefully selected from existing contacts and relevant contacts found in policy documents, reports, brochures, and on websites (Creswell, 2014). Interviewees were selected from different organizations, levels of governance and regions (especially in the case of the project case study). After establishing initial contacts, the snowball method was used to contact additional interviewees.

Interviews for the two in-depth case studies were carried out by the author herself, with, in case of the case study at the national level, a number of interviews carried out together with the co-author. For every interview, an interview guide was used that contained a list of questions that were (slightly) modified for each category of interviewee (see appendix III for samples of the interview guides). For the project case study, a local research assistant familiar with the project was hired to translate the interviews. The 388 interviews that informed the cross-country comparative analysis were part of the Center for International Forestry Research (CIFOR)'s Global Comparative Study on REDD+⁶ and were carried out by CIFOR scientists from 2010-2013. Here, the selection of interviewees was based on earlier studies and experience from researchers involved in the Global Comparative Study to identify core policy actors involved in national REDD+ decision-making. This initial selection of potential interviewees was validated by a panel of experts to make a final selection in each country (for more information, see Brockhaus et al., 2014).

In addition to semi-structured interviews, the project case study and the cross-country comparative study draw on quantitative data from surveys. Respondents to the surveys were also those who were interviewed, so that answers given in the surveys could be cross-checked during the semi-structured interviews. In the Indian REDD+ pilot project case study, the surveys were translated into the local language (Khasi language) to enable a broad coverage of participants. Appendix III includes an English version of the survey that was used for the project level case study.

Another important data collection method was extensive review of literature,

6 For more information, see <http://www.cifor.org/gcs>.

documents and visual data. Both primary and secondary literature was consulted, including scholarly articles, reports, policy documents, project documents, newsletters, project videos, and websites. In addition, the thesis draws on data and analyses from seven articles that the author of this thesis published together with co-authors during the research period, and that are not part of this thesis (Gupta et al., 2012; Visseren-Hamakers et al., 2012a, b, c; Gupta et al., 2015; Skutsch et al., 2013, 2014). At the end of this thesis, there is a list of the author's publications.

Finally, data were gathered through direct and participant observation during field visits in 2011 and 2013-2014, REDD+ project meetings in 2013-2014, a Plan Vivo⁷ stakeholder meeting in Edinburgh in 2013, an Indian Forest Congress in 2011, and attendance of several UNFCCC REDD+ negotiations since 2006.

1.6.4 Data analysis

As I explained earlier, this thesis focuses on four dimensions of multilevel forest governance in order to analyze the consequences of carbonization. These four dimensions were distilled from an extensive review of literature on REDD+, drawing in part on previous literature reviews in which the author was involved (Gupta et al., 2012; Visseren-Hamakers et al., 2012a, b, c). From a preliminary analysis of the scholarly and political debates around these four dimensions, I identified four sets of ideal typical discourses. Based on data from semi-structured interviews, surveys, project and policy documents, and participant observations, the thesis analyzes, both in a qualitative and quantitative manner, which of these discourses (if any) are prominent in different cases of REDD+ operationalization and implementation at the global, national and project level. For the quantitative analyses, the four sets of discourses were further operationalized into storylines. I developed an analytical framework with specific indicators for each storyline to enable systematic multilevel comparisons of the prominence of storylines. As such, the thesis uses the prominence of storylines as proxies for the four dimensions of multilevel forest governance.

First, in order to analyze the consequences of carbonizing forest governance for the complexity of the governance domain, I assess the prominence of storylines around the question: *what should REDD+ achieve: simplified forest carbon or multiple carbon and non-carbon objectives?* Second, in order to analyze the consequences of carbonization for the sites of authority in forest governance, I assess the prominence of storylines around the question: *at what level should REDD+ be governed: at national (centralized) or sub-national (decentralized) levels?* Here, I use a privileging of national levels as a proxy for centralization, and a privileging of sub-national levels as a proxy for a dispersion of authority⁸. Third, in order to analyze the consequences of carbonizing forest governance

⁷ Plan Vivo is the carbon standard that accredited the REDD+ project under study in this thesis.

⁸ Though a dispersion of authority is not the same as a decentralization of authority, the two processes do have similarities (see Biermann et al., 2009), thereby justifying the use of this proxy.

for the production and use of knowledge, I analyze the prominence of storylines around the question: *who should monitor the outcomes of REDD+ governance: technical experts alone or a collaboration of experts and local communities?* Finally, in order to analyze the consequences of carbonizing forest governance for the use of policy instruments, this thesis analyzes the prominence of storylines around the question: *how should REDD+ be financed: through market- or fund-based sources of finance?* Here, I use a preference for fund-based sources of finance as a proxy for a non-market approach to carbonizing forest governance.

In order to assess - in a more quantitative manner - the prominence of storylines around the above four questions, the project case study and the cross-country comparative analysis rely on data from surveys with policy actors and stakeholders engaged in REDD+. These data were used - in addition to the semi-structured interviews - to classify respondents into storylines or to assess, in a more general way, how REDD+ is being framed with regard to the four questions⁹. The software programs SPSS and Excel were used for the quantitative data analyses of the surveys.

As to the semi-structured interviews, these were recorded (only with explicit consent from the interviewee) and transcribed in their entirety. For the cross-country comparative analysis, my co-authors and I coded the REDD+ policy documents of the seven countries and the transcripts of the interviews with the use of the software program NVivo. The coding system was based on the above-mentioned analytical framework, using the indicators to classify the documents into storylines. The development of the coding system was an iterative process, informed, as well, by the policy documents, transcribed interviews and intense discussions with co-authors. The coding of the semi-structured interviews helped to analyze - as a complement to the surveys and in a more qualitative way - how respondents frame REDD+ with regard to the four questions.

1.6.5 Research reliability and validity

Validity of the research refers to the accuracy of the findings, and can be increased in a number of ways (Creswell, 2014). As explained above, the analyses in this thesis rely on a variety of qualitative and quantitative research methods, thereby ensuring a triangulation of data sources (Creswell, 2014; Boeije, 2010; Yin, 2009). The semi-structured interviews, the most important data collection method, covered a large number of interviewees compared to the total number of people involved in REDD+

9 In the surveys, respondents had to rate their (dis)agreement with a number of stances. These stances were formulated in such a way that they related to the above-mentioned questions. For the project case study, respondents were classified into storylines based on their answers to the stances (in addition to the semi-structured interviews). The cross-country comparative analysis, on the other hand, only presented the percentages of actors (dis)agreeing with the stances. Appendix III provides the survey with stances for the project level case study (chapter 4); the stances for the cross-country comparative analysis are given in the individual chapter (chapter 5). See also the individual chapters for an explanation of how these stances were derived.

decision-making in the analyzed contexts. The interviewees included a wide variety of state and non-state actors operating at different levels of governance. The validity of the project case study and the cross-country comparative study was further enhanced by drawing on both qualitative and quantitative data analyses. For the quantitative data analyses, specific indicators to assess the prominence of storylines were used to analyze the data in a systematic way.

An important way to guarantee the internal validity of the research findings is prolonged periods of exposure during fieldwork, which gives the researcher an in-depth understanding of the object of research (Creswell, 2014). Data for the national level case study were gathered in 2011 during 2 weeks residence in New Delhi to carry out interviews with policy actors involved in REDD+ at the national level, followed by 6 weeks of project visits and travel to two Indian states (Uttarakhand and Himachal Pradesh) to conduct interviews with policy actors and practitioners involved in REDD+ at the sub-national and project level. The project visits served as a scoping exercise; data gathered during those visits were not used in this thesis but served as background information. Data for the project level case study were collected, first, in 2013 during a week's stay in Edinburgh for a Plan Vivo stakeholder meeting, second, in 2013-2014 during a 5 weeks visiting scholarship in New Delhi with an environmental finance and project development group involved in the case study project, and third, also in 2013-2014, during 5 weeks of project visit with regular travel to different project sites. Finally, data for the cross-country comparative study were retrieved in 2014 during a 3 months visiting scholarship with the Center for International Forestry Research in Bogor, Indonesia.

The internal validity of the findings was further increased by cross-checking preliminary results and draft versions of the chapters with the interviewees, so-called "member checking" (Creswell, 2014; Boeije, 2010). Prior to the start of the research, the research proposal was reviewed by several reviewers. In addition, research design and findings were discussed with and commented on by supervisors, colleagues, and co-authors during the entire research period. Formal and informal discussions about the research also took place in the author's capacity as network manager of the REDD@WUR network, an interdisciplinary research project that fosters collaboration and joint research on theoretical and policy-relevant questions around REDD+ at Wageningen University & Research Centre and beyond¹⁰. In addition, the (preliminary) findings of each of the chapters were presented and discussed more than once during multiple international conferences, workshops, summer schools, and during the two visiting scholarships in India and Indonesia. Finally, validity of the research was checked by reviewers who peer reviewed the four empirical chapters for publication. Three of the four chapters have been revised based on reviewers' comments.

The research was deliberately designed so as to increase the external validity of the

10 For more information, see <http://www.wageningenur.nl/redd>.

findings, i.e. the generalizability of the findings beyond the specific research context (Boeije, 2010). First, since the external validity of case studies is generally limited (Yin, 2009; Creswell, 2014; Boeije, 2010), it was decided to complement the national level case study in this thesis with a cross-country comparative analysis. Second, the analyses in this thesis were complemented with a review of literature, thereby constantly checking the generalizability of the findings. Third, each of the analyses in this thesis focuses on the consequences of carbonization for (a number of) the four dimensions of multilevel forest governance. Consistently focusing on the four dimensions in all the analyses allows for comparisons between the different case studies and analyses of carbonization at the global, national and project level. Finally, these four dimensions were chosen so as to represent contentious and fundamental issues that link to many REDD+-related debates as well as to debates regarding the changing nature of environmental governance more broadly. As I will show in the conclusion, this extended the generalizability of the findings in this thesis beyond the REDD+ governance domain.

1.7 Outline of the thesis

The outline of the thesis is as follows. This introductory chapter provided an overview of the topic of the thesis, together with the research objective, questions and methodology.

Based on a study of global policy debates and developments, chapter 2 analyzes how and with what consequences carbonization manifests itself through REDD+ measuring, reporting and verification systems. This chapter considers REDD+ MRV systems to be aligned with the growing uptake of transparency necessary for the exchange of carbon units. The starting point of the chapter is that such systems are not apolitical or neutral, as they are often portrayed, since their scope and methods are subject to contestation (see also Gupta et al., 2012). The chapter analyzes the outcomes of this contestation and the consequences for the constitution of and shifting authority over forest governance. More specifically, it analyzes how and with what consequences the prominent framings and institutionalization of REDD+ MRV systems promote a *simplification* or complexity of the forest governance domain, and a *technicalization* or diversity in the production and use of knowledge in forest governance.

Chapter 3 presents the national level case study of REDD+ in India. It contains an in-depth qualitative analysis of how carbonization manifests itself in India's REDD+ strategy, and how Indian forest policies and practices are being (re)shaped in response to this. In particular, the chapter studies how India's REDD+ strategy frames carbon versus non-carbon benefits and different sites of authority in forest governance. In so doing, it analyzes how and with what consequences India's REDD+ strategy seeks to promote a *simplification* or a focus on multiple benefits, and a *centralization* or decentralization of authority in forest governance.

Chapter 4 presents the project level case study, which analyzes how and with what consequences carbonization manifests itself in the first Indian REDD+ project. It first

conceptualizes storylines related to three of the four dimensions presented in section 1.4. Using specific indicators for these storylines, the chapter assesses which storylines are prominent among the project's stakeholders and in the design of the project. The conceptualization of storylines in this chapter can be used as a framework to analyze how REDD+ is being framed in specific instances. The conclusion of the chapter reflects on how the prominent framings in the REDD+ project promote or prevent a *simplification*, *technicalization* and *marketization* in forest governance in this specific context.

Chapter 5 contains a cross-country comparative analysis of how carbonization manifests itself in seven developing countries. It analyzes how REDD+ is being framed and planned to be operationalized at the national level in Cameroon, Indonesia, Nepal, Papua New Guinea, Vietnam, Peru and Tanzania. Using the analytical framework developed in chapter 4, this chapter assesses which storylines are prominent among national policy actors and reflected in the REDD+ Readiness Preparation Proposals of the seven countries. In concluding, the chapter assesses how the prominent framings of REDD+ in the seven countries promote or prevent *simplification*, *technicalization*, *centralization* and *marketization* of forest governance.

Chapters 1 to 5 analyze how carbonization manifests itself in different contexts and at different levels of governance, and with what consequences for (some of) the four dimensions of multilevel forest governance. Table 1-2 shows which chapters focus on which of the four dimensions.

Table 1-2: The four dimensions of multilevel forest governance as analyzed in the separate chapters (x= core focus in the analysis; *= indirectly related to the analysis).

	Complexity of the governance domain	Sites of authority	Production and use of knowledge	Use of policy instruments
Chapter 2	x	*	x	*
Chapter 3	x	x	*	
Chapter 4	x	*	x	x
Chapter 5	x	x	x	x

Chapter 6 contains the conclusions of this thesis. It answers the first research question related to the consequences of carbonization for multilevel forest governance. Drawing on this answer, the chapter provides theoretical and empirical insights into whether and how a homogenization of environmental governance might be underway, thereby addressing the second research question. Finally, the chapter takes stock of a decade of REDD+ governance and provides a future outlook.

CHAPTER 2

Making REDD+ transparent: The politics of measuring, reporting, and verification systems

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N.B. the abstract has been added for the purpose of this thesis, and minor changes have been made to references to the other chapters published in the edited volume.

Abstract

In this chapter, we analyze global policy debates and developments around REDD+ measuring, reporting and verification (MRV) systems. We consider MRV systems to be aligned with the growing uptake and institutionalization of transparency in environmental governance. In much scholarly literature and in the rhetoric and practice of international institutions involved in REDD+, the design and functioning of MRV systems is framed largely as a technical challenge. We argue, however, that such systems are not apolitical or neutral, since their scope and methods are subject to contestation, the outcomes of which have implications for the constitution of and shifting authority over forest governance. Regarding what is being made transparent, making forest carbon equivalent with other forms of carbon for exchange purposes is centrally implicated in MRV systems. This makes a *carbonization*¹¹ of forest governance - i.e. a prioritization of forest carbon over co-benefits - a possibility. Regarding transparency how and by whom, we argue that the priority given in current policy debates to national level expert-led MRV systems might well fuel a *technicalization* of forest governance in specific instances whereby scientific expertise and high-tech methods are privileged over monitoring by local communities. Such a technicalization might reinforce inequalities in state authority, since states with less monitoring capacity might be less able to participate in and shape REDD+ governance. Finally, whether REDD+ MRV systems open up political space for non-state actors remains contingent and flows from context-specific modes of institutionalization. Thus, REDD+ MRV systems merit further social science scrutiny, particularly in light of the (contested) neoliberal and technocratic thrust to global environmental governance within which they are negotiated and advanced.

Keywords: REDD+; MRV systems; Transparency; Carbonization; Technicalization.

11 In the initial stages of this research I used the term carbonization to signify a simplification of forest governance, as explained in the introduction. Later on I used carbonization as an umbrella term to refer to the broader phenomenon of governing forests for their carbon content, whether with a simplified focus on carbon or not. Hence, while in the individual chapters the term carbonization refers to simplification, in the introduction and conclusion of this thesis it is used as an umbrella term.

2.1 Introduction

Reducing Emissions from Deforestation and forest Degradation in developing countries (REDD) is currently one of the most debated climate mitigation options within the United Nations Framework Convention on Climate Change (UNFCCC) negotiations. REDD is intended to be a performance-based financing mechanism, whereby industrialized countries compensate developing countries for reducing forest-related carbon emissions. The mechanism is now labeled REDD+ (Reducing Emissions from Deforestation and forest Degradation and the role of conservation, sustainable management of forests, and enhancement of forest carbon stocks in developing countries). Many see great potential in REDD+ to simultaneously deal with climate change and loss of the world's forests. It is hoped that REDD+ will deliver cost-effective climate mitigation through reduced carbon emissions and carbon sequestration, as well as co-benefits such as biodiversity conservation (Pistorius et al., 2011; Seymour, 2012) and improved livelihoods of forest communities (Cowie et al., 2007). Yet whether REDD+ can satisfy these high expectations remains contested (Visseren-Hamakers et al., 2012b).

A much-debated element of these discussions centers on the measuring, reporting, and verification (MRV) systems necessary to ascertain whether and how much forest carbon is being sequestered, and also whether and what co-benefits are being generated and for whom. In this chapter, we focus on the politics of REDD+ MRV systems. We view the centrality of measuring, reporting, and verification in REDD+ as aligned with the growing uptake of transparency and governance by disclosure in the global environmental domain. Transparency is seen as an important means to hold the powerful to account, empower recipients of information, and thereby also improve environmental performance (Gupta and Mason, 2014). Yet a central question in this regard is who is being held to account by whom, and why. This becomes relevant to assess because REDD+ MRV systems are also implicated in the ascendancy of neoliberal environmental governance, which emphasizes the creation of new markets, efficiencies, and performance-based compensation as key to securing desired environmental aims (Duffy and Moore, 2010; Pistorius et al., 2012; see also Knox-Hayes and Levy, 2014; Orsini et al., 2014).

In much scholarly literature, as well as in the rhetoric and practice of international institutions involved with REDD+, the design and functioning of MRV systems is framed largely as a technical and administrative challenge, requiring accurate and verifiable data, access to technology, and capacity-building (Böttcher et al., 2009; GOFC-GOLD, 2010; Hiepe and Kanamaru, 2008). Yet what should be measured, reported, and verified, how, and by whom are fundamentally political questions, insofar as REDD+ will be constituted in large part by what is measured and valorized.

In this chapter, we analyze the uptake, institutionalization, and impacts of transparency through focusing on debates and developments around REDD+ MRV systems. In analyzing transparency about what, we focus on the scope of REDD+ MRV

systems, that is, the extent to which they focus on forest carbon alone or also include non-carbon or so-called co-benefits. A proposition we consider is that REDD+ MRV systems may promote a “carbonization” of multilevel forest governance if they promote valorization of forests for their carbon content alone, rather than for the multiple benefits that forests provide.

In addressing transparency how and by whom, that is, the modalities of REDD+ MRV systems, we analyze whether such systems privilege certain types of scientific expertise and data-generation techniques over others or whether they envision drawing on a diverse array of expertise and assessment techniques (from remote sensing to community-based monitoring) and sources of data. Assessing transparency how and by whom leads us to a second proposition: that REDD+ MRV systems may promote what we refer to as a “technicalization” of multilevel forest governance, if decisions about MRV practices are deferred largely to the scientific realm to be decided by experts. Such technicalization may also entail the empowerment of certain experts over others and representations of “the forest” in ways that render it measurable, monitorable, and hence also more amenable to centralized control (Scott, 1998).

In assessing these propositions, we proceed as follows. Section 2.2 discusses the rationales for the embrace of transparency in REDD+ by assessing the centrality and role of MRV systems in this new climate governance innovation. Section 2.3 discusses the institutionalization of transparency by analyzing the scope and modalities, that is, the what, how, and by whom of REDD+ MRV systems. Section 2.4 considers the prospects for empowerment and environmental gains through REDD+ transparency.

The analysis is based on primary and secondary sources and occasional participant observation of the UNFCCC REDD+ negotiations since 2006.

2.2 Embracing transparency

As hypothesized by Gupta and Mason (2014), the uptake of transparency in specific issue areas plays out within a broader global context shaped by a democratic imperative to redress governance deficits such as a lack of accountability, but also by a neoliberal privileging of market-based solutions to environmental challenges. We analyze here how these twin dynamics of democratization and marketization underpin a demand for REDD+ transparency.

REDD+ arguably fits within a broader trend in global environmental governance to promote increased efficiency through a combination of commodification of the environment, marketization, globalization, and new public management (see e.g. Hood, 1991, see also Turnhout and Boonman-Berson, 2011). The growing reliance on “payment for ecosystem services” in nature and biodiversity conservation reflects an increasing dominance of economic conceptions of the environment, often accompanied by a shift in governance responsibility from the public to the private sector (Bekessy and Wintle, 2008; Bernstein, 2001). Examples include national systems of wetland

banking (Robertson, 2006) and payment schemes for tourism in which representative species such as elephants are expected “to pay” for their own conservation by providing recreational services for tourists (Duffy and Moore, 2010; Neves, 2010).

In REDD+, forests are similarly conceptualized as providing the ecosystem service of carbon sinks, one that can be measured, valorized, compensated, and/or marketed (Diaz et al., 2011; Mackenzie, 2008; Pistorius et al., 2012). In contrast to other neoliberal marketized contexts, however, the focus here is not necessarily on private, voluntary arrangements. Instead, states are centrally implicated in REDD+ transparency, with the contours of REDD+ and its MRV systems now being negotiated within the multilateral regime of the UNFCCC and various types of disclosure required from REDD+ recipient countries. Thus, REDD+ as an experiment in payment for ecosystem services unfolds in an unequal geopolitical context, whereby distribution of, access to, and control over the ecosystem service in question varies, as does the capacity to valorize and be compensated for it.

MRV systems for REDD+ are centrally implicated in this process, given the need for information to ascertain results as a basis for compensation. As such, REDD+ MRV systems also reflect a rapidly growing role for *scientific expertise* in environmental governance. As noted, environmental governance increasingly focuses on performance and efficiency (Mol, 1999; Turnhout, 2009). Yet assessing performance and efficiency requires information about outputs, costs, and effects. Transparency - in the form of measuring, reporting, and verification - is thus a crucial condition for payment for ecosystem services to work, and expert-led knowledge production is often a key component herein.

In contrast to other aspects of neoliberal approaches to environmental governance (such as privatization, marketization, or the dominance of efficiency), transparency, however, is not often criticized (Gupta, 2008; Power, 1999). Yet transparency can have empowering and disempowering consequences, depending on who is engaged in monitoring and measuring, reporting and verification, and for what purposes. Monitoring can be a powerful tool, if deployed by civil society or others, to bring to light unsustainable or corrupt (forest) practices and thereby force accountability of powerful actors (Fuller, 2006; Transparency and Accountability Initiative, 2010). Yet it can also have disempowering consequences if it allows those in power to “see like a state”, that is, to enhance control over and appropriate valuable resources through data gathering and surveillance (Scott, 1998; see also Luke, 1995 and Turnhout, 2009).

How REDD+ MRV systems will work, and to whose benefit, is thus contested political terrain. This is particularly so because the outcome of monitoring, measuring, reporting, and verification may be to harmonize or homogenize as a prerequisite to exercising (centralized) control. As Fogel (2004, p. 111), for example, notes “the notion that ‘standardized’ carbon units can be produced through standardized sequestration projects (...) is an expression of an instrumental ‘global gaze.’” Such a global, or in

the case of REDD+, national, gaze requires the development of complex monitoring systems or “infrastructures of transparency” that may be costly and resource intensive to establish (Gupta, 2010c; on infrastructures of transparency, see also Orsini et al., 2014; Dingwerth and Eichinger, 2014).

In a global climate-monitoring context, Bäckstrand and Lövbrand note, for example, that “satellite supervision of the Earth’s vegetation cover, advanced computer modeling of atmospheric and oceanographic processes, a global grid of meteorological stations and carbon flux towers [all] exemplify the resource-intensive infrastructure used by expert groups to study, monitor and predict the trajectories of human induced climate change” (Bäckstrand and Lövbrand, 2006, p. 54). In the REDD+ context, calls for powerful satellite systems on a global scale, operated by “independent” international expert bodies to generate “real-time” information and early warning systems about tropical forest loss, are increasingly heard (Lynch et al., 2013, p. 294).

Yet such systems are not detached from the exigencies of politics, insofar as they raise questions about what is to be seen by whom and to what end, with implications for shifting sovereign authority over resource governance choices and outcomes. Added to this, the view that expert knowledge generation is an apolitical, neutral activity aimed at discovering objective realities or facts of nature has been criticized for its failure to acknowledge the nature of scientific practice as well as the dynamics between knowledge production and use (on the latter, see for example, Gieryn, 1995; Latour, 1999). Such critiques highlight, for example, the extent to which scientific experts constitute the things that they study or measure (Fogel, 2004; Gupta, 2004; Jasanoff, 2004; Law, 2009; Mackenzie, 2004; Turnhout and Boonman-Berson, 2011).

For REDD+, forest carbon monitoring is to occur largely in a national context, with varying degrees of flexibility and discretion permitted with regard to scope, techniques, and data sources (Herold et al., 2012; Romijn et al., 2012). Furthermore, whether REDD+ compensation will be organized through markets or international fund transfers remains undecided in global policy. Regardless, the imperative for transparency in this case is to serve as the basis for compensating environmental performance. Thus, rather than a democratization impulse (understood as a push for more open and inclusive governance), transparency is fueled more by the impetus to valorize, commodify, and create new markets in environmental goods and services.

This raises a variety of questions, including what environmental gains (carbon-related or also non-carbon forest services) are to be measured, valorized, and/or compensated with the aid of REDD+ MRV systems, and who is empowered by the generation and provision of such information. Will REDD+ MRV systems empower global and/or national elites of scientists, policy-makers, and carbon market actors at the expense of affected groups such as local forest-dependent communities? What might REDD+ MRV systems render visible or leave obscure, and with what implications for environmental gains? We turn to these questions next.

2.3 Institutionalizing transparency

We analyze here the scope and modalities (the what, how, and by whom) of REDD+ MRV systems, as these are now being debated in a global multilateral context. In so doing, we explore the hypothesis that governance by disclosure decenters state-led regulation and opens up political space for other actors (Gupta and Mason, 2014). In one sense, the first part of this hypothesis does not apply to this case, given that REDD+ MRV systems are envisioned to be national level, state-based systems, and hence states are central to their establishment and institutionalization. Nonetheless, REDD+ recipient countries have very different capacities to develop and institutionalize such systems. Thus, what the scope of these systems will be, and who will be involved with or have the capacity to generate required information, has consequences for who (i.e. which states) will be empowered and/or cede authority, and the extent to which these systems will open up political space for other actors, whether local communities, experts, or private market actors.

In assessing these dynamics, we discuss in the following, first, the debates and developments relating to the *scope* (the what) of REDD+ MRV systems, specifically the multiple political and technical challenges inherent in attempts to monitor, measure, and thereby valorize forest carbon and other forest ecosystem services. Next, we discuss *modalities* of REDD+ MRV (the how and by whom) by assessing whose knowledge and what techniques are being privileged in debating the contours of these systems.

2.3.1 Institutionalizing the scope of MRV systems: Disclosure about what?

When REDD was first introduced into the UNFCCC negotiations in 2005, the conference of the parties to the UNFCCC mandated its Subsidiary Body for Scientific and Technological Advice to develop a sound methodological approach to the development of MRV systems (Pistorius et al., 2012). The assumed scope of REDD+ MRV at the time was to assess avoided deforestation (and forest degradation), rather than the sustainable management of forests and conservation and enhancement of forest carbon stocks (the + activities added later to REDD).

With the earlier, more limited scope, the MRV challenge turned on assessing land use changes relating to avoided deforestation, with the presumption that this was largely achievable via available remote-sensing techniques and satellite data (Böttcher et al., 2009). Policy-makers acknowledged, however, that assessing carbon stock changes associated with forest degradation was much more complex.

Since 2007, the scope of REDD has expanded to include essentially all forest-related activities. This makes it necessary to not only *monitor* changes in deforested areas using proxy values, but also to *measure* actual carbon stock changes in different forest types and different carbon pools (living and dead biomass and soil carbon), both in degraded areas and in areas where no change of land use has occurred. This has greatly expanded the scope of MRV systems required for REDD+ forest carbon accounting.

In line with this expanding scope, the international scholarly and political debate over REDD+ MRV systems has intensified, with a focus on developing “adequate scientific methods” for measuring, reporting, and verification of forest carbon emissions (UNFCCC, 2008, p. 42). Many international initiatives, including the World Bank’s Forest Carbon Partnership Facility (FCPF) and the United Nations REDD (UN-REDD) Programme, are helping developing countries to get “ready for REDD+”, including through capacity-building for the development of REDD+ MRV systems (Herold and Skutsch, 2009). As suggested by a UNFCCC technical paper, the “estimation and reporting of emissions and removals of greenhouse gases” should be guided by five principles, including “transparency, consistency, comparability, completeness, and accuracy” (UNFCCC, 2009a, p. 6). This builds on the Intergovernmental Panel on Climate Change (IPCC) good practice guidelines for countries to report on forest carbon emissions relating to land use, land use change, and forestry (LULUCF) in their overall greenhouse gas emission budgets (IPCC, 2003).

The outstanding issue remains, however, what constitutes, *inter alia*, “completeness” and “accuracy” and according to whom. The IPCC good practice guidelines are framed as technical requirements and the rhetoric of intergovernmental organizations is to emphasize that investments in capacity-building will permit the development of adequate MRV systems in developing countries that can meet such criteria. Extensive policy and scholarly discussions now turn on the challenges of determining baselines (referred to as reference [emission] levels) and appropriate techniques for monitoring changes in forest cover, as well as measuring carbon density and identifying credible data sources on which to base forest carbon accounting (see e.g. Asner, 2009; Herold et al., 2012; Olander et al., 2008).

Tellingly, a UNFCCC background paper notes that “due to the complexity of the processes involved and the lack of information, expert opinions, independent assessments or model estimations are commonly used as information sources to produce forest carbon data” (UNFCCC, 2009a, p. 13, referring to Holmgren et al., 2007). Insofar as uncertainties persist and experts disagree on carbon accounting methods, what constitutes “good practice” in MRV systems is thus flexible and open to interpretation (Lövbrand, 2004). Whose interpretation prevails thus has consequences for the implementation and the effects produced by such systems.

The IPCC guidelines explicitly recognize the need for flexibility in determining good practice in accounting, given the very different contexts and preconditions prevailing in different REDD+ countries. In recognition of this, it identifies three different tiers of acceptable data sources in calculating so-called emission factors (that is, forest carbon stock changes) needed to calculate forest carbon emissions. IPCC tier 1–level reporting permits use of (aggregate) default data. As per IPCC tier 2–level reporting, emission factors are to be calculated based on country-specific data. Finally, IPCC tier 3 is the most stringent in calling for emission factors to be based on “models and inventory

measurement systems tailored to address national circumstances, repeated over time, and driven by high-resolution activity data disaggregated at sub-national to fine grid scales” (Herold et al., 2012, p. 3; see also IPCC, 2003).

Only IPCC tier 3–level reporting actually entails measurements, whereby then a calculation of scientific uncertainties is also feasible. Although this reflects needed flexibility in what constitutes good practice, it is striking that few industrialized countries have the technical means and infrastructure to generate tier 3–level data, and most developing countries do not. As one illustration, even Germany, with its long tradition of generating forest inventory data, is currently unable to report in “tier 3 quality” on all relevant forest carbon pools, as the latest German national inventory report submitted to the UNFCCC reveals (UBA, 2010). Here, the calculation of dead wood carbon pools relies on different data sets, and carbon stored in soil (estimated to constitute approximately 50 percent of the total forest carbon pool) is calculated using tier 1 data. The required calculation of uncertainties in tier 3–level reporting also reveals how very large uncertainty ranges are derived from “practical approaches” that “do not take into account every possible error source” and “neglect correlations” (UBA, 2010, p. 445).

Thus, even in a developed country context, where the LULUCF sector is a relatively small fraction of the national greenhouse gas emission budget, it is difficult to measure (rather than model or estimate) carbon stock changes. Such measurement is a much greater challenge in most developing countries, where the contribution of LULUCF to national greenhouse gas budgets is also likely to be higher.

In developed and developing country contexts, given lack of data, it is also challenging to account for the impact of severe biotic (e.g. pests) or abiotic (e.g. fires, storms) calamities on forest carbon pools. Notwithstanding this, there is a global policy debate underway regarding the need to distinguish human from natural disturbances to forests (see e.g. Lövbrand, 2004), given the relevance of this distinction for REDD+ performance-based compensation. Such distinctions further exacerbate the challenges of forest carbon accounting. Another expansion in the scope of MRV systems now being contemplated is whether to account for carbon stored in harvested wood products, as a form of postharvest carbon sequestration. Again, this would rely on estimations and models rather than measurement, but nonetheless pose various socio-technical challenges (Fox et al., 2010).

The extensive and ever-growing needs of forest carbon accounting implies that the term *measuring* (the “M” of MRV) might well be misleading, given that the expanded set of MRV challenges facing REDD+ can be addressed only through monitoring. Such monitoring relies, furthermore, on long intervals between observations, the use of default values, and the omitting of relevant carbon pools if data are unavailable or cannot be obtained at “reasonable” costs. In addition, the need to supplement historical data on deforestation and forest cover change, with projections of future trends, including the (social, political, and economic) drivers of deforestation, in calculating baselines against

which REDD+ country performance is to be assessed, adds to scientific and social uncertainties and accounting challenges (see e.g. Herold et al., 2012; Lövbrand, 2004).

With the exception of larger emerging economies, such as China, India, Brazil, Mexico, and Argentina, there are considerable gaps in the capacities of most developing countries to even monitor (much less measure) land use and carbon stock changes (Romijn et al., 2012). Multilateral REDD+ readiness support programs of UN-REDD and the World Bank seek to build such capacities to permit countries to participate in REDD+, yet in large intact forest landscapes, such as the Amazon or the Congo Basin, implementing ground-truthing inventories to complement remote-sensing data remains largely out of reach. The costs associated with establishing such systems, even if they are technically feasible now or in the near future, will be easier to bear for some than others. A recent comparative study argues, for example, that monitoring costs associated with REDD+ may have a significant impact on distribution of REDD+ benefits (Plugge et al., 2012).

The preceding discussion highlights that the data generated and the scope of REDD+ MRV systems are necessarily politically negotiated and context driven, rather than being neutral technical means by which to objectively document (comparable) REDD+ performance. This is also evident, for example, from a survey of experts and policy-makers from developed and developing countries, on issues such as baselines and credible sources of data for REDD+ MRV systems. Huettner et al. (2009) show that developed versus developing countries, but also policy-makers versus technical experts, have different notions of what the parameters for forest carbon monitoring systems should be and who should decide. For example, (southern) policy-makers rated a requirement for “national sovereignty over data” for REDD+ MRV systems as much more important than technical experts. Southern policy-makers also expressed a preference for baseline measurement methods to have “compatibility with the FAO [Food and Agriculture Organization of the United Nations] data sets and UNFCCC forest definitions” (Huettner et al., 2009, p. 6), with policy-makers prioritizing this much more than technical experts. Technical experts view FAO data, for example, with suspicion, given that it is submitted by countries with little to no independent verification. Similarly, policy-makers support but experts question the UNFCCC definition of forests, because it is broad and open to multiple interpretations (see e.g. Putz and Redford, 2010; see also Seymour, 2012).

Going beyond the challenges of accounting for *forest carbon* in REDD+ MRV systems, the debate has now also moved to the need for and challenges of including *co-benefits and safeguards* in the scope of REDD+ MRV systems. This discussion is now underway in the UNFCCC context and in related global institutional arenas, such as UN-REDD and the World Bank’s FCPF. The notion of “safeguards” within the UNFCCC encompasses a set of minimum standards intended to avoid unintended side effects of REDD+ activities, such as negative social impacts on forest-dependent

communities or adverse environmental consequences such as biodiversity loss. Safeguards were introduced into the UNFCCC negotiations in 2009 in recognition of the fact that the ever-broadening scope of REDD+ activities could pose significant risks to biodiversity and needs of local forest-dependent communities (Phelps et al., 2012). Going beyond safeguarding against potential negative impacts of REDD+, the concept of co-benefits is concerned with how REDD+ may also have positive consequences for the other environmental and social services that forests provide.

Until recently, however, there have been few attempts to identify monitoring options for co-benefits and safeguards (Hiepe and Kanamaru, 2008). This appears to be changing, with the need for “REDD+ safeguard monitoring” now also being discussed within the UNFCCC (Stickler et al., 2009, p. 2813; see also Pistorius et al., 2011). The UNFCCC’s Cancun Agreement in 2010 and subsequent decisions require countries to discuss options for broadening monitoring requirements beyond greenhouse gas emissions to include “a summary of information on how (...) safeguards (...) are being addressed and respected throughout the implementation of the activities” (UNFCCC, 2011a, p. 2). The Cancun decision that REDD+ countries should establish “information systems for safeguards” focuses, however, only on “how the safeguards are addressed and respected”, rather than on whether co-benefits are being realized (UNFCCC, 2011a, p. 2). This means that such safeguard information systems aim merely for an inventory of formal project statements, and not for the monitoring and measurement of biodiversity and livelihood issues to produce information on actual achievement of co-benefits.

Whether this should be included within REDD+ MRV systems is a contested issue, given that inclusion of such aspects would increase the monitoring burden on developing countries beyond what is currently required from UNFCCC annex I (industrialized) countries. These discussions have raised concerns about infringement of sovereignty of developing countries, if safeguard monitoring is globally mandated through REDD+ MRV systems, rather than being determined through national policy processes in REDD+ recipient countries. A related contested issue is whether REDD+ compensation payments are to be linked to safeguards *monitoring* as opposed to simply documenting existence of “safeguard information systems” and/or whether MRV systems should simply be carbon focused.

Building on the preceding discussion of the scope (i.e. the what) of REDD+ MRV systems, we turn next to the how and by whom of REDD+ MRV, that is, to modalities of REDD+ MRV systems and the envisioned involvement of various actors in it.

2.3.2 Institutionalizing the modalities of MRV systems: How and by whom?

With regard to the means by which to generate forest carbon and non-carbon information, current debates around REDD+ MRV systems emphasize reliance on globally agreed high-tech and sophisticated methods, more so than local, on-the-ground techniques or monitoring by local communities. Yet there is now a growing consensus

that local community-based inventories will be essential for forest carbon monitoring and monitoring for social and environmental co-benefits (Fry, 2011; Herold and Skutsch, 2011; Stickler et al., 2009).

In considering the prospects to include local level monitoring in national expert-led MRV systems, prior experience with afforestation and reforestation projects under the Kyoto Protocol's Clean Development Mechanism (CDM) is instructive here. At the international level, experience with CDM projects has suggested a low level of confidence among global and national policy elites in locally produced data, compared to data gathered by technical experts relying on sophisticated methodologies (see e.g. Fry, 2011). The focus of (international) capacity-building for REDD+ MRV systems has similarly been on remote-sensing and satellite-based methods to generate forest carbon (stock) estimates.

The REDD+ web platform on the UNFCCC website, for example, has a section on methodologies for REDD+ MRV systems that contains elaborate discussions of remote sensing, but not much information on ground-based forest inventories (UNFCCC, 2011b). Although this could be because there is already more familiarity and experience with forest inventories in developing countries as compared to remote-sensing techniques, the use of ground inventories in estimating changes to forest carbon stocks remains essential and complex. If so, the implications of promoting sophisticated and remotely deployed methodologies for assessing REDD+ performance are important to examine. The experience with CDM suggests that the globally adopted "overly rigid standards-based approach" (Fry, 2011, p. 185) of CDM afforestation and reforestation projects, with stringent monitoring requirements, complex regulations, and high transaction costs, renders it difficult for local communities to be involved with monitoring (Fry, 2011; see also Bose et al., 2012).

Clearly, monitoring tools and practices can also have empowering consequences for local communities. Evidence from forest governance experiences in a variety of regional contexts, also predating REDD+, reveals that indigenous communities have successfully used ground-truthing and remote-sensing techniques to map their customary land rights and thereby "press their claims on behalf of nature and cultural survival" (Gupta et al., 2012, p. 729). A growing literature now documents how local communities might deploy such systems of transparency to further social and environmental gains (Litfin, 1997; for recent detailed discussions, see also Dickson and Kapos, 2012; Larrazábal et al., 2012; Visseren-Hamakers et al., 2012b). This implies that whether REDD+ MRV systems open up political space for non-state actors remains contingent and flows from context-specific modes of institutionalization.

In sum, this section has shown that the expanding scope and complexity of globally required, national level REDD+ MRV systems might well impinge on state sovereign authority, insofar as some states might be less able to develop such systems and hence participate fully in this multilaterally negotiated payment for ecosystem services scheme.

Such systems might simultaneously open up space for non-state actors to engage, whether as a way to reinforce or contest such shifts in state authority. We elaborate further on such effects in the following discussion of the prospects for REDD+ MRV systems to reinforce a “technicalization” and “carbonization” trend in multilevel forest governance, with consequences for who is empowered and what environmental gains are secured.

2.4 Effects of transparency

Drawing on the preceding discussion, we consider here the effects of transparency (via REDD+ MRV systems) in line with the normative, procedural, and substantive typology of effects outlined by Gupta and Mason (2014). In doing so, we engage with the hypothesis that transparency is likely to be effective in contexts resonant with the goals and decision processes of both disclosers and recipients.

2.4.1 REDD+ MRV systems: Who is empowered?

Our preceding discussion highlights that debates over the scope and modalities of REDD+ MRV systems are, ultimately, debates over how to frame the object of governance, in this case the role of forest-related activities in mitigating climate change. The scope and practices of MRV systems are critical to determining whether changing forest-related practices can be harnessed to combat climate change, but also to conserve biodiversity and enhance local livelihoods.

Given the high stakes, it is inevitable that globally negotiated performance assessment systems, such as REDD+ MRV systems, will encounter the strictures and concerns of state sovereignty and local forest-related accountability politics (Niederberger and Kimble, 2011; Transparency and Accountability Initiative, 2010). This is especially so if they implicate public research institutes, global science networks, a diverse array of countries with multiple and competing priorities, and globalized carbon market actors, as do REDD+ MRV systems.

On the key question of empowerment through transparency, then, debates around internationally mandated measuring, reporting, and verification of (voluntarily assumed) climate mitigation actions of developing countries, going beyond REDD+, has been one of the most contentious issues in UNFCCC discussions. Conflict over MRV of climate mitigation actions being taken by countries came to the fore in the 2009 UNFCCC negotiations in Copenhagen. China, in particular, opposed an international review and verification process for its voluntarily assumed national climate mitigation actions, viewing this as an infringement of sovereignty (Niederberger and Kimble, 2011).

With regard to REDD+ MRV systems, the conferences of the parties to the UNFCCC agreed in 2010 that these should be “available and suitable for review as agreed by the conference of the parties” (UNFCCC, 2010a, p. 12). However, what such an international review process entails has not been agreed on, because it requires agreeing on who will assess whether REDD+ standards are being met and what the

consequences are if standards are not met. Thus, a globally organized “independent review” of REDD+ MRV outcomes is a high-level political conflict over potential infringements of national sovereignty (Herold and Skutsch, 2011, p. 2). This is evident as well from the collapse of REDD+ negotiations in the UNFCCC meeting in Doha in December 2012 because of unresolvable disagreements between industrialized countries (led by Norway) and developing countries (led by Brazil) over the need for a “robust” international verification procedure for forest emission reductions as a basis for performance-based REDD+ payments (Conservation International, undated). The political significance of the scope and modalities of REDD+ MRV systems is underscored by this outcome, notwithstanding framing of such matters as “technical”, also within the UNFCCC context.

The disagreement also highlights that although some states, including China, India, and Brazil, can contest or block perceived infringements of national sovereignty by determining the scope of their own REDD+ MRV systems or contesting the need for international verification, others are less able to do so. One outcome can be their exclusion from participating in REDD+ in the face of stringent international monitoring, reporting, and verification requirements. As McAlpine et al. (2010, p. 339) argue, international MRV standards can lead to a “disproportionate representation of some countries [in the REDD+ mechanism] at the expense of others”, because not all countries have the capacity to put into place MRV systems that comply with globally negotiated standards and/or successfully contest these standards as an infringement of sovereignty.

If so, as noted previously, transparency-based arrangements can reinforce inequalities in state authority to participate in and shape multilevel governance outcomes. One can conclude then that the effects of REDD+ MRV systems, as currently envisioned, might be to empower those countries with developed capacities for MRV and exclude others (and/or their affected publics) who may lack the capacity to participate in or shape MRV requirements to suit their own circumstances. Thus, such systems of transparency might be “effective” insofar as they are aligned with the goals and priorities of some key REDD+ donor and recipient countries, but not all.

With regard to whether other (non-state) actors are empowered by REDD+ MRV systems, the struggle between the sovereign state and a mobilized, vocal, active, transnationally connected, and locally embedded civil society that seeks to shape institutional arrangements for REDD+ is now well underway (for detailed discussions, see Gupta et al., 2012; Larrazábal et al., 2012; Visseren-Hamakers et al., 2012b). As a result, REDD+ and its MRV systems constitute a still unstable climate governance project, with the jury out on how such systems will develop and who will be empowered in diverse national and local contexts.

Clearly, in the everyday realities of forest management and local livelihood needs, REDD+ MRV systems will perform in unpredictable ways. Notwithstanding this,

the priority given in current policy debates to national level *expert-led* MRV systems, with limited scope and resources for community involvement, might well fuel a *technicalization* of forest governance in specific instances. Again, such a technicalization of forest governance might well be aligned with the goals of certain REDD+ donor and recipient countries, and hence yield “effective” results-based compensation outcomes for them, but with adverse consequences for others, particularly local communities, who might be left out from negotiating and participating in these arrangements.

2.4.2 REDD+ MRV systems: Fueling environmental improvements?

In addition to empowerment, a related set of questions raised by our analysis turns on the environmental gains sought from transparency. Here, the materiality of the resource being governed (forest carbon) comes to the fore. The complexities and uncertainties surrounding the monitoring and measuring of forest carbon, and the challenges of making forest carbon commensurate (i.e. equivalent for exchange purposes) with other forms of carbon, are centrally implicated in the prospects of governance by disclosure to fuel desired environmental improvements (such as climate mitigation and biodiversity conservation) in this case (Boyd, 2010). In particular, given that co-benefits and the social consequences of potential REDD+ arrangements are harder to measure and valorize than forest carbon, they are likely to remain outside the scope of MRV systems.

Although an important discussion about safeguards has begun globally under the UNFCCC, the relationship to evolving MRV systems is tentative, and the discussion itself remains contentious because of potential restrictions on sovereignty. Thus, a *carbonization* of multilevel forest governance, whereby forests as sources and sinks of carbon are prioritized over the co-benefits they yield, remains a possibility. When such carbonization is congruent with the goals of specific disclosers and recipients (REDD+ donor and recipient countries), it might well yield results-based compensation and transfers in specific instances, yet this may be to the detriment of valuing non-carbon forest ecosystem services.

2.5 Conclusion

This chapter has analyzed what REDD+ MRV systems intend to make visible and for whose benefit. Through focusing on debates and developments around the scope and modalities of REDD+ MRV systems (the what, how, and by whom of such systems), we have suggested that their design and functioning is not merely a (neutral) technical administrative challenge, requiring sufficient resources and capacity and adequate and accurate expertise, as framed in mainstream policy-making circles. Instead, these are fundamentally political processes, whereby the scope and methods of measuring, reporting, and verifying are subject to contestation and fraught with uncertainties and specific enabling assumptions.

Although often cast as technical, these are political processes insofar as they

determine who is empowered or disempowered by the pursuit of transparency. We have also argued that an environmental valuation and commodification impetus for disclosure is privileged in this realm. As such, the possibility remains that expert-driven MRV systems, inspired by a neoliberal attempt to valorize and commodify carbon, may promote a *technicalization* of forest governance. This may empower actor groups favored by epistemic (forest experts) and market-based identities (suppliers and consumers of “verifiable” ecosystem goods and services) over affected actor groups falling outside these categories (forest-dependent communities with unrecognized local knowledge and communal property rights holders). With regard to environmental improvements, a preoccupation with forest carbon in REDD+ MRV systems may well result in marginalizing co-benefits and hence *carbonizing* forest governance.

In conclusion, our analysis suggests that transparency-based governance arrangements serve to constitute and represent the forest in ways that render it measurable. As such, REDD+ MRV systems merit further social science scrutiny, particularly in light of the (contested) neoliberal and technocratic thrust to global environmental governance within which they are now being negotiated and advanced.

CHAPTER 3

Framing REDD+ in India: Carbonizing and centralizing Indian forest governance?

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Abstract

This article analyzes the interaction of newly articulated climate governance goals with long-standing forest policies and practices in India. We focus on India's REDD+ (reducing emissions from deforestation and forest degradation and related forest activities) strategy, with a particular focus on the Green India Mission (GIM). The GIM calls for a doubling of the area for afforestation and reforestation in India in the next decade as a dominant climate mitigation strategy. We analyze how the GIM policy document frames carbon versus non-carbon benefits to be derived from forest-related activities; and how the GIM envisages division of authority (between national, regional and local levels) in its implementation. We are interested in assessing (a) whether the GIM promotes a *carbonization* of Indian forest governance, i.e. an increased focus on forest carbon at the expense of other ecosystem services; and (b) whether it promotes an increased *centralization* of forest governance in India through retaining or transferring authority and control over forest resources to national and state level authorities, at the expense of local communities. We argue that the GIM frames the climate-forest interaction as an opportunity to synergistically enhance both carbon and non-carbon benefits to be derived from forests; while simultaneously promoting further decentralization of Indian forest governance. However, based on past experiences and developments to date, we conclude that without significant investments in community-based carbon and biodiversity monitoring, as well as institutionalized benefit-sharing mechanisms that reach down to the local level, the posited REDD+ induced move toward more holistic and decentralized Indian forest governance is unlikely to take place.

Key words: REDD+; Forest governance; Climate policy; India; Carbonization; Centralization.

3.1 Introduction

Given the increasingly intractable global governance challenge posed by climate change, the potential of forests to store carbon is receiving ever more attention. This is evident from multilevel debates and policy developments relating to Reducing Emissions from Deforestation and forest Degradation; and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries (collectively known as REDD+). The idea of REDD+ was first introduced in 2005 by developing countries to the eleventh Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC), and has been intensely negotiated ever since. It envisages shared global action on climate change by allowing industrialized countries to compensate developing countries for reducing forest-related carbon emissions. Policy developments around REDD+ can thus be viewed as a dominant site wherein the imperatives of climate and forest governance come together.

REDD+ has been widely portrayed as a “win-win” opportunity to combat both climate change and worldwide deforestation and forest degradation. From such a perspective, the intense attention devoted to climate change increases both the momentum and the resources available to combat forest loss, and generates a more holistic view on forest ecosystem services. REDD+ might also provide opportunities for wider institutional reforms in forest governance, such as improved tenure security and rights and empowerment of local communities in forest management (see e.g. Angelsen et al., 2009). Critics of REDD+ argue, however, that increased attention to forest carbon storage may divert attention from the equally important forest governance imperatives of conserving biological diversity and sustaining livelihoods of forest-dependent communities. The prioritization of one specific forest ecosystem service - carbon storage - at the expense of others is thus seen to pose direct and indirect risks to local livelihoods and/or to the conservation of forest biodiversity (see e.g. McDermott, 2012¹²; Visseren-Hamakers et al., 2012a, b). We refer to this effect here as a “carbonization” of forest governance (see also Gupta et al., 2012, p. 2).

Another major concern is that the implementation of REDD+ may promote a centralization trend in forest governance. This is linked to the fact that the majority of REDD+ activities are intended to compensate national governments for their forest-related carbon emission reductions, hence possibly creating incentives for central governments to maintain or regain control over forest resources. Indeed, most parties to the UNFCCC favor a national approach to REDD+. The majority of REDD+ funding to date has been allocated to the development of national level “REDD+ readiness strategies”. These include strengthening national forest monitoring systems and national systems for measuring, reporting and verification of REDD+ activities. A number of scholars have therefore argued that REDD+ may well reverse the trend of

12 This article has now been published as McDermott, 2014.

decentralization underway in forest governance for the last decades, and thereby reduce community participation in such initiatives (see e.g. Sandbrook et al., 2010; Phelps et al., 2010; Angelsen et al., 2009; Toni, 2011), although studies on this issue remain scarce. Scholars who raise concerns about the potential of REDD+ to centralize forest governance also often assume, however, that decentralized forest governance is necessarily more democratic, and will *prima facie* empower local communities. Centralized approaches to forest governance are not, however, necessarily disempowering. Using the case of Brazil, Toni (2011), for example, argues that centralized approaches that mandate involvement of local communities in decision-making are, in fact, essential to promote the rights and participation of marginalized groups in sub-national REDD+ activities. Experiences with decentralization in natural resource management do suggest, in many instances, that a strong central government authority can facilitate successful and equitable decentralization and participation of local communities (see e.g. Sandbrook et al., 2010).

In this article, we analyze the REDD+ stimulated interaction of climate and forest governance in India by focusing on how the contours of Indian forest governance are being framed and (re)shaped in response to the imperatives of multilevel climate governance. In particular, we study how India's REDD+ strategy frames carbon versus non-carbon benefits of forest-related activities; and specifies different sites and levels of governance authority in implementing REDD+-related activities. This allows us to draw conclusions about whether REDD+ is being articulated and constituted in a manner that may promote instances of "carbonization" and centralization in Indian forest governance. With regard to centralization, our concern in this article is to assess whether India's REDD+ strategy has the potential to empower forest-dependent communities in managing their forests. Hence, notwithstanding the above-mentioned potential positive effects of a strong central government authority, we frame centralizing tendencies as those that seek to retain or transfer authority and control over forest resources to national and state level authorities at the expense of local communities.

India provides an important and timely case to study the above-mentioned aspects, particularly since it is not often the focus of REDD+ scholarship. As one of the fastest growing emerging economies, India is a powerful economic and political player in international climate negotiations, and is increasingly aware of the need to curb its own growing carbon emissions. Furthermore, policy-makers portray forests as central to Indian climate change mitigation strategies. India belongs to the top ten countries with the largest forest area in the world, with a total area of circa 68 million hectares (FAO, 2010). Although significant deforestation and forest degradation is still taking place in India (Sharma and Chaudhry, 2013; Ravindranath et al., 2012; Aggarwal et al., 2009; Singh et al., 2012), this is often masked by the fact that it is also one of the countries actively pursuing afforestation and reforestation. As a result, India's total forest area has stabilized and even increased in the last decades (FAO, 2010; Sharma and

Chaudhry, 2013). Studies show that the Indian forestry sector has the potential to offset a significant percentage of India's carbon emissions (see e.g. Singh et al., 2012; Sharma and Chaudhry, 2013).

For these reasons, the link between forest governance and climate change governance has been institutionalized in the National Mission for a Green India (also called the Green India Mission, GIM), which the Indian government developed in May 2010 as part of its National Action Plan on Climate Change. The Mission explicitly aims to double the area for afforestation and eco-restoration over the next ten years, and hence significantly enhance removal of carbon emissions through forests. Within India, the GIM is both portrayed by policy-makers and perceived by civil society and other stakeholders as a critical component of India's (future) REDD+ strategy, as and when the global modalities for REDD+ are agreed under the UNFCCC (MoEF, 2010a). While some praise the Green India Mission and its objectives, it has been heavily criticized by a number of civil society organizations for its alleged primary focus on carbon and its potential to continue or enhance state control over forests (Interviews Jindal, Kohli, Lahiri, Radhakrishnan, Poffenberger, S. Gupta 2011). Thus, debates regarding the potential of REDD+ to carbonize and/or centralize forest governance are very topical in India. Despite this, scholarly analyses of REDD+ in India remain scarce, particularly in the social sciences (for some exceptions, see e.g. Ravindranath et al., 2012; Pandey, 2012; Aggarwal, 2011; Sharma and Chaudhry, 2013; Singh et al., 2012; Ravindranath and Murthy, 2010). Our article thus seeks to fill this scholarly gap, focusing on the GIM as the lynchpin of India's emerging REDD+ strategy.

In doing so, we consider first whether the GIM promotes an increased focus on the potential of forests to store carbon at the cost of other ecosystem services, in particular biodiversity conservation. Balancing carbon with biodiversity benefits is a particularly pertinent concern in the Indian context, given that India is one of the twelve so-called mega-diverse countries. Second, we consider whether the GIM bolsters or reverses decentralization trends in Indian forest governance, given that Indian forestry is often seen as one of the most successful examples of a decentralized participatory approach to forest management, although this success has long been debated (see e.g. Sundar et al., 2001; World Bank, 2006; Bose, 2012). Since the Green India Mission has only recently been developed and remains to be implemented, we assess the prospects for carbonization and/or centralization of Indian forest governance through analyzing, primarily, how the GIM frames these two aspects; and consider as well relevant past experiences with attempts at holistic forest governance in India.

We proceed as follows: section 3.2 describes the current state of development of the GIM and REDD+ policies and practices in India. Section 3.3 then analyzes how the GIM envisages securing both carbon and non-carbon benefits from its proposed forest activities, and where the authority to implement GIM activities lies. We conclude by assessing the potential consequences of GIM's framing of the climate-forest interface for

future trends in Indian forest governance, including carbonization and centralization. The analysis is based on primary and secondary sources and interviews with over 30 government representatives, academics and representatives of non-governmental organizations involved in (discussions of) the Green India Mission and India's REDD+ strategy (see appendix II for a list of interviewees).

3.2 Governing the climate-forest interface in India: The Green India Mission

3.2.1 India's REDD+ strategy and development of the GIM

Since 2007, India has been at the forefront of international REDD+ debates within the UNFCCC. India pushed for an expanded view of reducing emissions from deforestation and forest degradation in this global context, arguing that carbon emissions reduced through the sustainable management of forests and carbon sinks provided by afforestation and reforestation activities were as valuable as emissions avoided through reduced deforestation and forest degradation. In 2009, this argument was accepted in the global context when the so-called "plus-activities" (conservation, sustainable management of forests and enhancement of forest carbon stocks) were added to the REDD mechanism, converting it to REDD+ (Pistorius, 2012; Interview Dhakate, 2011; MoEF, 2010b).

At the national level, the Indian government announced the National Mission for a Green India as one of the eight missions under the National Action Plan on Climate Change in 2010. The National Mission for a Green India aims to double the area for afforestation and eco-restoration over the next ten years, enhance the resilience of forests, and significantly increase the removal of carbon emissions by forests. The GIM is serviced by a Mission Directory, which is housed within the National Afforestation and Eco-Development Board, a part of the Ministry of Environment and Forests. For its implementation at the state level, it is to be coordinated by a revamped State Forest Development Agency. District Planning Committees and State Forest Development Agencies will be responsible for the district level, while the Gram Sabhas - India's local governance institutions - and their accompanying committees will implement the Mission at village level (MoEF, 2010a).

With regard to its link to REDD+, the Mission document states explicitly that the "majority of interventions under the Mission have potential to qualify under REDD/ REDD Plus" (MoEF, 2010a, p. 36). In order to coordinate and guide REDD+-related activities in India, the Ministry of Environment and Forests has established a so-called "REDD+ cell", which is meant to assist in developing and implementing national policies related to REDD+. In collaboration with the State Forest Departments, the REDD+ cell is intended to guide collection and management of data related to forest carbon accounting and provide technical advice on these matters. It is also expected to guide development, funding, monitoring and evaluation of REDD+ activities (MoEF, 2010a; Interview Dhakate, 2011).

In addition to the REDD+ cell, the Indian government is planning to establish a

technical group for the development of carbon monitoring methodologies and a National Forest Carbon Accounting Program. The government has also recently established the Indian Network on Climate Change Assessment, which focuses, *inter alia*, on the inter-linkages between climate change impacts and forests (Interview Dhakate 2011). In institutional terms, the responsibility to implement and monitor REDD+ activities rests with the Forest Survey of India as lead institution, together with other (non- or semi-) governmental institutions, including, among others, the National Remote Sensing Agency and the Indian Council of Forestry Research and Education (MoEF, 2010a; Interview Dhakate 2011). In designing a REDD+ strategy and implementing the GIM, the Ministry of Environment and Forests is expected to cooperate, *inter alia*, with the Ministries of Agriculture, Rural Development, Panchayati Raj, and Renewable Energy (Aggarwal et al., 2009). Table 3-1 summarizes the envisaged institutional architecture for the GIM and REDD+ in India.

3.2.2 Putting REDD+ into practice in India

Despite the Indian government's stated support for REDD+ in both an international and national context, REDD+-related activities in India remain relatively few, compared to other developing countries. Since a final draft version of the Green India Mission document was made available in September 2010, no major developments have taken place with regard to its further design or implementation. Funding for the Mission has not yet been fully secured either, which may also threaten rapid implementation (Indo-Asian News Service, 2013). Nonetheless, as Table 3-1 reveals, institutional arrangements to implement REDD+ in India do exist and can be relatively quickly mobilized, should the need arise.

In terms of international funding and support for REDD+-related activities, the main multilateral agencies currently active globally in promoting capacity-building, policy development and implementation of REDD+ are the United Nations REDD Programme (UN-REDD), as well as the World Bank's Forest Carbon Partnership Facility (FCPF) and Forest Investment Program. None of these programs is currently active in India. Explanations for this state of affairs include the official Indian government position that these multilateral programs are less interested in supporting development of the "+" activities in REDD+ that are most relevant for India, although this might now be changing (Kishwan, 2011).

More importantly, India plans to allocate significant domestic funding for its REDD+ strategy, with less need to rely on outside assistance in the preparatory phases of developing a national REDD+ strategy, compared to other countries (Aggarwal, 2011; Interview Aggarwal, Poffenberger, Sanan, 2011). The Indian government intends, for example, to invest Rs 460 billion (approximately \$8.5 billion) over ten years in the Green India Mission (MoEF, 2010a). As a comparison, the total funding portfolio of the UN-REDD Programme as of 2012 is approximately \$100 million and that of the FCPF

Table 3-1: Institutional architecture for REDD+ and the GIM in India (source: compiled by authors).

Institutions/Institutional arrangements	(Proposed) Functions
National policy formulation	
Ministry of Environment and Forests (in cooperation with Ministries of Agriculture, Rural Development, Panchayati Raj, Renewable Energy, Tribal Affairs, Finance, and the Planning Commission)	<ul style="list-style-type: none"> • Design and overall guidance to the Green India Mission
REDD+ cell , housed within the Ministry of Environment and Forests	<ul style="list-style-type: none"> • Design of national REDD+ strategy • Guide development and funding of REDD+ activities • Cross-sectoral coordination with other ministries • International reporting on REDD+ activities
Data management and monitoring	
Forest Survey of India (in cooperation with the National Remote Sensing Agency, the Indian Council of Forestry Research and Education, the Indian Institute of Remote Sensing, the Indian Institute of Science, the Indian Institute of Forest Management, and the Wildlife Institute of India)	<ul style="list-style-type: none"> • Develop technical capacity for carbon stock assessment • Develop national data base for carbon stock assessment • Monitor carbon and non-carbon benefits of REDD+ activities
REDD+ cell in cooperation with State Forest Departments	<ul style="list-style-type: none"> • Provide technical advice on monitoring, reporting and verification as well as benefit-sharing for REDD+ • Guide monitoring and evaluation of REDD+ activities • Collection and management of data for forest carbon accounting
Technical REDD+ group	<ul style="list-style-type: none"> • Develop carbon monitoring methodologies and a National Forest Carbon Accounting Program
Indian Network on Climate Change Assessment	<ul style="list-style-type: none"> • Publish national climate change assessments
Implementation of REDD+ and GIM at sub-national levels	
State Forest Departments	<ul style="list-style-type: none"> • Coordinate implementation of REDD+ and GIM • Facilitate distribution of REDD+ benefits
(Revamped) State Forest Development Agencies , in cooperation with District Planning Committees	<ul style="list-style-type: none"> • (Cross-sectoral) coordination of GIM implementation • Planning of GIM at district level
Gram Sabhas and its committees (or where applicable, village councils and traditional village institutions)	<ul style="list-style-type: none"> • Planning and implementation of GIM at village level

approximately \$240 million (UN-REDD, 2011; FCPF, 2012).

In addition, these multilateral programs intended to support the development of REDD+ in developing countries are still engaged in institutional capacity-building and development of monitoring, reporting and verification systems as preparation and “readiness” for REDD+, so-called phases 1 and 2 of REDD+ strategy development and implementation. The Indian government claims, however, to already be in phase 3 of

REDD+ readiness, i.e. ready for “results-based compensation” or receiving international funds for reduced forest carbon emissions (Kishwan, 2011). This third phase assumes a well-developed capacity to monitor (changes in) forest carbon stock, a crucial element in a REDD+ readiness program.

India’s capacity in forest monitoring is indeed much further advanced compared to other countries in the South, with its monitoring capacity gap categorized in a recent study as being “very small” (Romijn et al., 2012, p. 42). Since 1987, the Forest Survey of India produces a two-yearly “State of the Forest Report” to keep track of (changes in) forest cover in India, relying on both remote sensing techniques and extensive ground-truthing (Aggarwal et al., 2009; Ravindranath et al., 2012; Sharma and Chaudhry, 2013).

Despite this, however, if the broader institutional capacity required for REDD+ is considered, a more mixed picture emerges. India’s greenhouse gas inventory is not yet complete, for example, and there are gaps in the monitoring systems for forest changes at the state level, as well as in the remote sensing techniques relied upon in India. Furthermore, India has not yet decided on a so-called “reference level” for its forest carbon stocks (i.e. a baseline against which future carbon stock changes can be assessed) (Aggarwal et al., 2009; Sud et al., 2012; World Bank, 2006; Sharma and Chaudhry, 2013; Romijn et al., 2012). While this remains a challenge for most developing countries, it is a requirement for phase 3 of REDD+. Furthermore, India’s monitoring system for non-carbon benefits is still in its infancy, again, as is the case with most other developing countries (Ravindranath et al., 2012; Sharma and Chaudhry, 2013; Ravindranath and Murthy, 2010). Both an acceptable reference level and an established monitoring system are essential ingredients in assessing REDD+ results in terms of both carbon and non-carbon benefits, and in calculating the financial benefits that should flow from certain activities. As a result, however, both of these remain highly contentious issues that are currently subject to intense negotiations both within and outside the UNFCCC (Sharma and Chaudhry, 2013; Gupta et al., 2012).

Notwithstanding potential gaps noted above, however, acceptance of World Bank FCPF or UN-REDD readiness funding for REDD+ requires adaptation of a country’s REDD+ strategy to international protocols and international monitoring and evaluation by these multilateral agencies. This has, therefore, been another hurdle to accepting such funds, with the Indian government citing sovereignty concerns and its unwillingness to subject its REDD+ strategies and capacities to international scrutiny, particularly for the very “small sums” available as REDD+ readiness support (Interviews Kishwan, Lahiri, Das, 2011).

As revealed by the GIM’s ambitions in greatly expanding afforestation and reforestation activities in India, India’s REDD+ strategy and engagement appears geared, instead, to the potentially larger funding flows that might become available once an international REDD+ mechanism is up and running. In line with this, the GIM is

implicitly seen as the mechanism that can mobilize future international financing for the Indian forestry sector through REDD+, which is expected to cover a “substantial part” of the Mission’s budget (Aggarwal, 2011; Interviews Dhakate, Lahiri, representative of USAID, Kohli, 2011). This is linked, as well, to India’s determination at the international level to ensure that even countries with a low deforestation rate, a group to which India claims to belong, can benefit from an international REDD+ financing mechanism (Interview Dogra, Lahiri, 2011).

In line with this, and despite the current lack of multilateral financial outlays for REDD+ in India, an important new bilateral initiative has recently been launched, the USAID-funded “India Forest Partnership for Land Use Science program”. This so-called “India Forest PLUS” program aims to support the development of national, state and community level monitoring, reporting and verification systems to assess forest-related activities, including those to be pursued via the Green India Mission. With regard to REDD+, the program appears intended to pave the way for future results-based compensation via REDD+, by fostering development of the institutional capacities necessary to monitor, report on and verify performance relating to forest carbon stock changes.

In preparation for REDD+ phase 3 readiness, it is also noteworthy that India’s national carbon market is relatively well advanced, compared to other developing countries. One indicator is that India hosts the second largest share of Clean Development Mechanism projects globally. While afforestation and reforestation-focused Clean Development Mechanism projects remain scarce internationally, the largest number (though only six) of these projects is in India (Aggarwal, 2012¹³).

In contrast, with regard to REDD+ project development at sub-national and local levels, there are relatively few such projects currently underway in India. There are, to date, two (self-designated) REDD+ pilot projects in the country, both located in the North-Eastern state of Meghalaya. One is located in the Khasi hills region, and bills itself as the first community-based REDD+ project in India, being initiated by indigenous Khasi communities. There are multiple posited drivers of deforestation in the area, including mining, illegal logging, grazing, fuelwood collection and forest fires. The Khasi hills project aims at watershed restoration through forest restoration activities and reducing pressure on forests, including, inter alia, through stimulating shifts from grazing to animal husbandry, use of fuel-efficient stoves, and regulations on forest use. Based on its experiences with piloting “payment for ecosystem services” arrangements in the region, the US-based non-governmental organization (NGO) Community Forestry International decided, together with indigenous communities, national and international NGOs, and the autonomous district council of Meghalaya, to seek carbon credits deriving from this project as additional financial support for its activities. As a result, the project was recently registered and certified under Plan Vivo standards, a

13 This article has now been published as Aggarwal, 2014.

UK-based carbon registry, and has commissioned a broker to sell the carbon credits on the voluntary market (Poffenberger, 2012; Interview Poffenberger, 2013). This is, to date, the closest India has come to participating in a REDD+ induced voluntary carbon market for forestry credits.

The other REDD+ pilot project¹⁴ is located in the Garo hills region of Meghalaya, where increased pressure on land has drastically reduced rotation cycles in small-scale slash and burn farming. While traditionally long-term rotation cycles allowed forests to regenerate, current practices have resulted in negative impacts on the area's biodiversity (World Land Trust, 2013). In 2005, Wildlife Trust India initiated a community-based natural resource management project in the area, in order to protect and regenerate the forests between two protected areas using village reserves, enabling wildlife to migrate along a "green spine" corridor. The main activities of this project include establishment of forest plantations, assisted natural regeneration, and patrolling to prevent illegal logging and grazing. In 2010, Wildlife Trust India and the UK-based NGO World Land Trust began to explore the possibility to add forest carbon sequestration as an additional objective and source of income for the project. In the initial stages of development, a UK-based shipping company signed a (non-binding) contract to fund the project up to its validation and, once issued, buy the carbon credits, in line with the company's corporate social responsibility goals (Interview Chatterjee, Absalom, 2011). However, this company recently withdrew from the project because of conflicts over the time-periods in which outcomes could be expected. World Land Trust is currently trying to secure alternative sources of funding for the carbon sequestration component of this project, essential to characterize it as a REDD+ initiative.

Interestingly, both projects were originally community-based natural resource management projects, with their developers now seeking to recast them as REDD+ pilot projects in order to potentially leverage carbon credits as an additional financial benefit. Given their genesis, both projects clearly prioritize non-carbon benefits, with carbon seen as an "add-on" benefit rather than the driving motivation; and both involve and seek to empower local communities and local level governance institutions. Yet these dynamics are very particular to the history and specific local contexts of these initiatives, permitting few conclusions to be drawn about the general thrust of REDD+ pilot projects in India. The Indian government, furthermore, is not involved in either of these projects, although it may well step in to provide additional (carbon or non-carbon related) funding in the future. As of now, national level policy-makers are following developments in both projects as a way to learn from them and fine-tune evolving REDD+ policies and strategies (Interview Chatterjee, 2011).

We turn next to assessing how these REDD+ policies, as captured prominently in the GIM and as discussed above, are framing and shaping trends in Indian forest

14 After this article had been published, this REDD+ project has become defunct, leaving the REDD+ pilot project in the Khasi hills the only operational REDD+ project in India.

governance.

3.3 Carbonization and centralization: Promoted by the GIM?

In this section, we assess how the forest governance debate in India is being affected by the relatively new link with the climate debate at the international and national level. Our focus is on the Green India Mission document, which we see as the embodiment of India's efforts to link multilevel climate governance with national forest governance. In particular, we study how the GIM frames carbon versus non-carbon (particularly biodiversity) benefits of its envisaged activities; and where implementation authority is projected to lie. In so doing, we assess whether the GIM promotes the two trends of carbonization and centralization.

3.3.1 Carbonization and its prospects: The GIM framing of carbon and non-carbon benefits

In Indian policy documents and pronouncements, the interaction between climate governance and forest governance is explicitly framed to be synergistic. In a brochure on REDD+, for example, the Ministry of Environment and Forests states that REDD+ is “not only (...) a cost-effective and efficient way to mitigate the effects of climate change but it also (...) safeguards rich biodiversity” (MoEF, 2010b, p. 1). This synergistic portrayal of the climate-forest governance interaction is also reflected in the Green India Mission. The GIM policy document takes into account the protection and enhancement of biodiversity in its forest-related activities, by explicitly emphasizing the restoration of forest ecosystems and enhancement of habitat diversity. The document proposes to take an “integrated cross-sectoral approach” (p. G) and a “holistic view on greening” (p. C). It also talks of a “fundamental shift in mindset” (p. C) from the traditional focus on increasing quantity of forests to a focus on quality. Carbon sequestration is widely portrayed as an “add-on” or “incidental benefit” rather than the central objective of the Mission (Interviews Aggarwal, Dhakate, Poffenberger, Kishwan, Sinha, Das, 2011). By stressing that carbon sequestration is and will remain an additional benefit in Indian forest governance, the aim is to distinguish the GIM and a REDD+ strategy from the more “carbon-centric” approaches that might be prevalent elsewhere (Interviews Poffenberger, Kishwan, representative of USAID, Ashutosh, 2011).

The process by which the GIM was designed has augmented this seemingly synergistic approach. Policy-makers made available the first draft of the Mission to a wide domestic audience for public discussions and feedback. Workshops were organized at the state level, involving civil society groups, local communities, State Forest Departments, various forest management committees, and experts from different disciplines. Suggestions and comments from workshop participants as well as e-mail messages were taken on board in a revised version of the Mission document (MoEF, 2010c). Comments on the Mission included that the draft document contained no provisions on biodiversity conservation

and ignored inter-sectoral linkages. In addition, comments suggested that biodiversity conservation should be given priority “over and above” carbon sequestration in case of conflicting interests (MoEF, 2010c, p. 81), and that enhancement of forest carbon stocks should not be the main objective of the Mission but a “by-product” (p. 12). These aspects are now reflected in the latest version. Thus, the consultative process by which the GIM was developed may have increased synergies between its multiple objectives (see also interviews Aggarwal, Kohli, Thampi, 2011). As the inspector General of Forests at the Ministry of Environment and Forests argued: “You need an integrated approach, not an isolated approach looking at different sectors separately. All this came up during the consultation process. So the shift was due to that” (Interview Thampi, 2011).

Thus, in Indian policy documents and pronouncements, and including in the GIM document, REDD+ is framed as an opportunity rather than a threat to synergistic forest governance. However, it is still unclear how India will implement this synergistic approach to climate-forest governance. For example, the Green India Mission does not specify how the promised synergies between its carbon and non-carbon objectives are to be realized, nor what the current land use of the sites is where the Mission will be implemented, and how changes in land use are to be compensated (MoEF, 2010a; Interview Lahiri, 2011).

The synergistic approach also seems to be based on an assumption that REDD+ will automatically provide carbon and non-carbon benefits, such as biodiversity conservation. The Green India Mission does not entertain the possibility of trade-offs between these objectives. Furthermore, the Mission document links the GIM to other ongoing programs, such as the Mahatma Gandhi National Rural Employment Guarantee Act, the National Afforestation Programme, and the Compensatory Afforestation Management and Planning Authority, but does not consider conflicting objectives between them. It also does not specify how coordination between these policies and programs will be ensured. Coordination between these programs is to be fleshed out in the coming years, both by the Ministry as well as by lower levels of governance (MoEF, 2010a; Interview Lahiri, 2011).

The assumption that REDD+ will automatically provide carbon and non-carbon benefits is particularly noteworthy, since the GIM mainly focuses on enhancing forest carbon stocks rather than avoiding deforestation. While the initial idea of REDD+ in a global context was that avoiding deforestation would automatically safeguard forest biodiversity and local livelihoods, the addition of the plus-activities that India had pushed for - particularly the inclusion of enhancement of forest carbon stock - has raised significant concerns about REDD+’s potential negative impacts on biodiversity (Visseren-Hamakers et al., 2012a). For this reason, Parties to the UNFCCC agreed in the 2010 Cancun agreements upon a number of so-called environmental and social “safeguard” provisions in order to prevent biodiversity loss and avoid harm to local communities from REDD+ activities. These include, for example, that REDD+ actions

be consistent with national forest policies, respect the rights and knowledge of indigenous communities, involve relevant stakeholders, be consistent with forest and biodiversity conservation, and prevent displacement of carbon emissions (UNFCCC, 2010b).

The official Indian response to these developments is to claim that such safeguards are already entrenched in Indian laws and policies relating to forests and biodiversity conservation. As the Director General at the Ministry of Environment and Forests stated in an interview, “India does not want to have any more safeguards imposed on it by the UNFCCC. India is confident that it has enough safeguards set in place” (Interview Kishwan, 2011). The forest and biodiversity conservation policies seen to embody these safeguards include, for example, forest conservation acts, the Biological Diversity Act, and the Wildlife Protection Act. The dominant viewpoint of government officials is that REDD+ will not dilute this relatively strong focus on forest and biodiversity conservation in India (Aggarwal et al., 2009; Sud et al., 2012; Interviews Kishwan, Lahiri, Aggarwal, Mathur, Dividi, Dogra, 2011).

An important aspect in realizing synergies between carbon and non-carbon benefits is how such diverse benefits are to be monitored, reported and verified. This will determine which benefits are prioritized and - in case of REDD+ - how these are paid for (see also Gupta et al., 2012). It remains unclear to date, however, how biodiversity as a non-carbon benefit will be monitored under the Green India Mission. The Mission document mentions the need for “basic biodiversity analysis” (MoEF, 2010a, p. 38), but only in the context of a “few pilot areas” (p. 37) in order to “facilitate review of (...) regulatory conditions” (p. 38). It does not specify criteria and indicators to monitor biodiversity, nor which actors will be involved in biodiversity monitoring (see also Ravindranath and Murthy, 2010).

Incentives to monitor non-carbon benefits of REDD+ are linked to whether such benefits will be relevant for REDD+-related compensation, yet this remains a contested and little studied issue globally (see also Visseren-Hamakers et al., 2012b; Sud et al., 2012). While India has a lot of experience with forest cover monitoring, it has much less experience with monitoring environmental and social services associated with forests, such as forest biodiversity and local dependence on such resources as a means of survival and livelihood. Until very recently, the Forest Survey of India only monitored forest cover in India without distinguishing different types of forests, let alone biodiversity aspects (Interviews Thampi, Agarwal, Ashutosh, S. Gupta, Das, Radhakrishnan, 2011; Pandey, 2012; World Bank, 2006). India has not yet established a safeguard information system with criteria and indicators on how to monitor (changes in) social and environmental safeguards, as requested by the UNFCCC Cancun agreements (Ravindranath et al., 2012; Sharma and Chaudhry, 2013; UNFCCC, 2010b). The GIM, for example, does not specify how much funding will be allocated for monitoring non-carbon benefits. India’s claim to be in phase 3 of REDD+ readiness notwithstanding, if its capacity for non-carbon monitoring is not enhanced, the Green India Mission’s proclamation

to primarily focus on non-carbon benefits and generate synergies between its multiple objectives may well become what critics call an assemblage of “politically correct words” (Interview Lahiri, 2011).

3.3.2 Centralization and its prospects: The GIM framing of sites of governance authority

Indian forest governance is often touted as one of the best examples of decentralized forest management approaches in the world. Through its national forest policies, the central Indian government provides general guidelines on how to manage forests sustainably. State Forest Departments have a relatively autonomous role in implementing these policies in Indian states, in cooperation with local level institutions. According to the Indian Constitution, Panchayati Raj (i.e. local level) institutions are the mandated bodies for decentralized planning and execution of forest management at the local level. National policies also emphasize decentralization and the involvement of local communities in forest management in India.

As per the Indian Joint Forest Management Resolution, local Forest Protection Committees currently manage nearly 30% of the forests in India. Various other grassroots level institutions engage in forest management in India, including Panchayats (local self-governance institutions), Van Panchayats (forest management institutions), Biodiversity Management Committees, self-help groups and indigenous institutions such as Village Councils (Aggarwal et al., 2009; Aggarwal, 2011; MoEF, 2010a). The Scheduled Tribes and Other Forest Dwellers Act (the Forest Rights Act) of 2006 also aims to enhance local self-governance. Its overarching objectives include granting local communities ownership rights over forestland, as well as the legal right to manage and protect their own forests.

The above-mentioned forest policies and practices are presented by Indian policy-makers as strong safeguards to prevent REDD+ from having centralizing effects on forest governance in India (Interviews Kishwan, Das, Mathur, Roy, Dividi, Dogra, 2011). In these pronouncements, REDD+ is not expected to have a big impact upon Indian forest governance. As an illustration of this, the Director General of Wildlife at the Ministry of Environment and Forests argued in a presentation during the first Indian Forest Congress: “We really do not have to do any separate thing for the carbon service investment” (Kishwan, 2011). Rather, REDD+ is depicted as a policy approach that will be synergistically integrated into existing and long-standing decentralized forest policies and practices in India. As a fellow at the Department of Natural Resources, Forestry and Biodiversity at TERI argued: “REDD+ will provide the opportunity of integrating these traditional mechanisms, governance, recognizing the dependence of local communities over resources, understanding the nature of co-benefits. This will create a more holistic perspective. The same holds for GIM” (Interview Gokhale, 2011).

The importance of strengthening India’s decentralized approach to forest governance

is also emphasized in the Green India Mission document. The document stresses that it has a “deliberate and major focus” on decentralization and that “local communities will be at the heart of implementation” (MoEF, 2010a, p. C), making it a “people’s program” (p. 38) through the involvement of agencies, organizations and individuals in the implementation of the Mission. While operational guidelines are provided by the Ministry, action plans for the Mission are to be developed at sub-national levels, including village levels. Planning and implementation is to be overseen by the Gram Sabhas, the citizen voters at the village level who elect the Gram Panchayats, the local self-governments. The Mission aims to strengthen the Gram Sabhas, which are expected to cooperate with and coordinate other local level (forest) governance and management institutions (MoEF, 2010a). During the earlier-mentioned consultative process for the Green India Mission, numerous suggestions were made about specific ways to involve citizens in the implementation of the Mission through Panchayati Raj institutions (MoEF, 2010c). Thus, not only did this process allow a wide range of stakeholders to participate in the decision-making process for the Green India Mission, it also strengthened the focus on decentralized authority for forest-related activities in the Mission document.

While the intent to be a people’s program is laudable, experience with the 2006 Forest Rights Act (FRA) shows that a democratic consultative process through which the FRA was designed - which was very similar to that undertaken for the GIM - has not necessarily stimulated empowerment of local agents in forest management practices. Studies show that the FRA has resulted in an increase in state control over forestry in some Indian states, as it has failed to recognize customary collective forest rights and authority, and hence disempowered locals in their forest use and management (e.g. Bose, 2012; Aggarwal, 2011).

In line with these claims, forest governance in India has been heavily criticized in certain quarters for its overall limited impact on empowerment of local communities. This is often attributed to the strong role of State Forest Departments in developing rules for forest management. The implementation of Joint Forest Management is similarly critiqued, with assertions of top-down approaches, a lack of meaningful participation by local communities, a lack of downward accountability, and erosion of customary land rights (see e.g. Sundar et al., 2001; World Bank, 2006; Aggarwal et al., 2009; Bose, 2012; Sharma and Chaudhry, 2013; Interviews Kohli, Lahiri, Radhakrishnan, Poffenberger, 2011). The degree of decentralization and empowerment of local actors also varies considerably across states and districts in India.

Such mixed experiences indicate that policies seen as important safeguards to prevent REDD+ from centralizing Indian forest governance have not necessarily safeguarded rights of local communities in the past, as envisaged. The GIM presents itself as an opportunity to address some of the above-mentioned problems. It presents a reform agenda, which includes “revamping” existing institutions such as Joint Forest Management committees (MoEF, 2010a, p. 5). However, how this will occur is not

clear, and critics argue that GIM's implementation scheme is similar to those of these earlier introduced forest policies (see e.g. Aggarwal, 2012¹⁵).

Of particular relevance in considering whether REDD+ may lead to centralization in Indian forest governance is to assess how REDD+ funding will be distributed. In an official policy statement, the Indian government declared that 100% of the funding from REDD+ will flow to local communities involved in (co-)managing forests (Kishwan, 2011). However, it is not clear how this will be realized, especially in the absence of legislation relating to carbon rights (Aggarwal et al., 2009; Pandey, 2012; MoEF, 2010c). The Ministry of Environment and Forests intends to provide guidelines on benefit-sharing for REDD+, and to allocate REDD+ funding from the central REDD+ cell down to the state and district levels. The latter are expected to manage these funds together with local communities (Interview Dhakate, 2011).

Experiences with the distribution of forest revenues in Joint Forest Management in several Indian states reveal, however, that revenues often remain at the state level, despite an explicit requirement that State Forest Departments share revenues with local communities (see e.g. Sundar et al., 2001; World Bank, 2006; Aggarwal et al., 2009; Bose, 2012; Interviews Kohli, Lahiri, Radhakrishnan, Poffenberger, 2011). Experiences with India's largest payment for ecosystem services scheme, the so-called "Compensatory Afforestation Management and Planning Authority", also reveal a low level of compliance by State Departments in mandatory revenue sharing schemes (CAG, 2013; Interview Jindal, 2011). Hence, such experiences suggest that, without a clear and well-functioning decentralized mechanism to share benefits from REDD+, central and state level government institutions will continue to retain significant authority over REDD+ funding disbursements (see also Sud et al., 2012; Interview Lahiri, Poffenberger, 2011).

Related to this, as we argued before, the Green India Mission does not elaborate upon who will be compensated for what kind of activities, how and by whom compensation will be distributed, and on whose land the GIM will be implemented. Disputes over land and land use rights have existed for decades in India, both between State Departments and local communities, as well as between Revenue and Forest State Departments (Aggarwal, 2011; Interview Das, 2011). Since forest boundaries are now being demarcated under the Forest Rights Act (FRA), interaction between the GIM and the FRA will be crucial in determining land (use) rights as well as benefit-sharing arrangements, yet such interaction is hardly mentioned in the GIM policy document (MoEF, 2010a; see also Aggarwal, 2011). Experiences with REDD+ pilot projects and Clean Development Mechanism afforestation and reforestation projects in India also indicate that the establishment of property rights is crucial to the success of such projects (Poffenberger, 2012; Interviews Kapoor, Chatterjee, 2011).

Another vital aspect that influences where authority is concentrated in REDD+ implementation relates to the planned forest monitoring system. The Green India

15 This article has now been published as Aggarwal, 2014.

Mission document calls for a combination of monitoring by local communities and reliance on high-end technologies, such as remote sensing and Global Positioning System mapping, to implement mission activities. More precisely, four inter-related approaches to monitoring are proposed. These include on-the-ground monitoring by State Forest Departments and local communities trained in carbon accounting and other services; field reviews by external agencies; remote sensing by the Forest Survey of India; and intensive monitoring of pilot areas by State Forest Departments and a supporting organization to assess the effects of forest conservation practices (MoEF, 2010a).

The GIM thus envisions an important role for State Forest Departments as both on-the-ground monitoring agencies and overseers of monitoring by local communities. It calls for “extensive support for communities” to “form the basis for REDD-based monitoring methodologies” (MoEF, 2010a, p. 20). Although the aspiration for an inclusive approach to monitoring is commendable, the devil lies in the details of designing such systems. One hurdle to community-based monitoring is that procedures and methodologies for monitoring forest cover in India are often complex and inaccessible to local communities (Interviews Dividi, Ashutosh, Pandey, 2011). Even where procedures are simple, Indian forestry institutions have little to no experience with community-based monitoring.

Experiences with forest monitoring practices in support of the Forest Rights Act are illustrative here (Bose, 2012). A study by the Council for Social Development (2010) on the process of verifying claims to forestland under the Forest Rights Act showed, for example, that demands from local communities to become involved in such verification were not met, despite availability of simple monitoring technologies. The study also revealed “widespread abuse” relating to use of hand-held Global Positioning System instruments by State Forest Department officials, when “verifying” local community forest rights claims. Forestry officials relied on these instruments to “convert the rough maps attached by claimants into accurate ones” (Council for Social Development, 2010, p. 18), yet this process of conversion invariably resulted in substantial reductions to the areas claimed by communities. As a result, monitoring practices aimed at holding the powerful to account or claiming land rights have had disempowering consequences in practice, partly due to local communities’ lack of access to monitoring devices. To realize the emphasis on local empowerment in the GIM policy document, there is thus a need for significant investments, not only to build capacity of local communities, as identified by the Green India Mission, but also to simplify monitoring procedures and methods and prepare monitoring agencies to involve local communities in their work.

3.4 Conclusion

This article analyzed how newly articulated climate governance approaches interact with long-standing forest governance policies and practices in India, focusing on whether REDD+ policy developments might promote two potential trends that have

raised worldwide concerns: a push toward carbonization, and centralization, of forest governance.

Regarding the prospects for carbonization, we argued that the Green India Mission, which we viewed here as the lynchpin of India's emerging REDD+ strategy, intends to synergistically govern the mitigation of climate change, protection of biodiversity, and security of local livelihoods through its forest-related activities. An inclusive consultative process during the GIM policy design phase has served to further enhance its inclusion of non-carbon benefits. Finally, already existing Indian forest and biodiversity conservation policies are considered to constitute strong national safeguards to prevent REDD+ from having negative effects on biodiversity conservation or local livelihoods.

As we have shown, however, the GIM document does not entertain the possibility of trade-offs between its carbon and non-carbon-related objectives, or of conflicts with other long-standing policies and programs. It assumes, for example, that conservation or enhancement of forest carbon stocks in India will automatically contribute to conservation of biodiversity and livelihood security. Furthermore, how non-carbon benefits are to be monitored is not specified, nor does the GIM mention the current gap in capacity to undertake such monitoring. We have thus argued that unless such capacity is prioritized, the Green India Mission's promise to break with a traditional focus on the quantity of forests, and facilitate synergistic - rather than carbonized - governance, is unlikely to be realized.

Regarding centralization of authority and control over forest resources, the Green India Mission document explicitly focuses on the involvement of local communities in its implementation and monitoring. It even presents itself as an opportunity to further decentralize Indian forest governance, by reforming existing forest management practices. Furthermore, existing national forest policies are seen as important safeguards to prevent a REDD+ induced centralization of Indian forest governance. We have argued, however, that these policies have a mixed implementation record vis-à-vis empowering local communities and benefit-sharing in Indian forest management. The GIM does not as yet address land (use) rights and benefit-sharing arrangements relating to carbon and non-carbon benefits. Furthermore, the Mission's promise to empower local communities through REDD+ implementation and monitoring cannot be realized in the absence of necessary investments to build capacity of monitoring agencies to engage local communities.

In short, we conclude that unless the Green India Mission institutionalizes significant investments in a decentralized benefit-sharing mechanism, as well as biodiversity and community-based monitoring systems, the promised REDD+ induced move toward synergistic and locally centered governance is not likely to take place. With regard to debates around the pros and cons of centralized authority for REDD+, centralized approaches are not necessarily less democratic than decentralized approaches, as we noted in the introduction. Various scholars have called for a combination of decentralized

and centralized approaches to REDD+ governance, in the form of so-called “nested approaches” (see e.g. Phelps et al., 2010; Angelsen et al., 2009; Visseren-Hamakers et al., 2012b). The implications of such nested approaches for recasting the sites of authority in multilevel forest governance, and even more so for carbonization trends, remain unclear, signaling an important future research agenda.

CHAPTER 4

Competing discourses on REDD+: Global debates versus the first Indian REDD+ project

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Abstract

This article analyzes three of the most contentious scholarly and political debates regarding REDD+, focusing on 1) what REDD+ should achieve; 2) who should monitor REDD+ outcomes; and 3) how REDD+ should be financed. In analyzing these, the article conceptualizes three sets of storylines and assesses which of the identified storylines resonate in the first Indian REDD+ project, focusing on both stakeholders' views and project design. The three identified questions do not give rise to contentious debates among stakeholders of the REDD+ project. Contrasting views on REDD+ found in scholarly and political debates - such as carbon versus non-carbon objectives, authority of technical experts versus local communities, and market versus fund-based approaches - are not prevalent among project stakeholders, who believe that different approaches to REDD+ can be combined and can even reinforce each other. Project stakeholders prefer non-carbon benefits as the project's main objective to be monitored jointly by experts and local communities, and favor a mix of fund- and market-based approaches. This is also reflected in the project design. The conclusion reflects on the insights that the multilevel discourse analysis in this article generated, including for REDD+ in general.

Key words: REDD+; India; Discourse analysis; Co-benefits; MRV; Market-based approach.

4.1 Introduction

When Reducing Emissions from Deforestation (RED) was first introduced within the United Nations Framework Convention on Climate Change (UNFCCC) in 2005, RED was envisioned as a relatively simple financing mechanism to compensate developing countries for reducing their forest-related carbon emissions, thereby simultaneously mitigating climate change and reducing deforestation. During subsequent years, however, the scope of this mechanism was significantly broadened and now includes forest degradation (the second D in REDD), the plus-activities (sustainable management of forests, conservation of forest carbon stocks and enhancement of forest carbon stocks), and safeguard provisions to prevent negative impacts on so-called “non-carbon” values (such as local livelihoods, security of land tenure, biodiversity conservation, and “good governance”). Though general guidelines on how to operationalize REDD+ have now been agreed upon by the UNFCCC, REDD+ is still heavily debated by politicians and scholars alike. In the meantime, different understandings of what constitutes REDD+ are being operationalized into various REDD+ policies and practices at the global, national and project level (see also Gupta et al., 2015). A large body of literature is concerned with assessing or enhancing the effectiveness of these REDD+ policies and practices. Yet competing discourses regarding what REDD+ should achieve in the first place and how it should be designed remain severely understudied, especially so at project level (for exceptions, see e.g. Evans et al., 2014; Lansing, 2010, 2012, 2013; Somorin et al., 2012; Mustalahti et al., 2012). This is nevertheless an important area of study, since such discourses likely affect the direction that REDD+ policies and practices (will) take.

This article aims to fill this gap in scholarly literature. My first aim is to bring conceptual clarity to the myriad scholarly and political debates around REDD+ by conceptualizing a range of storylines within three of the most heated debates¹⁶. As I will show, this conceptualization can be used as a framework to analyze how REDD+ is being framed in specific instances. In applying this framework to a case study of the first Indian REDD+ project, my second aim is to assess which of the identified storylines are espoused by the project’s stakeholders, and which storylines are reflected in the design of the project. By carrying out a multilevel discourse analysis, the article compares storylines commonly used in scholarly and political debates with storylines at the project implementation level. This not only provides insights into the range of existing storylines regarding REDD+, but also into their relevance in a specific case of REDD+ implementation.

The outline of this article is as follows: section 4.2 presents the case study, methodology, and theoretical approach of the article. Section 4.3 identifies three contentious debates regarding REDD+ and conceptualizes three storylines in each of these debates. Section

16 In this article I only focus on discourses around REDD+, thereby excluding discourses that are opposing the very idea of REDD+, for example the “no-REDD” storyline (see e.g. McDermott et al., 2012, p. 70).

4.4 assesses which of these storylines are espoused by project stakeholders, and which ones are reflected in the design of the first Indian REDD+ project. Section 4.5 reflects on the insights that the multilevel discourse analysis in this article generated, including for REDD+ in general.

4.2 Case study and methodology

4.2.1 Case study of the first REDD+ project in India

This article draws on a case study of the first REDD+ project in India: the Khasi hills community REDD+ project. The project is located in the sub-watershed of the Umiam river in the Khasi hills of Meghalaya, the North-East of India, and covers an area of 27,139 ha, comprising 62 villages. The area has a high rate of deforestation caused by forest fires, aridization and erosion (exacerbated by climate change), illegal logging, stone quarrying, intensive grazing and agricultural expansion, charcoal making and unsustainable fuelwood collection. Based on experiences with a pilot project for payment for ecosystem services (PES) from 2005 to 2009, indigenous Khasi communities, now organized in the Synjuk Welfare Society, and the US-based non-governmental organization Community Forestry International (CFI) decided to explore the potential to generate additional financial benefits from carbon sequestration (PDD, 2012; Poffenberger, 2012). CFI provides technical support in the project design, implementation and monitoring of the project, including marketing support and fund-raising. Bioclimate, a UK-based not-for-profit technical support company, and Plan Vivo, a UK-based accreditation scheme for payment for ecosystem services projects, guided the development of the Project Design Document and the project's validation based on the Plan Vivo standard (Plan Vivo, 2015; Interview D3¹⁷). In March 2013 the project was certified by Plan Vivo in order to sell the generated carbon credits on the private voluntary carbon market. Initially, two brokers were commissioned to find buyers for the ex-post sale of the project's carbon credits: the Sweden-based U&We, holding around 4,900 tons of carbon from the project, and the UK-based Clevel, holding around 450 tons (PDD, 2012; Interview B1). More recently, three additional brokers became involved in selling the project's credits: Carbon Offsets To Alleviate Poverty, WeForest and Emergent Ventures¹⁸.

The Khasi hills REDD+ project initiates activities aimed at forest restoration, reforestation, and reduction of pressure on existing forests, including assisted natural regeneration, regulations on forest use, control and prevention of forest fires, soil and water conservation, introduction of sustainable farming systems, and use of fuel-efficient

17 Interview references distinguish between local project participants (A), local project managers (B), project advisors (C), and stakeholders at the global level (D). See section 4.2.2 for an explanation of these categories and appendix II for a list of interviewees per category.

18 Since these brokers became involved in the project at a much later stage and only after the research had been completed, their role in and views on the project are not further discussed in this article.

stoves (Poffenberger, 2012). The Synjuk Welfare Society, hereafter the Synjuk, is a local non-governmental organization that guides the implementation of the project. It was set up by ten indigenous governments, the Hima, to oversee the planning and enforcement of the project, and coordinate its strategy. Community Facilitators currently guide Local Working Committees in each Hima to develop local natural resource management and livelihood plans. Youth volunteers and extension workers help implementing the project's activities in each village. By building the capacity of self-help groups and farmers' clubs, the Synjuk helps to establish small enterprises, providing people in the project area with alternative livelihood options that reduce pressure on forests (PDD, 2012; Poffenberger, 2012; Interview B1).

The Khasi hills community REDD+ project is rather unique in the context of implementing REDD+ in India, due in part to the specific governance arrangements of India's North-Eastern states. Being governed under the Sixth Schedule of the Indian Constitution, Autonomous District Councils are allowed to manage the natural resources in their districts according to customary practices. The Indian national government is not involved in the Khasi hills REDD+ project, but merely follows developments in order to fine-tune its national REDD+ strategy (see also Vijge and Gupta, 2014).

4.2.2 Methodology

This article draws on both qualitative and quantitative methods. A review of primary and secondary literature informed the analysis of scholarly and political debates around REDD+, drawing in part on previous literature reviews in which the author was involved (Visseren-Hamakers et al., 2012a, b, c; Gupta et al., 2012). The discourse analysis at the project level was informed by interviews with nearly fifty stakeholders - i.e. active participants¹⁹ - of the project, with several key stakeholders being interviewed more than once (see appendix II for a list of interviewees). During a field visit to the Khasi hills REDD+ project from November 2013 to January 2014, a total of 42 stakeholders were interviewed. These included 3 project advisors from Indian governmental and non-governmental organizations; 15 actors who were involved in setting up the project - Synjuk Community Facilitators and Synjuk staff members - henceforth called "local project managers"; and 24 actors who became involved only after the project had been set up - youth volunteers, extension workers, members of the Local Working Committees, village headmen, and members of self-help groups and farmers' clubs - henceforth called "local project participants". Existing contacts were used to select interviewees at the project level, using a snowball method. Interviewees were also chosen to represent different geographical regions within the project area, thereby covering regions with distinct opportunities and challenges to project implementation.

19 Since the research is concerned with views among involved actors on the REDD+ project rather than with a complete discourse analysis around the REDD+ project among inhabitants of the Khasi hills, the interviews excluded people who were not involved in the project.

The 5 interviewed stakeholders operating at the global level included representatives of Plan Vivo, Community Forestry International, U&We, and Bioclimate. They were interviewed during a Plan Vivo stakeholder meeting in Edinburgh in October 2013, followed by several Skype interviews.

The interviews consisted of two rounds. A first round of semi-structured to open interviews yielded information about stakeholders' views regarding the desired objectives and current design of the REDD+ project. In a second round of more quantitative interviews, interviewees were asked to rate their (dis)agreement with a set of statements that were drawn from a preliminary analysis of the first round of interviews. Such an approach allowed for a systematic analysis of the interviewees' views on a set of statements which were based on interviewees' views rather than on the researcher's own interpretations. The different levels of understanding among stakeholders posed a challenge to systematically comparing stakeholders' views. Follow-up questions on the questionnaires not only yielded additional qualitative data on stakeholders' discourses regarding questionnaire statements, but also helped to assess stakeholders' level of understanding of these statements.

In addition to the interviews, analyses of primary documents, such as mission and vision statements, project documents and annual reports yielded information regarding the views of involved organizations on REDD+, as well as reflection of such views in project design.

4.2.3 Theoretical approach: Discourse analysis

This article employs a discursive approach to analyzing REDD+ (Hajer, 1995; Sharp and Richardson, 2001). I use the definition of discourse by Hajer: "an ensemble of ideas, concepts and categories through which meaning is given to (...) phenomena, and which is produced and reproduced through (...) practices" (Hajer and Versteeg, 2005, p. 175). Storylines can be seen as elements of a discourse, i.e. "a (...) narrative (...) to give meaning to (...) phenomena" (Hajer, 1995, p. 56). This article analyzes different storylines among actors (as a frame and in their communication), within project documents (in the text), and in institutional arrangements (in social practices) (Arts and Buizer, 2009). Discursive theory holds that such storylines do not just represent given phenomena, but actively construct these phenomena by changing the way in which actors see and govern them (Hajer, 1995; Hajer and Versteeg, 2005; Sharp and Richardson, 2001). Following this approach, I consider REDD+ not as an externally given phenomenon, negotiated within global UNFCCC discussions and implemented at the local level, but rather as a "discursive construction" (Hajer and Versteeg, 2005, p. 183), a discourse or a set of (competing) storylines that is actively constructed and reconstructed by actors at various levels of governance (see also Den Besten et al., 2014; Melo et al., 2014). In such a view, REDD+ has different meanings in different situations, at different levels, and for different actors, be it a policy arrangement, set of projects, or financial mechanism. This

article uses a discursive approach to give insight into how storylines around REDD+ are (re)interpreted by various stakeholders at different levels, and how such storylines are reflected in the design of a specific REDD+ project. I turn next to identifying such storylines around REDD+.

4.3 Identifying storylines around REDD+

Since its inception, reducing emissions from deforestation has been subject of heated political and scholarly debates. Some praise REDD+ for its potential to (cost-)effectively reduce deforestation and mitigate climate change at the same time by trading forests as accurately measured carbon units on the global market. Others criticize REDD+ for its perceived neoliberal, technocratic, centralized, and/or carbon-centric approach, which they see as incompatible with a participatory, democratic REDD+ that generates carbon as well as non-carbon benefits for multiple actors (see e.g. Corbera, 2012; McAfee, 2012; Den Besten et al., 2014; Visseren-Hamakers et al., 2012a).

In my aim to bring conceptual clarity to these debates, I focus on three inter-related questions that currently give rise to some of the most prominent concerns and some of the most heated debates regarding REDD+, namely 1) what REDD+ should achieve; 2) who should monitor REDD+ outcomes; and 3) how REDD+ should be financed. In analyzing these debates, several scholars have conceptualized discourses around REDD+, yet most discuss only one or a few specific storylines, often in a normative way (see e.g. Gupta et al., 2012; Melo et al., 2014; Boyd, 2010; Lansing, 2011; Corbera, 2012; Stephan, 2012; Arhin, 2014; Pistorius et al., 2012; Den Besten et al., 2014; Nielsen, 2014). This section aims to identify one full range of possible answers to each of the three above-mentioned questions. These answers constitute what I call storylines around REDD+²⁰. I discuss each of the three questions in turn.

4.3.1 What should REDD+ achieve: Carbon or non-carbon objectives?

In analyzing debates around what REDD+ should achieve, I focus on carbon versus non-carbon objectives. Scholars, activists and civil society organizations have raised concerns regarding the carbon-centric focus of many REDD+ policies and practices at the expense of non-carbon values (Chhatre et al., 2012; McDermott et al., 2012; McDermott, 2014; Visseren-Hamakers et al., 2012a; Buizer et al., 2014), referring as well to a “carbonization” or “carbonification” of forest governance (Vijge and Gupta, 2014, p. 18; Gupta et al., 2012, 2014; Mert, 2009, p. 334; Stephan, 2012). Others, however, maintain that REDD+, being a UNFCCC-driven mechanism, is, and should

20 Many of the storylines identified in this section are not unique to REDD+ debates, but can also be discerned in other governance realms, for example in the broader climate governance and natural resource management realms. This section is restricted to a discussion of REDD+ debates only. In identifying the storylines, I draw as much as possible on existing terms and conceptualizations of storylines.

be, primarily meant to reduce carbon emissions, rather than address an entire range of forest-related issues. I identify three storylines around the question what REDD+ should achieve.

In the carbon storyline, mitigating climate change by storing carbon in forests is seen as the only objective of REDD+; non-carbon values should not be promoted or safeguarded since this may reduce the cost-effectiveness of storing carbon. Nowadays, advocates of the carbon storyline have become scarce. Even organizations considered to be carbon-oriented, such as the Verified Carbon Standard (see McDermott et al., 2012), only accredit REDD+ projects if they avoid negative impacts on a couple of pre-defined non-carbon values (Arhin, 2014). Criticism concerning the over-emphasis on carbon objectives at the cost of non-carbon objectives has led to increased attention to safeguards and co-benefits (Pistorius, 2012).

In the safeguards storyline, the generation of carbon benefits is seen as the main objective of REDD+, yet safeguards are considered necessary to prevent risks to or negative impacts on non-carbon values. The safeguards storyline (in various gradations) is currently highly dominant among REDD+ scholars and practitioners. Scholars commonly observe that key multilateral organizations involved in REDD+ take a safeguards or so-called “risk-based” approach to REDD+ (Visseren-Hamakers et al., 2012a; McDermott et al., 2012; Arhin, 2014). A large body of literature as well as civil society organizations, donors, multi-, bilateral and private organizations are developing safeguard policies or frameworks for REDD+ (see Arhin, 2014 for an overview). Parties to the UNFCCC agreed on a broad set of safeguards in 2010, and agreed in 2011 that any REDD+ payments should be conditional on providing information on how safeguards are “addressed and respected” at the national level (UNFCCC, 2014, p. 16).

Finally, the co-benefits storyline considers REDD+ as a potential win-win situation for the attainment of both carbon and non-carbon benefits (see e.g. Chhatre et al., 2012; Levin et al., 2008; McDermott et al., 2011; Pant, 2011; Phelps et al., 2012; Nielsen, 2014). The co-benefits storyline is particularly prominent among civil society groups and organizations representing indigenous communities (Pistorius, 2012). The concepts of safeguards and co-benefits are often conflating, making the division between the safeguards and co-benefits storylines blurry (see also Arhin, 2014). The large investments in the development of safeguard frameworks have caused a gradual shift from a focus on a minimum set of safeguards toward also promoting co-benefits in REDD+ policies and practices (Roe et al., 2013). At the far end of the co-benefits storyline sits the belief that REDD+ is primarily a vehicle for generating non-carbon benefits, for example through (institutional) capacity-building or the generation of financial resources (see e.g. Corbera, 2012; Venter et al., 2009).

4.3.2 Who should monitor REDD+ outcomes: Technical experts or local communities?

In analyzing debates around who should monitor REDD+ outcomes, I focus on who is

involved and whose knowledge is taken into consideration in the design and execution of measuring, reporting and verifying (MRV) REDD+ outcomes: technical experts alone, or also local communities. MRV systems are increasingly central to REDD+ schemes, causing a heated debate regarding by and for whom objectives of REDD+ should be accounted for (Gupta et al., 2012, 2014). The UNFCCC identifies principles for high-quality MRV systems such as “transparency, consistency, comparability, completeness, and accuracy” (UNFCCC, 2009b cited by Gupta et al., 2014, p. 187). Some believe that involving local communities in MRV systems jeopardizes meeting these principles. Others, however, are more concerned that the need to accurately measure the amount of carbon stored in forests disproportionately draws on scientific knowledge and technical expertise. They criticize REDD+ for further empowering scientific, often Northern “elites” and disempowering those who do not possess such knowledge or expertise, including local communities (Lahsen, 2009; Lohmann, 2001; Lövbrand, 2009; Den Besten et al., 2014). This trend has also been termed “technicalization” (Gupta et al., 2014, p. 182) or “technocratization” (Melo et al., 2014, p. 50). I identify three storylines in these debates (see Danielsen et al., 2008; Larrazábal et al., 2012 for similar categorizations).

According to the expert-based storyline, technical experts possess the best - i.e. most accurate and reliable - knowledge, and should therefore be responsible for the development and execution of REDD+ MRV, drawing on scientific and standardized criteria and indicators to monitor environmental services with the help of high-end technologies. MRV systems that draw on the expert-based storyline are typically externally driven and do not allow involvement of local communities. Most of the scholarly literature on REDD+ as well as the majority of REDD+ policies and practices draw on the expert-based storyline (Nielsen, 2014). Large investments are being made by multilateral, bilateral and private organizations and standards in the development of high-tech MRV (and safeguard) systems for REDD+, in building technical capacity for MRV, and in improving (access to) standardized MRV methodology and technology in order to generate accurate and verifiable data (Gupta et al., 2012, 2014). The expert-based storyline is also dominant within the UNFCCC negotiations, particularly since agreements have been made on “results-based” compensation for REDD+ (UNFCCC, 2014, p. 32). This means that REDD+ payments are conditional on additional carbon units (and information regarding safeguards) that are measured and verified in a way that is “consistent with” methodological guidance provided by the UNFCCC (UNFCCC, 2014, p. 29).

Like the expert-based storyline, the expert-based devolution storyline considers technical expert best suited to design MRV systems, as well as analyze and interpret the data. Unlike the expert-based storyline, however, the expert-based devolution storyline favors limited devolution of responsibilities by involving local communities in data collection. In this view, local communities can cost-effectively carry out ground-based

inventories to complement remote-sensing methods, but rather than drawing on local knowledge, this should follow scientific criteria and be guided by technical experts in order to ensure adherence to global standards (see e.g. GOFC-GOLD, 2014; Skutsch et al., 2009).

The collaboration storyline goes one step further in involving local communities. It advocates the involvement of local communities not only in data collection, but also in the design of MRV systems, and possibly in the analysis and interpretation of collected data. This storyline favors shared authority between technical experts and local communities, proposing that REDD+ MRV be based on both scientific and local (indigenous) knowledge (see Larrazábal et al., 2012 for an overview of literature and REDD+ practices based on similar ideas). Even in the collaboration storyline, however, reliability and accuracy of data should still be safeguarded by adherence to global (generic) standards for MRV methodology²¹. Many scholars and civil society groups call for REDD+ MRV to be more inclusive of local communities (see e.g. Fry, 2011; Danielsen et al., 2011; Global Witness, 2009). A draft decision by the UNFCCC Subsidiary Body for Scientific and Technological Advice recognized in 2009 “the need for full and effective engagement of indigenous peoples and local communities in, and the potential contribution of their knowledge to, monitoring and reporting of activities” (UNFCCC, 2009b, p. 3). Despite this, reflection of the collaboration storyline in concrete REDD+ practices remains scarce, as skepticism persists among public and private organizations regarding the accuracy and reliability of community-generated data (Fry, 2011).

4.3.3 How should REDD+ be financed: Market-based or fund-based?

In considering debates around how REDD+ should be financed, I focus on market-based versus fund-based approaches. Some see great potential in the forest carbon market, believing it could fill long-existing financial gaps to conserve forests globally, as well as create economic incentives for state and non-state actors to reduce or compensate their carbon emissions. Others instead criticize REDD+ for underlying such a market-oriented approach to forest conservation, arguing for example that a “neoliberalization of nature” threatens to reduce forests to mere commodities (Corbera, 2012, p. 612; Stephan, 2012; McAfee, 2012). I again identify three storylines in these debates.

In the market-based storyline, markets are deemed most appropriate to finance REDD+ in the long run, though fund-based approaches might temporarily be needed to finance the development of REDD+ mechanisms or projects. Trade in carbon (and possibly non-carbon) services is believed to support the provision of such services by generating private investments and simultaneously create economic opportunities for companies involved in such trading (for advocates, see Eliasch, 2008; Parker et al., 2009;

21 MRV systems designed and executed solely by local communities do exist, but are not realistic in the case of REDD+, which typically requires adherence to standardized protocols in order to secure outside finances.

Stern, 2007; Lederer, 2011). Though most REDD+ activities are currently financed by funds, many note that the market-based storyline is pervasive among REDD+ practitioners, especially so among multilateral organizations working on REDD+ (Visseren-Hamakers et al., 2012a; McAfee, 2012; Melo et al., 2014; Nielsen, 2014).

The hybrid storyline favors a combination of market- and fund-based approaches to finance REDD+, as this allows benefiting from the advantages of both approaches and filling (financial) gaps that might be left if either one approach were used alone (advocates include Dutschke et al., 2008; Grondard et al., 2008; Meridian Institute, 2009).

Finally, the fund-based storyline is based on the belief that free trade in environmental services may negatively impact the provision of social and environmental services. Governments are considered to be best suited to finance REDD+ through national, bi- or multilateral fund-based programs (see e.g. Corbera, 2012; McAfee, 2012).

4.3.4 The three sets of storylines

Figure 4-1 shows that the three sets of storylines identified above can be perceived as spectra of answers to the three identified questions related to REDD+²². Table 4-1 gives a summary of the storylines and identifies the indicators that are used in the next section to assess reflection of these storylines in the design of the Khasi hills community REDD+ project.

Apart from having provided conceptual clarity to some of the most prominent scholarly and political debates on REDD+, this section presents a framework to analyze discourses around REDD+. The representation of the storylines as spectra of answers to the identified questions enables positioning stakeholders' views and the design of REDD+ policies or practices along the three spectra. The next section uses this framework in analyzing how the storylines identified above resonate at the project level.

4.4 Storylines around REDD+ at the project level

In this section I analyze which of the storylines identified in section 4.3 are espoused by stakeholders of the first Indian REDD+ project, and which ones are reflected in the design of the project.

22 A combination of one storyline from each of the identified spectra may constitute part of a discourse, such as those identified by Bäckstrand and Lövbrand (2006). It is, however, beyond the scope of this article to analyze the relation between these storylines and identify the range of discourses that combinations of storylines might constitute.

What should REDD+ achieve?



Who should monitor REDD+ outcomes?



How should REDD+ be financed?



Figure 4-1: Conceptualization of the storylines as spectra of answers to the three identified questions (source: constructed by the author based on literature study).

Table 4-1: Storylines regarding what REDD+ should achieve, who should monitor REDD+ outcomes, and how REDD+ should be financed (source: compiled by the author based on literature study).

<i>What should REDD+ achieve?</i>		
<i>Carbon storyline</i>	<i>Safeguards storyline</i>	<i>Co-benefits storyline</i>
Carbon benefits	Carbon benefits, but safeguards should prevent negative impacts on non-carbon values	Carbon and non-carbon benefits
Reflection of storylines in REDD+ design		
Carbon benefits framed as main objective. MRV of carbon benefits	Carbon benefits framed as main objective. MRV of carbon benefits and safeguard information and/or monitoring system	Carbon and non-carbon benefits framed as main objectives. MRV of carbon and non-carbon benefits
<i>Who should monitor REDD+ outcomes?</i>		
<i>Expert-based storyline</i>	<i>Expert-based devolution storyline</i>	<i>Collaboration storyline</i>
Technical experts	Technical experts, with limited involvement of local communities in data collection	Both technical experts and local communities
Reflection of storylines in REDD+ design		
MRV designed and executed by technical experts, relying on scientific knowledge	MRV designed by technical experts, relying on scientific knowledge, and executed with involvement of local communities	MRV designed and executed jointly by technical experts and local communities, relying on scientific and local knowledge
<i>How should REDD+ be financed?</i>		
<i>Market-based storyline</i>	<i>Hybrid storyline</i>	<i>Fund-based storyline</i>
Through sale of carbon credits	Both through sale of carbon credits and fund-based finances	Through fund-based finances
Reflection of storylines in REDD+ design		
Project designed to sell credits on carbon market	Project designed to sell carbon credits and secure fund-based finances	Project designed to secure fund-based finances

4.4.1 What should REDD+ achieve?

Stakeholders' storylines: Carbon or non-carbon objectives?

Plan Vivo, the certification body for the Khasi hills community REDD+ project, considers REDD+ as a mechanism that can simultaneously improve livelihoods, restore ecosystems and reduce climate change by empowering communities “at the frontline of climate change” (Plan Vivo, 2012). Though Plan Vivo considers carbon storage as one of the objectives of REDD+, it considers carbon as “a stimulus” for the generation of non-carbon benefits rather than “the whole point of a project” (Interview D1). Plan Vivo can therefore be placed at the far end of the co-benefits storyline.

Community Forestry International's storyline is similar to that of Plan Vivo. CFI sees REDD+ as a mechanism that can reduce deforestation, alleviate poverty, and empower local communities. Sequestering carbon is presented as a means to achieve these objectives and is treated as a secondary objective (CFI, 2006).

The broker U&We aims to stimulate corporate environmental and social responsibility. It does not mention carbon storage or climate change in its mission or vision statements (U&We, 2014). U&We favors a “holistic perspective” to REDD+ projects over a single-sided focus on carbon sequestration (Interview D4). U&We can therefore also be positioned in the co-benefits storyline.

Compared to the other stakeholders, the broker Clevel puts most emphasis on carbon benefits; its primary aim is to reduce companies' “carbon footprints” and achieve a more “carbon balanced” business, though Clevel also stresses that its carbon offset projects “go way beyond just carbon” (Clevel, 2014a). Clevel is the only stakeholder that presents the Khasi hills REDD+ project's “substantial carbon offsets” as an important objective of the project, rather than only a means to achieve non-carbon objectives (Clevel, 2014b). Hence, though Clevel can still be placed in the co-benefits storyline, it sits closer to the safeguards storyline than Plan Vivo, CFI and U&We.

Like Plan Vivo, CFI and U&We, local project participants and managers can also be placed at the far end of the co-benefits storyline. Motivations for local project participants to be involved in the project included protection and restoration of forests and biodiversity (Interviews A1–3, 4, 8, 10, 14, 16, 19, 22; B2–5, 9–11), improvement of livelihoods of present and future generations (Interviews A2, 8, 11, 24; B1, 3, 6, 7, 9, 11, 13, 15), improvement of watersheds (Interviews A8, 13, 14; B4, 9), reduction of soil erosion (Interviews A13, 14; B8), and capacity-building among local communities (Interviews A3, 12; B1, 5, 7). Carbon storage was not mentioned as a prime motivation to be involved in the project. As the Chief Community Facilitator argued: “The project is something that stands by itself and if it can create carbon credits, then that is fine” (Interview B1). Many local project participants were not (fully) aware of the concept of carbon funds (Interviews A1, 2, 4, 8, 9, 11–14, 18, 21, 22, 24; B8, 10; C1). Those project participants who did know about the concept were not skeptical about it, as they perceived the generation of carbon and non-carbon benefits as synergistic. They saw

carbon storage as a means to maintain the sustainability of the project and realize the attainment of those non-carbon benefits that they were primarily interested in (Interviews A24, 18; B1, 2, 12, 15; C3; D1, 3). As the Chief Community Facilitator argued: “Our job is not that we are doing a new thing, we do what the villages know how to do, only that they don’t have money or funds” (Interview B1). Interestingly, while global climate change mitigation was not mentioned as a motivation to be involved in the project, an important reason for local project participants to protect and restore forests was to improve adaptation to climate change; many were concerned with reducing adverse local impacts of climate change such as reduced rainfall, reduced water levels in rivers, and the effects of the rise in temperature (Interviews A1, 7, 17, 18; B3–5, 9).

Reflection in project design: Carbon or non-carbon objectives?

As shown above, all stakeholders relate to the co-benefits storyline, some even sitting at the far end of that storyline, valuing non-carbon benefits above carbon benefits. This is reflected in the project design. The Khasi hills REDD+ project grew out of an earlier PES project, in which REDD+ was introduced to generate additional income in order to sustain the project. The Khasi hills REDD+ Project Design Document does not specifically mention carbon storage as one of the objectives of the project, but generally refers to improvement of environmental services. By generating income from carbon sales, carbon storage is portrayed as a means to achieve the project’s main objectives, namely improvement of local communities’ livelihoods and enhancement of environmental services such as biodiversity conservation. In the Project Design Document, the generation of finances through carbon sales is always mentioned along with other PES sales, reflecting again the co-benefits storyline (PDD, 2012; Interview D3).

The project’s MRV system is designed to monitor both carbon and non-carbon objectives. The development of the MRV system was guided by the Plan Vivo standard, a generic guideline for payment for ecosystem services rather than for carbon sequestration alone (Plan Vivo Standard, 2013). The validation of the project was based on a set of carbon and non-carbon indicators, including governance, carbon, ecosystems, and livelihoods, and was carried out by a forestry expert and a socio-economic expert (Paudel and Aryal, 2012). To monitor carbon stock changes, the project uses satellite imagery, photo monitoring, and forest plot inventories. In addition to monitoring carbon benefits, the project conducted a large socio-economic baseline study to measure income level, health, education, biodiversity, water availability, and use of natural resources. This study will be repeated every 4–5 years to monitor changes (PDD, 2012). The project currently employs one forestry expert and one socio-economic expert to continuously monitor the project’s carbon and non-carbon benefits.

4.4.2 Who should monitor REDD+ outcomes?

Stakeholders' storylines: Technical experts or local communities?

Plan Vivo projects are supposed to be “community-led”, as Plan Vivo believes that “local knowledge is more helpful for projects” (Interview D1). A key feature of the Plan Vivo standard, which includes monitoring requirements, is “meaningful participation and ownership by communities” (Plan Vivo Standard, 2013, p. 2). Plan Vivo does, however, also draw on a group of experts to peer review projects’ technical specifications and discuss technical aspects of the Plan Vivo Standard (Plan Vivo Standard, 2013). In acknowledging authority and knowledge of both experts and local communities, Plan Vivo can be positioned in the collaboration storyline.

CFI relates to the same storyline as Plan Vivo. It aims to enable “stakeholder dialogue” to bring together different “knowledge sets”, including those of local communities and technical experts in the development of the Khasi hills REDD+ project (Interview D3).

Though Clevel is the only stakeholder that mentions carbon sequestration as one of the main objectives of REDD+, it does not mention any (technical) standards or scientific expertise used in establishing the amount of carbon that is stored or saved in the projects that it sells to its clients (Clevel, 2014a). The same holds for U&We (2014). Both Clevel and U&We claim to invest in Plan Vivo projects because of their strong emphasis on devolving decision-making authority to local communities (Clevel, 2014a; Interview D4). Hence, similar to Plan Vivo and CFI, Clevel and U&We can be placed in the collaboration storyline.

All local project participants and local project managers agreed with the questionnaire statements that local project participants have the biggest say in the project and that there are sufficient opportunities for local people to express their opinion (Questionnaire). None of the local project participants expressed concerns during the interviews regarding the involvement of technical experts inhibiting local people’s say in the Khasi hills REDD+ project. This is salient in a region where residents are known to strongly hold to their very distinct culture and traditions, resulting in hostilities and even violence against “immigrants” from other parts of India. Local project participants and local project managers were of the opinion that expert involvement is necessary to run the REDD+ project (Interviews A18; B7). The Plan Vivo standard was considered to be a helpful monitoring guideline rather than a constraint to local decision-making authority (Interviews B3–5, 12). Some local project participants and managers even saw the involvement of technical experts in the project’s MRV as an opportunity to build their capacity, knowledge and connections (Interviews A1; B1, 9, 11). Hence, decision-making authority by technical experts was mostly believed to be compatible with, and even able to strengthen decision-making authority at the local level. Thus, like Plan Vivo, CFI, Clevel and U&We, local project managers and local project participants can be placed in the collaboration storyline.

Interestingly, opinions regarding decision-making authority on the design of the

project were not so much divided along the spectrum of technical experts versus local communities, but rather along competing local decision-making authorities. The few local project participants who expressed dissatisfaction with their decision-making authority did not attribute this to experts inhibiting their authority in (monitoring) the project, but rather to traditional structures in which village elders have large decision-making authority in the management of natural resources (Interviews A3, 6, 14).

Reflection in project design: Technical experts or local communities?

Plan Vivo has a different approach to accrediting projects than most other carbon forestry standards. Rather than a-priori defining methodologies or setting strict technical requirements for MRV systems, Plan Vivo allows projects to define their own technical specifications, which Plan Vivo sends out to expert reviewers for approval. Plan Vivo also allows projects to choose their own “locally appropriate validators” (Interview D1). Plan Vivo’s approach to monitoring, validating and verifying allows projects to design methodologies “to suit local circumstances” (Plan Vivo Standard, 2013, p. 2; Interview D1). The technical specifications for the Khasi hills REDD+ project were developed jointly by the Synjuk, CFI, a local non-governmental organization, and Bioclimate, a UK-based not-for-profit technical support company. The executive director of Bioclimate argued that “the communities themselves (...) define the [socio-economic] indicators”. He continued: “We assess what methods they [the communities] are already familiar with and how we could adapt those methods to tune to the project. The local partners can continue monitoring, and we check now and then” (Interview D5).

The monitoring of the Khasi hills REDD+ project draws on a combination of high-tech and on-the-ground methods, such as remote-sensing imagery, photographic monitoring, reporting by communities and forest plot inventories (PDD, 2012). As stated in a promotion video of the project: “The Synjuk blends their traditional practices with scientific natural resource management methods” (CFI, 2006). Forest plot inventories as well as monitoring of socio-economic indicators are jointly carried out by Community Facilitators, village headmen, Local Working Committees and youth volunteers. In order to build capacity of these actors, monitoring is guided by a forestry and a socio-economic expert (Interview B1). Hence, I conclude that the design of the Khasi hills REDD+ project reflects the collaboration storyline that most stakeholders relate to.

4.4.3 How should REDD+ be financed?

Stakeholders’ storylines: Market-based or fund-based?

Plan Vivo’s approach is based on the belief that free trade in environmental and social services can simultaneously help to generate such services and benefit private investors (Plan Vivo, 2012). As a program manager of Plan Vivo argued: “I believe that aspects that are good for communities are good for business (...)” (Interview D1). Plan Vivo

does not, however, rely on market-based approaches alone; it encourages projects to access a wide range of financial resources, including public funding (Plan Vivo Standard, 2013). Plan Vivo can therefore be placed in the hybrid storyline.

Also Community Forestry International, local project managers and local project participants relate to the hybrid storyline. CFI aims to contribute to the development of national or regional markets for REDD+ in order to make the Khasi hills REDD+ project viable in the long run. At the same time, CFI supports local communities to build stronger relationships with government agencies in order to access long-term public funding (Interview D3). Many local project managers believed it may be risky for the Khasi hills REDD+ project to solely rely on selling carbon funds on the voluntary carbon market, and that it should therefore tap into various sources of income (Interviews A14; B1, 2, 7, 8, 9, 11, 12; D3). All interviewees, including local project managers and local project participants, agreed with the questionnaire statement that linking up with existing regional and national government schemes would be beneficial to the project (Questionnaire; Interviews A16, 18, 21, 24; B1, 3–5, 8, 9, 11, 13, 14; C1, 3).

The brokers of the project, U&We and particularly Clevel, relate most closely to the market-based storyline. They support companies to combine profitability with social and environmental responsibility through the sale of carbon credits from REDD+ projects (Clevel, 2014a; U&We, 2014). Clevel is the only stakeholder that presents the Khasi hills REDD+ project as a sellable product which “can fit well with a holistic carbon management plan in any business” (Clevel, 2014b).

As shown, most stakeholders believe in the need to combine market-based and fund-based approaches to REDD+. What is more, such approaches were even believed to be mutually re-enforcing. CFI, for example, expressed the belief that by selling carbon credits on the market, the project builds capacity among Khasi communities to also interact with government agencies in managing natural resources and in acquiring government funding (Interview D3). The Khasi hills REDD+ project is often presented as a show case, not only for other voluntary market-based REDD+ projects around the world, but also for the Indian and other governments to improve their national REDD+ strategies (Interviews B1; D3).

Reflection in project design: Market-based or fund-based?

In the early stages, several public funders supported the Khasi hills REDD+ project with start-up grants. Now that the design phase is over and the project certified, the project sells its Plan Vivo certificates on the private voluntary market through ex-post sales. From June 2013 to August 2014 carbon credits have been sold for a net value of around \$52,000. In addition, WeForest committed itself in June 2014 to find corporate buyers to plant or protect 400,000 trees in the project area. At the time of writing, WeForest transferred more than \$80,000 to the project (Interviews B1; D3). According to the Project Design Document, 75% of the external funding is expected to come from

carbon sales; the remaining 25% would be from Indian government funding. Several attempts have been made by the project managers to acquire funding from regional and national government agencies (PDD, 2012; Interview B1). Hence, the intended design of the Khasi hills REDD+ project reflects the hybrid storyline that most stakeholders relate to.

Due to their design, Plan Vivo projects such as the Khasi hills REDD+ project face heavy competition from REDD+ projects which employ more rigorous or more well-known carbon monitoring standards. The latter are often favored by private investors who are primarily interested in offsetting their carbon emissions in a secure and reliable manner. Buyers of Plan Vivo credits on the other hand are generally not only interested in carbon offsetting, but are concerned with the full range of carbon and non-carbon objectives. CFI, Plan Vivo and U&We consider selling the Khasi hills REDD+ project's credits not only on the global private voluntary carbon market, but also on Indian national and regional markets, for example by targeting companies downstream of the Umiam river with a potential interest in regional ecosystem services (Interview D1, 3, 4). This shows that the Khasi hills REDD+ project focuses on a niche in the private voluntary carbon market that may also include national or regional buyers rather than only global corporations, and that is strongly focused on generating not only carbon but also non-carbon benefits, similar to the project itself.

4.5 Conclusion

This article analyzed some of the most prominent scholarly and political debates regarding REDD+ which revolve around three inter-related questions: 1) what should REDD+ achieve; 2) who should monitor REDD+ outcomes; and 3) how should REDD+ be financed. Based on an analysis of these debates, I conceptualized three sets of storylines that constitute a range of answers to these questions, focusing respectively on carbon versus non-carbon benefits, technical experts versus local communities, and market- versus fund-based approaches. Through a case study of the first REDD+ project in India, the Khasi hills community REDD+ project, I analyzed how the identified storylines resonate at the project implementation level.

Presenting the storylines as a range of answers to the above three questions enabled placement of project stakeholders along a spectrum (see Figure 4-2). This shows that stakeholders of the Khasi hills REDD+ project are mainly interested in non-carbon objectives, favor involvement of both technical experts and local communities in the design and execution of the project's measurements, reporting and verification, and favor reliance on both market- and fund-based finances. This is reflected in the project design: the project is mainly focused on non-carbon benefits, involves both technical experts and local communities in MRV design and execution, and relies on both fund-based finances and the sale of carbon credits.

The multilevel discourse analysis in this article showed that the three questions

that give rise to heated debates among scholars and politicians do not always provoke contentious debates at the project implementation level. Most stakeholders relate to the same or similar storylines. Local project managers asserted that few (if any) conflicting views exist among stakeholders regarding the design and implementation of the project (Interview B11; Questionnaire). More importantly, most project stakeholders perceive the different answers to the three identified questions as compatible with one another. Rather than believing in trade-offs between carbon and non-carbon benefits, most project stakeholders believe that a focus on carbon benefits can help to generate finances for the attainment of non-carbon benefits. Many believe that the involvement of technical experts builds local communities' knowledge and capacity rather than inhibits their authority or the use of local knowledge. Stakeholders also believe that the REDD+ project can trigger acquisition of public funding in addition to funding from carbon sales, rather than having to choose one or the other approach. As a result, none of the project stakeholders shared the concerns that are pervasive among some scholars regarding the dominance of carbon-oriented, expert-based and market-based storylines in REDD+ policies and practices.

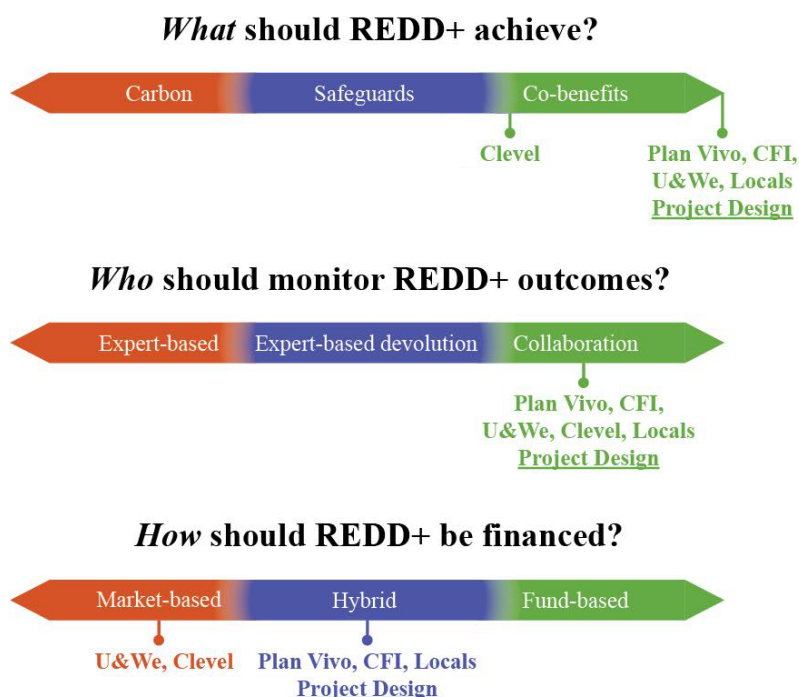


Figure 4-2: Identification of stakeholders' storylines and reflection of storylines in the Khasi hills REDD+ project design (source: compiled by the author).

In addition to drawing lessons for the REDD+ project under study, the multilevel discourse analysis in this article enhanced understanding of how scholarly and political debates can play out at the project implementation level. As shown, some of the concerns that fuel these debates relate to the idea that REDD+ might lead to “carbonization” or “technicalization” trends in forest governance. Vijge and Gupta (2014) argued in the case of India that while the framing of the national REDD+ strategy opposes the carbonization trend and the disempowerment of local communities in forest monitoring, the national institutional arrangements in the country do not seem conducive to countering such trends in (future) REDD+ implementation. Gupta et al. (2012, 2014) showed that the development of REDD+ MRV systems - driven by a neoliberal effort to commodify forest carbon - may very well stimulate carbonization and technicalization trends, yet that this does not appear to be the case in all instances of REDD+ implementation around the world. This article indeed showed that carbonization and technicalization trends are not promoted in all cases of REDD+ implementation. Ostensibly, then, current discourses on REDD+ are very dissimilar around the world and do not direct REDD+ policies and practices in one single direction. Since the case study in this article is quite distinct due to the unique political arrangements in the area and its accreditation by Plan Vivo, additional multilevel discourse analyses would be welcome to analyze similar storylines in other instances of REDD+ project implementation, and to assess whether storylines at global and national levels actually align with those at project level.

CHAPTER 5

Framing REDD+ in the national political arena: A comparative discourse analysis of Cameroon, Indonesia, Nepal, PNG, Vietnam, Peru and Tanzania

This chapter has been revised and resubmitted based on three positive reviews to *Global Environmental Change* as: **Vijge, M.J.**, Brockhaus, M., Di Gregorio, M., Muharrom, E. Framing national REDD+ benefits, monitoring, governance and finance: A comparative analysis of seven countries.

Abstract

This article analyzes how REDD+ is framed in the national political arena by assessing which storylines around REDD+ are prominent among policy actors and in the Readiness Preparation Proposals (R-PPs) in Cameroon, Indonesia, Nepal, Papua New Guinea (PNG), Vietnam, Peru and Tanzania. We focus on storylines related to four questions: 1) *What* should REDD+ achieve: carbon or also non-carbon objectives? 2) *Who* should monitor REDD+ outcomes: only technical experts or also local communities? 3) *At what level* should REDD+ be governed: at national or sub-national level? and 4) *How* should REDD+ be financed: through market- or fund-based sources of finance? While the vast majority of policy actors agreed that REDD+ should also realize non-carbon benefits, actors' views on the three other questions were highly divergent both within and between countries. Almost all R-PPs stress the importance of non-carbon benefits, yet few contain detailed strategies to develop non-carbon monitoring systems. Apart from PNG, all R-PPs contain plans to involve local communities in the design and/or execution of measuring, reporting and verifying REDD+ outcomes. With regard to the level at which REDD+ should be governed, while most R-PPs contain some elements of a nested approach to REDD+ accounting, almost all countries envision a long-term transition to national accounting. We found strikingly little discussion of how to finance REDD+, both among policy actors and in R-PPs. In the conclusion we reflect on possible implications of the prominence of REDD+ storylines in the seven countries, and argue that concerns about *carbonization* and *centralization* of forest governance may be justified given the limited attention to non-carbon monitoring and the envisioned centralized approaches to REDD+.

Key words: REDD+; Comparative discourse analysis; Co-benefits; Market-based approach; MRV; Centralization.

5.1 Introduction

Though Reducing Emissions from Deforestation and Forest Degradation (REDD+) is arguably one of the most advanced climate mitigation options, scholars and politicians are still debating and negotiating important aspects of its design, both within and outside the United Nations Framework Convention on Climate Change (UNFCCC). A variety of state and non-state actors have already operationalized REDD+ policies and practices at the global, national and project levels, all with their own ideas of what constitutes REDD+. A large and ever-growing body of literature aims to assess the (potential) effectiveness of these policies and practices, their (possible) implications, and the (lack of) progress in operationalizing and implementing REDD+ (see e.g. Angelsen et al., 2009, 2012; Gupta et al., 2013; Levin et al., 2008). Much less literature analyzes the discourses of actors involved in REDD+, such as what REDD+ should achieve and how it should be operationalized. Most of these analyses focus on the global REDD+ domain (Den Besten et al., 2014; Hiraldo and Tanner, 2011). Only a few have investigated such discourses at the national level, and very few have done so comparatively (for some exceptions, see Pistorius et al., 2012; Di Gregorio et al., 2015; Van der Hoff et al., 2015; Evans et al., 2014). This article contributes to this small but growing body of literature by carrying out a cross-country comparative analysis of how REDD+ is framed at the national level in Cameroon, Indonesia, Nepal, Papua New Guinea (PNG), Vietnam, Peru and Tanzania. We focus on four inter-related questions that currently feature prominently in scholarly and political debates related to REDD+ objectives, monitoring, governance, and finance. Our aim is to analyze how debates around these questions resonate in the national political arenas of the seven countries, and with what possible implications for their national forest governance. We do so by assessing, first, which views around these questions are prominent among national policy actors, and second, which storylines are reflected in the countries' Readiness Preparation Proposals (R-PPs), the REDD+ plans that are prepared as part of the World Bank's Forest Carbon Partnership Facility program.

The next section presents the analytical framework and related REDD+ storylines. Section 5.3 presents the methods used to assess policy actors' views and the storylines that are reflected in the R-PPs. Section 5.4 analyzes the views of national policy actors regarding the four questions, drawing on quantitative and qualitative analyses of surveys and semi-structured interviews with policy actors. In section 5.5 we analyze which of the identified storylines are reflected in the countries' R-PPs. Finally, the discussion draws out possible implications of the prominence of storylines for national forest governance in these countries, drawing on our evidence and existing literature.

5.2 Analytical framework and storylines around REDD+

Different understandings of REDD+ are contained in distinct policy discourses. Discourse analysis of both spoken and written text - interviews and policy documents -

can help to identify which understandings of REDD+ have gained prominence. In this article we define a discourse as “an ensemble of ideas, concepts, and categorizations that are produced, reproduced, and transformed in a particular set of practices and through which meaning is given to physical and social realities” (Hajer, 1995, p. 44). Discourses matter because they shape debates around REDD+ policy design and can justify specific policy design solutions (Den Besten et al., 2014; Hiraldo and Tanner, 2011). An analysis of the prominence of certain discourses can therefore gain insight into the direction that a certain policy instrument such as REDD+ is likely to take.

One way to operationalize discourses is through storylines. A storyline is a narrative that gives meaning to specific phenomena or “through which actors are positioned, and through which specific ideas of ‘blame’ and ‘responsibility’ and ‘urgency’ and ‘responsible behavior’ are attributed” (Hajer, 1995, p. 64–65). By referring to a specific element of a storyline, policy actors can signal their position and evoke a storyline or discourse as a whole. We expect prominent storylines to be upheld by key policy actors (Hajer, 1995). Similarly, storylines contained in policy documents (such as R-PPs) can serve as an indication for the prominence of certain discourses (Sharp and Richardson, 2001; Rantala and Di Gregorio, 2014). In this article, we use the concept of storylines to assess views of policy actors on REDD+ policy design and analyze whether these views are reflected in official policy documents.

In analyzing prominent storylines among policy actors and in the R-PPs of the seven countries, we draw on an expanded version of the analytical framework developed by Vijge (2015). We focus on four inter-related questions: 1) *What* should REDD+ achieve: carbon or also non-carbon objectives? 2) *Who* should monitor REDD+ outcomes: only technical experts or also local communities? 3) *At what level* should REDD+ be governed: at national or sub-national level? and 4) *How* should REDD+ be financed: through market- or fund-based sources of finance? As we also show below, these questions are currently subject of some of the most heated scholarly and global political debates around REDD+. Based on the core elements outlined below, Table 5-1 presents a range of storylines for each of the four questions.

In considering *what* REDD+ should achieve, we explore prominent positions of actors and evidence from R-PPs about whether REDD+ is meant to generate carbon benefits²³ alone, or also generate other benefits such as biodiversity conservation and poverty reduction. This question has been extensively debated in the literature (see e.g. Visseren-Hamakers et al., 2012a; Chhatre et al., 2012; McDermott, 2014; Buizer et al., 2014; Pistorius et al., 2012; Phelps et al., 2012; Nielsen, 2014; Arhin, 2014; Hiraldo and Tanner, 2011; McGregor et al., 2014; White, 2014). A number of scholars have argued that because of its prime focus on carbon benefits, REDD+ may lead to a “carbonization” of forest governance at the expense of other, so-called non-carbon or co-

23 With carbon benefits we mean the mitigation of climate change through an increase in forest carbon stock or the avoidance of carbon emissions from forestland.

benefits (Vijge and Gupta, 2014, p. 18; see also Vijge, 2015; Gupta et al., 2012, 2014; Mert, 2009; Stephan, 2012). In assessing the framing and planned operationalization of what REDD+ should achieve in the R-PPs, we study which carbon and/or non-carbon objectives will be monitored and how central and detailed the proposed measuring, reporting and verification (MRV) or information systems for non-carbon benefits and safeguards are.

In considering *who* should monitor REDD+ outcomes, we assess views on who should design and execute MRV systems, ranging from technical experts alone to a collaboration between technical experts and local communities (for scholarly debates, see e.g. Vijge, 2015; Gupta et al., 2012; Larrazábal et al., 2012; Danielsen et al., 2011; Nielsen, 2014; Angelsen et al., 2009; Melo et al., 2014). Studies show that high-tech monitoring systems can present trade-offs with community-based monitoring approaches (Murdiyarso et al., 2012). Some assert that due to the centrality of monitoring systems in REDD+ debates, policies and practices, REDD+ empowers scientific elites at the cost of those without scientific knowledge or expertise, such as local communities (Gupta et al., 2012, 2014; Den Besten et al., 2014; Buizer et al., 2014). This has also been referred to as a “technicalization” trend (Gupta et al., 2014, p. 182). In considering how debates around this topic resonate in the national political arena, we assess views among policy actors regarding the authority of scientific experts and the involvement of local communities. In analyzing the R-PPs, we consider not only whose knowledge is considered important, but also who is involved in the process of designing and executing MRV systems: technical experts/scientists alone, or also local communities. In doing so, we also consider whether the proposed MRV methods allow for participation of local communities.

In analyzing *at what level* REDD+ should be governed, we explore views on the level at which carbon from REDD+ activities should be accounted for (for scholarly debates, see e.g. Van der Hoff et al., 2015; Bushley, 2014; Levin et al., 2008). Since the majority of REDD+ activities and funding currently aims to compensate national governments for the reduction of forest-related carbon emissions, a number of scholars have raised the concern that REDD+ may lead to a (re)“centralization” of forest governance (Toni, 2011, p. 67; Phelps et al., 2010; Sandbrook et al., 2010; Vijge and Gupta, 2014; Angelsen et al., 2009; Rantala and Di Gregorio, 2014; Buizer et al., 2014). In considering how debates around this topic resonate in the national political arena, we assess views among policy actors on whether REDD+ accounting and payments should go through the national government. We also assess whether the R-PPs propose national or sub-national reference levels for monitoring forest carbon stock, and whether they envision handling and distributing REDD+ payments at the national, sub-national and/or project level.

Finally, in considering *how* REDD+ should be financed, we explore views on whether REDD+ should be market- or fund-based (for scholarly debates on this, see e.g. Eliasch, 2008; Stern, 2007; Meridian Institute, 2009; Streck, 2010; McGregor et

Table 5-1: Storylines related to the four questions, with two indicators per storyline that were used in the analysis of the R-PPs and semi-structured interviews (source: adapted from Vijge, 2015).

<i>What should REDD+ achieve?</i>			
	<i>Carbon storyline</i>	<i>Safeguards storyline</i>	<i>Co-benefits storyline</i>
What are the main objectives of REDD+?	Carbon benefits	Carbon benefits, but safeguarding non-carbon values	Carbon and non-carbon benefits
Which objectives will be monitored?	MRV of carbon benefits	MRV of carbon benefits and safeguard information / monitoring system	MRV of carbon and non-carbon benefits
<i>Who should monitor REDD+ outcomes?</i>			
	<i>Expert-based storyline</i>	<i>Expert-based devolution storyline</i>	<i>Collaboration storyline</i>
Who develops MRV systems, drawing on whose knowledge?	Technical experts, using scientific knowledge	Technical experts, using scientific knowledge with involvement of local communities	Both technical experts and local communities, using scientific and local knowledge
Who executes MRV with which methods?	Technical experts, using high-tech methods and on-the-ground inventories	Technical experts, with limited involvement of local communities, using high-tech methods and participatory on-the-ground inventories	Both technical experts and local communities, using (among others) participatory on-the-ground inventories
<i>At what level should REDD+ be governed?</i>			
	<i>National storyline</i>	<i>Nested storyline²⁴</i>	<i>Sub-national storyline</i>
What is the proposed reference level?	National level	Both national and sub-national / project level	Sub-national and/or project level
At what level are REDD+ payments handled and distributed?	National level	Payments (eventually) received at national level, distributed and managed at sub-national / project level	Sub-national and/or project level
<i>How should REDD+ be financed?</i>			
	<i>Market-based storyline</i>	<i>Hybrid storyline</i>	<i>Fund-based storyline</i>
What is the envisioned long-term funding approach?	Sale of carbon credits	Sale of carbon credits and fund-based finances	Fund-based finances
What arrangements are made for the acquisition of funding?	Stimulating carbon markets, e.g. by reducing market barriers	Stimulating both carbon markets and fund-raising	Stimulating fund-raising, e.g. through compliance with donors' policies

24 The nested storyline is based on the concept of the “nested approach”, which allows both sub-national and national level accounting (Angelsen et al., 2009).

al., 2014; Vatn and Vedeld, 2013; Pham et al., 2013). Some scholars have criticized REDD+ for underlying a neoliberal logic, arguing that this may lead to what we call here a “marketization” of forest carbon, thereby turning (certain aspects of) forests into commodities (Melo et al., 2014; Vijge, 2015; Stephan, 2012; Corbera, 2012; Van der Hoff et al., 2015; Nielsen, 2014; Buizer et al., 2014; McAfee, 2012). In this article we analyze views among policy actors regarding the preferred funding mechanism for REDD+. We also analyze visions expressed in the R-PPs regarding what type of finances - market- or fund-based - should be relied on in the long run, and what arrangements are made for the acquisition of such finances.

As argued above, an analysis of the prominence of particular storylines can help to assess and explain the likelihood of certain trends in policy outcomes. Hence, our analytical framework allows us to draw conclusions on whether the above-described trends of “carbonization”, “technicalization”, “centralization” and “marketization” of forest governance are likely to occur in any of the seven countries (see section 5.6).

5.3 Research methodology

The analysis in this article draws on qualitative as well as quantitative research methods. Information about the views of policy actors comes from national surveys carried out between 2010 and 2013²⁵ with representatives of organizations that were relevant for REDD+ decision-making at the national level, including government agencies²⁶, non-governmental organizations²⁷, businesses, international organizations²⁸, and research institutes²⁹. Each survey covered around 40 to more than 60 policy actors, depending on the size of the countries’ REDD+ policy domains. Respondents were asked to rate their organization’s (rather than personal) level of (dis)agreement with specific position statements, or stances, on REDD+. A likert scale was used to rate their responses, ranging from 1 - meaning strongly disagree - to 5 - meaning strongly agree. Responses to four stances were used to assess, more generally, policy actors’ positions related to the four identified questions (see Table 5-2). Note that these are not a perfect reflection of the storylines presented in section 5.2, but relate to the same overarching questions.

25 The surveys were part of the Center for International Forestry Research (CIFOR)’s Global Comparative Study on REDD+. Full information on the questionnaires can be found in Brockhaus et al., 2014. Surveys were carried out in Nepal: May - December 2011; Peru: November 2012 - February 2013; PNG: January 2011 - June 2012; Indonesia: October 2010 - February 2012; Tanzania: March 2011 - September 2012; Cameroon: May - October 2011; and Vietnam: June - November 2011.

26 These included various ministries, departments, commissions and working groups operating at the national level.

27 These included both national and international non-governmental organizations.

28 These included multilateral organizations (e.g. the World Bank, UN-REDD Programme, FAO, etc.) and bilateral programs (e.g. USAID, Norad, JICA, etc.).

29 These included universities and national and international think tanks.

Table 5-2: Stances used to identify policy actors' positions related to the four questions.

Four questions	Related stances
<i>What should REDD+ achieve?</i>	"All REDD schemes aimed at reducing CO ² emissions should also require the realization of other key benefits like poverty reduction and biodiversity conservation".
<i>Who should monitor REDD+ outcomes?</i>	"Scientific experts are the best and final authority on REDD"
<i>At what level should REDD+ be governed?</i>	"All REDD accounting and payments should go through the national governments"
<i>How should REDD+ be financed?</i>	"REDD schemes should only be financed through funds"

We complemented our analysis of the surveys with qualitative observations from the semi-structured interviews, which were carried out at the same time as the surveys and with the same policy actors.

In analyzing the framings of REDD+ in each of the countries, we focus on the Readiness Preparation Proposals (R-PPs) that are developed as part of the World Bank's Forest Carbon Partnership Facility (FCPF). The FCPF is one of the largest REDD+ readiness programs. It provides technical and financial support to help countries build their capacity to participate in REDD+ programs and activities³⁰. The reason for choosing to analyze R-PPs is that these provide important insights into the direction of national REDD+ strategies and program activities (Angelsen et al., 2009). Moreover, the R-PPs follow a unique format, allowing for systematic comparisons across countries. We draw on additional observations from Emission Reduction Program Idea Notes (ER-PINs), which follow the R-PPs, for those countries that have developed these: Indonesia, Vietnam, Nepal and Peru. In order to systematically analyze the R-PPs, ER-PINs, as well as the semi-structured interviews, these documents and transcripts were coded with the software program NVivo, using the indicators presented in section 5.2.

Though the R-PPs have been developed in different years (ranging from 2009 to 2013), we did not find evidence that more recent R-PPs were more advanced or reflected later progress in REDD+ negotiations. Since the surveys were not carried out in the same years as the R-PPs were developed, we do not draw causal links between the views of policy actors and the reflection of storylines in the R-PPs. We recognize that the prominence of views expressed by policy actors does not alone provide an indication of the dominance of issues in national policy dialogues among these actors. Similarly, storylines expressed in the R-PPs may differ from storylines expressed in other REDD+ policy documents, such as national REDD+ strategies. We therefore corroborate our findings with recent literature throughout the article. Because of the large diversity among countries in terms of their institutional frameworks as well as the constellations of REDD+ actors, the discussion of this article contains a reflection of the possible

30 For more information, see <http://www.forestcarbonpartnership.org>.

implications of the prominence of storylines, rather than possible explanations of their prominence.

5.4 Prominent views among national policy actors

In this section we analyze the views of national policy actors regarding the four identified questions around REDD+, drawing on national surveys and semi-structured interviews in the seven countries. Figures 5-1 to 5-4 show the percentage of actors that agree or disagree with the four stances in each country.

Of the four stances we analyzed, the stance regarding what REDD+ should achieve (carbon or also non-carbon objectives) yielded the least divergent answers, both within and between the seven countries. In total, a mere 3% of the actors slightly disagreed with the stance that REDD+ should also deliver non-carbon benefits such as poverty reduction and biodiversity conservation, while none of the actors strongly disagreed. In Nepal and PNG, respectively 100% and 96% of the policy actors agreed with the stance, with more than 70% of the actors in PNG strongly agreeing. Compared to the other issues we analyzed, co-benefits were most frequently discussed by policy actors in the semi-structured interviews, though the question of how to operationalize these received much less attention and was often left unanswered.

Regarding the question who should monitor REDD+ outcomes (only technical experts or also local communities), around half of the policy actors across all countries disagreed with the stance that scientific experts are the best and final authority on REDD+, while around 20% agreed. In most countries the majority of the actors disagreed with the stance, with the exception of Vietnam where as many actors agreed as disagreed. We found that policy actors in Nepal and Tanzania were most strongly united in disagreement that experts are the best and final authority; more than 70% disagreed in each of these countries. Interestingly, in most countries, government agencies, including the most powerful³¹ ones, were strongly divided on the stance regarding experts' authority. In Tanzania, for example, answers by government agencies ranged from strongly disagree to strongly agree.

Views regarding the level at which REDD+ should be governed (national or sub-national) were the most divergent compared to the other stances, both within and across countries. In Nepal and Vietnam, more policy actors agreed than disagreed with the stance that all REDD+ accounting and payments should go through the national government. Semi-structured interviews revealed, however, that this did not prevent Nepalese policy actors from being highly concerned with equitable distribution of REDD+ benefits at the local level. While in Vietnam most government agencies favored national REDD+ accounting and payments, most international and non-governmental

31 Wherever we discuss the power of actors in this article, we refer to their in-degree reputational power. This is based on the number of actors participating in the survey that identified a particular actor as "especially influential" in shaping national REDD+ policies.

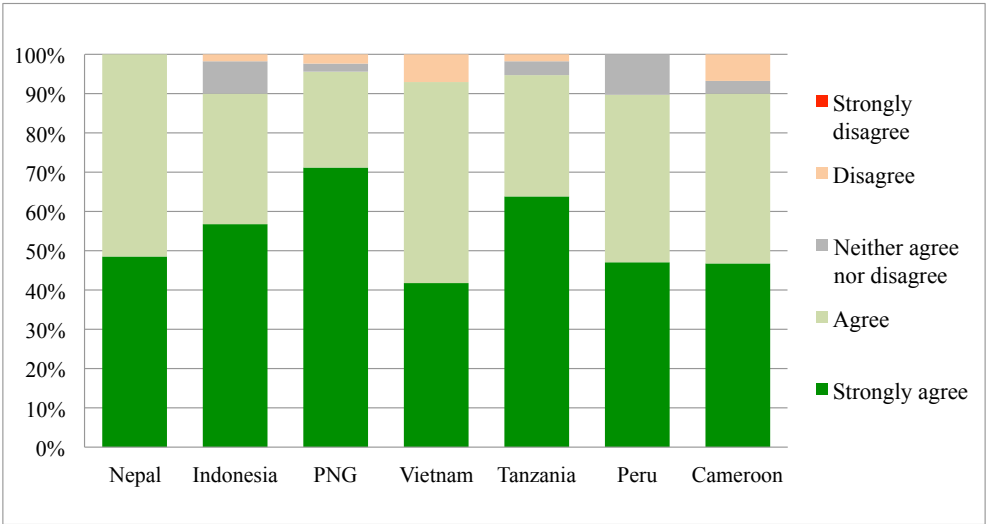


Figure 5-1: Percentages of national policy actors (dis)agreeing with the stance “All REDD schemes aimed at reducing CO2 emissions should also require the realization of other key benefits like poverty reduction and biodiversity conservation” (source: compiled by the authors based on analysis of the national surveys).

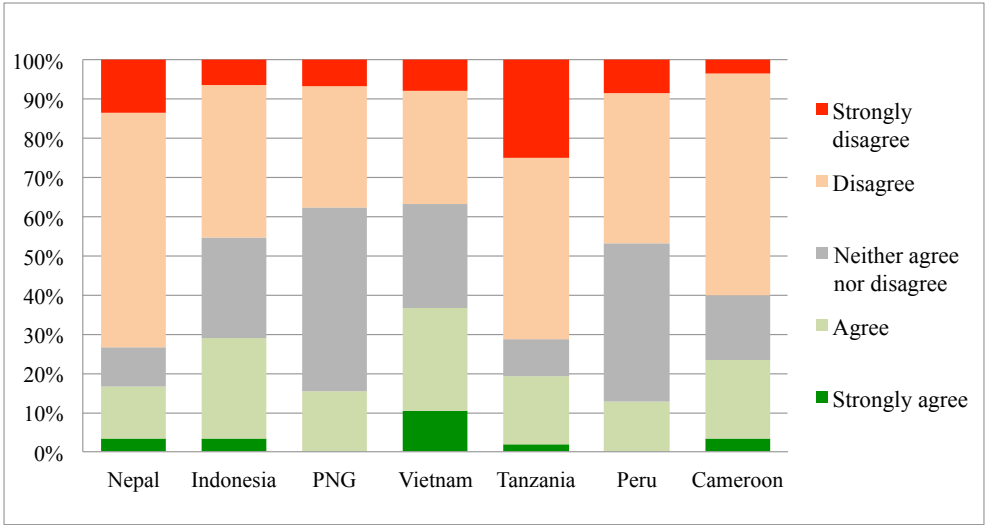


Figure 5-2: Percentages of national policy actors (dis)agreeing with the stance “Scientific experts are the best and final authority on REDD” (source: compiled by the authors based on analysis of the national surveys).

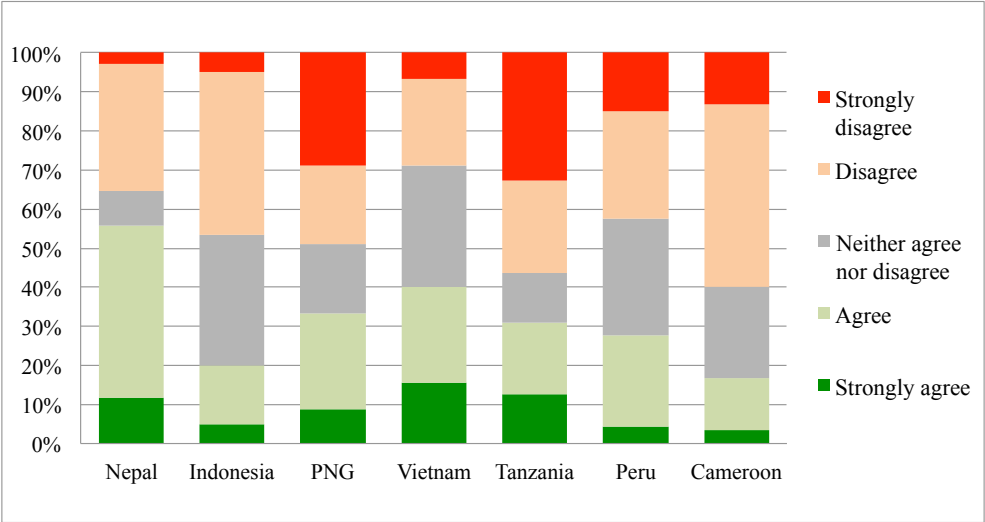


Figure 5-3: Percentages of national policy actors (dis)agreeing with the stance “All REDD accounting and payments should go through the national governments” (source: compiled by the authors based on analysis of the national surveys).

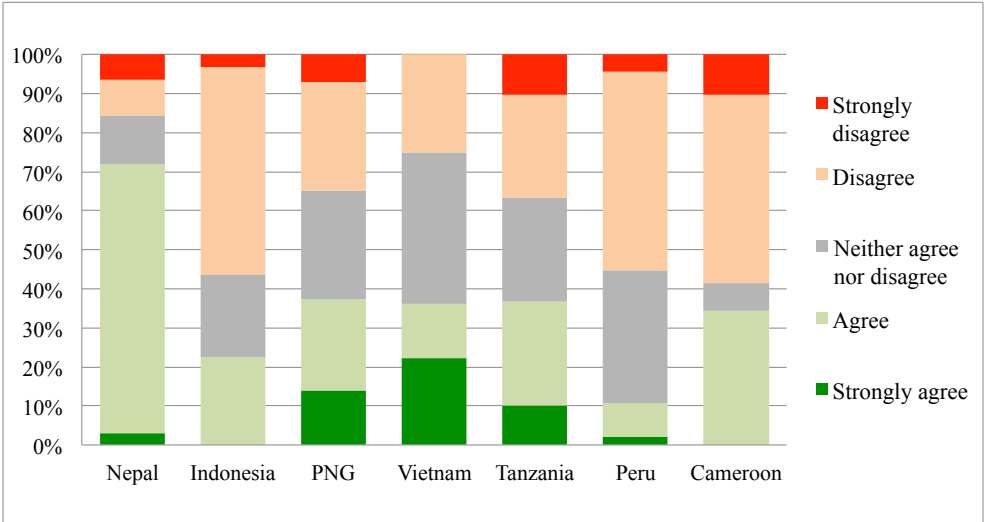


Figure 5-4: Percentages of national policy actors (dis)agreeing with the stance “REDD schemes should only be financed through funds” (source: compiled by the authors based on analysis of the national surveys).

organizations favored a decentralized approach, mainly because of concerns about misuse of funds and corruption (Pham et al., 2014). In Cameroon, Indonesia, PNG, Tanzania and Peru, more actors disagreed than agreed with the stance that REDD+ accounting and payments should go through the national government. Government agencies were again strongly divided on this issue. Once more, Tanzania stood out in this; answers of Tanzanian government agencies ranged from strongly disagree to strongly agree, though the most powerful government actors were in favor of a national system for REDD+ accounting (see also Rantala and Di Gregorio, 2014).

Also views regarding how REDD+ should be financed (market-based or fund-based) were strongly divided. Across all countries, around 30% of the actors agreed that REDD+ schemes should only be financed through funds, while around 40% disagreed with this stance. There were also strong differences between countries. While in Nepal more than 70% of the actors agreed that REDD+ should only be financed through funds, in Peru, Indonesia and Cameroon nearly 60% of the actors disagreed with this stance. Similar to the previous two stances, government agencies in most countries were strongly divided in their answers to this stance. In Tanzania (again), as well as in Peru, answers among government agencies ranged from strongly disagree to strongly agree. Nepal was the only country where most government agencies agreed that REDD+ should only be financed through funds. Semi-structured interviews revealed virtually no discussion among policy actors of how to acquire market- or fund-based REDD+ finances. Interviewees were more concerned with how to use and allocate REDD+ payments than with how to acquire it or, related to the previous question, at what level to account for it. As one interviewee argued: “Receiving the money is not difficult, but payment is our headache”³². Another stated: “Giving money is the easy bit, it’s what’s to do with it”³³.

5.5 Storylines reflected in national REDD+ policy documents

This section analyzes which of the storylines identified in section 5.2 are reflected in the R-PPs and ER-PINs of the seven countries. Figure 5-5 at the end of this section gives an overview of the reflection of storylines in each of the countries’ R-PPs. We discuss each of the four questions in turn.

5.5.1 What should REDD+ achieve?

In section 5.4 we showed that the vast majority of policy actors in all seven countries agreed that REDD+ should also realize non-carbon benefits. There are, however, significant differences in how much importance R-PPs adhere to non-carbon benefits. While all R-PPs outline plans to monitor or provide information on safeguards, only

32 Representative of the Forest Protection Department, Vietnam. Interview 14-09-2011, Lam Dong.

33 Representative of a forest industry association, PNG. Interview 2012, Port Moresby.

few R-PPs contain detailed strategies to also measure, report and verify non-carbon benefits.

Papua New Guinea places least emphasis on non-carbon benefits in its R-PP. This is salient considering that it is the country where the highest percentage of policy actors (including the four most powerful government agencies) strongly agreed that REDD+ should also generate non-carbon benefits. PNG's R-PP frames REDD+ as an important contribution to "PNG's long standing commitment in addressing global climate change" (R-PP PNG, 2013, p. 7). Safeguards are deemed necessary to avoid "endanger[ing] the objectives of REDD+ activities" (p. 63). Plans to develop safeguard policies and a safeguard information system are relatively detailed. PNG's R-PP does not, however, contain a detailed strategy to measure, report and verify non-carbon benefits. We therefore argue that PNG's R-PP reflects the safeguards storyline, both in its framing of REDD+ and in its proposed MRV system.

In contrast to PNG's, Cameroon's R-PP most strongly emphasizes the non-carbon benefits of REDD+. Cameroon's R-PP frames REDD+ as a "development tool that must help the country achieve [its] sustainable development objective" (R-PP Cameroon, 2013, p. 1). To realize this vision, a special unit for "Strategic Environmental and Social Evaluation" is to evaluate and monitor the realization of both carbon and non-carbon benefits. REDD+ pilot projects in Cameroon are required to contribute to rather than only safeguard environmental, social and governance co-benefits (see also Dkamela, 2011). Cameroon's R-PP thus strongly reflects the co-benefits storyline by framing as well as planning to operationalize REDD+ as a tool to generate non-carbon benefits.

The R-PPs of Nepal, Tanzania, Vietnam and Indonesia also reflect the co-benefits storyline in their framing of REDD+, though less strongly than Cameroon. These countries frame carbon and non-carbon benefits as equally important (see also Pham et al., 2012). Their R-PPs envision a cross-sectoral approach to integrate their REDD+ strategies with other policies, most notably development and poverty reduction strategies. In terms of their plans to monitor carbon and non-carbon benefits, however, there are significant differences between the four countries.

Nepal's R-PP contains detailed plans to operationalize the unanimous view among Nepalese policy actors that REDD+ should also generate non-carbon benefits. Nepal's R-PP is one of the few that outlines comprehensive baseline studies for non-carbon values and detailed strategies to develop MRV systems both for safeguarding and enhancing non-carbon benefits. Nepal even frames itself as an "early pilot country for REDD+ Social and Environmental Standards" (ER-PIN Nepal, 2014, p. 50). Nepal's R-PP frames the World Bank's mandatory Strategic Environmental and Social Assessment (SESA) framework³⁴ as a tool to achieve Nepal's poverty reduction strategy.

34 To be eligible for FCPF funding, all countries are required to develop and implement Strategic Environmental and Social Assessments (SESAs) in order to comply with World Bank safeguard policies.

In contrast, Vietnam's R-PP largely frames SESA as a framework that enables necessary compliance with World Bank policies to safeguard (rather than also contribute to) non-carbon benefits.

Tanzania's and Indonesia's R-PPs contain the least detailed strategies for the measurement, reporting and verification of non-carbon benefits (see also Indrarto et al., 2012; Jagger et al., 2014). Though Tanzania has served as pilot for REDD+ social and environmental standards, neither its R-PP, nor its national REDD+ strategy outline detailed plans to develop safeguards or operationalize non-carbon benefits for REDD+ (Jagger et al., 2014).

The ER-PINs of both Vietnam and Indonesia provide more detailed plans on how to measure non-carbon benefits, listing specific indicators in the mandatory section on social and environmental benefits. Hence, with the development of their ER-PINs, the differences between both countries' proposed non-carbon MRV systems have decreased compared to, for instance, Nepal (see also Astuti and McGregor, 2015).

Like PNG, Peru's R-PP frames REDD+ primarily as a climate change mitigation option (see also Piu and Menton, 2014; White, 2014). SESA is framed as a means to ensure that "R-PP components have the least possible impact in social and environmental terms" (R-PP Peru, 2011, p. 102). While safeguard indicators are identified, an MRV system for non-carbon benefits is not outlined in Peru's R-PP. Despite this, Peru is one of the few countries that mention ideas to promote rather than only monitor and safeguard non-carbon benefits. These ideas include prioritizing areas for REDD+ implementation where non-carbon benefits can be realized (R-PP Peru, 2011), and enabling diversified prices for carbon credits depending on the generation of non-carbon benefits, so-called "conventional", "gourmet" and "extra gourmet" credits (ER-PIN Peru, 2014, p. 69). Hence, while in the framing of objectives Peru's R-PP reflects the safeguards storyline, the planned operationalization of these objectives sits a little closer to the co-benefits storyline.

5.5.2 Who should monitor REDD+ outcomes?

Section 5.4 showed that in almost all countries, more actors disagreed than agreed with the stance that scientific experts are the best and final authority on REDD+. Almost all countries outline strategies to involve not only technical experts but also local communities in the execution as well as in the design of REDD+ MRV systems (see also Angelsen et al., 2012). There are, however, significant differences in how far-reaching R-PPs are with regard to involving local communities in the proposed MRV systems.

PNG is again rather exceptional; it is the only country that does not outline any strategy to involve local communities in MRV design and/or execution. The largest part of PNG's REDD+ funding is allocated to the development of an "IPCC³⁵-compliant

35 IPCC stands for the Intergovernmental Panel on Climate Change, a scientific intergovernmental body under the UNFCCC. It develops among others so-called "good practice guidelines" for measuring, reporting and verifying REDD+ outcomes.

MRV system” (R-PP PNG, 2013, p. 85) of which the quality will be checked by internal and external (UNFCCC) experts based on the principles of the IPCC good practice guidelines³⁶. PNG’s R-PP does not mention the involvement of local communities in the development of this system. It seeks to “address the safeguards on the full and effective participation of (...) indigenous peoples and local communities” merely through an open access web-portal (R-PP PNG, 2013, p. 100). Hence, we conclude that PNG’s R-PP reflects the expert-based storyline in its plans to design and execute the country’s REDD+ MRV system.

Indonesia’s R-PP states that local and indigenous communities will play an “enormously important role” in the implementation of REDD+, using traditional knowledge as the “basis” for the development of its REDD+ strategy (R-PP Indonesia, 2009, p. 26). However, the document does not contain any details on how to involve local communities in MRV design or execution. The ER-PIN briefly states that options for participatory monitoring will be “explore[d]” and engagement of local communities “encouraged” “where appropriate” (ER-PIN Indonesia, 2014, p. 41), but provides no details on how to do so. Indonesia therefore only weakly reflects the collaboration storyline.

In contrast to the R-PPs by PNG and Indonesia, the other five R-PPs we analyzed do contain detailed strategies to involve local communities and other stakeholders in the design and/or execution of REDD+ MRV, thereby reflecting the collaboration storyline. Cameroon, Nepal, Vietnam, Peru and, albeit with less detail, Tanzania, outline plans to establish stakeholder committees to involve non-governmental organizations, community-based organizations, and/or local or indigenous communities in the development of their MRV systems. Peru, Cameroon and Nepal also plan to involve these committees in the development of reference scenarios and non-carbon MRV systems, and intend to draw on local knowledge in developing their REDD+ strategy.

Besides involving local communities in the design of their MRV system, Cameroon, Nepal, Vietnam and, again to a lesser extent, Tanzania, also outline plans to involve local communities in the monitoring itself. The R-PPs of all four countries mention plans to develop participatory methods, participatory protocols and/or principles for stakeholder participation in the monitoring of REDD+ outcomes. Vietnam’s R-PP is most detailed on this; it plans to develop protocols to allow forest owners to submit data to its national MRV system (see also Pham et al., 2012). Also Nepal seeks to develop a uniform approach to participatory monitoring for REDD+; its R-PP intends to draw on experiences with participatory forest monitoring in existing community-based forest management systems. Both Nepal and Tanzania have undertaken pilot activities to develop participatory REDD+ MRV methods (see also Pratihast et al., 2013). Cameroon has no such experience³⁷ (Dkamela, 2011; Pratihast et al., 2013), but

36 These are: transparency, consistency, comparability, completeness, and accuracy.

37 Cameroon does, however, have experience with participatory forest monitoring.

envision a “primary role” for local and indigenous communities in the validation and monitoring of its REDD+ MRV system as well as in the collection of data that will feed into this system (R-PP Cameroon, 2013, p. 97).

Peru’s R-PP strongly emphasizes communities’ involvement and the use of local knowledge in the design of the country’s national REDD+ MRV system. Though participatory monitoring is briefly mentioned, no plans are outlined for this, not even in Peru’s ER-PIN (see also White, 2014). The monitoring of non-carbon benefits is said to be “a technical task that will be carried out by institutions specializing in this subject” (R-PP Peru, 2011, p. 130). Hence, while Peru’s R-PP reflects the collaboration storyline in the design of its MRV system, it reflects the expert-based devolution storyline in the planned execution of this system.

5.5.3 At what level should REDD+ be governed?

Section 5.4 showed that the stance related to the level at which REDD+ should be governed yielded the most divergent answers both within and between countries. Many countries’ R-PPs did not outline full-fledged plans for REDD+ accounting and payment distribution (see also Angelsen et al., 2012). All countries make at least some reference to sub-national accounting, with almost all exemplifying elements of the nested storyline in their proposed reference levels. However, with the exception of Peru, countries advocating a nested approach all envision a long-term transition to national accounting, and most countries assume that REDD+ payments will be handled and distributed only at the national level (see also Pham et al., 2013).

Peru’s R-PP is by far the most explicit in advocating the nested approach in its reference levels and benefit distribution system, despite the fact that some of the most powerful actors in Peru agreed that REDD+ payments should go through the national government. Peru calls itself a “pioneer in proposing a nested approach” (R-PP Peru, 2011, p. 84). According to its R-PP, Peru’s national reference scenario will be developed in line with its decentralization process, through aggregation of regional reference scenarios. These will be built in collaboration with regional REDD+ roundtables, taking account of “the unique background and features of each region” (R-PP Peru, 2011, p. 109).

Nepal and Vietnam also envision a nested approach in developing their reference levels. Nepal’s R-PP plans to develop a monitoring and reporting system to integrate national, regional, district and management unit levels, and the country’s ER-PIN outlines several sub-national reference levels. Vietnam’s R-PP and ER-PIN contain plans to develop sub-national reference levels based on eco-regions, yet aim to eventually transition to a national accounting system.

Compared to the other countries, Papua New Guinea, Indonesia and Tanzania put more emphasis on national than on sub-national reference levels. As to PNG, while its R-PP mentions the development of a national reference level as a necessity, no mention

is made of the development of sub-national reference levels. PNG's R-PP states that any existing sub-national REDD+ activities or reference levels will need to be "reconciled" with its national reference level (R-PP PNG, 2013, p. 84). In the case of Tanzania, though its R-PP mentions both national and sub-national reference levels, no details are provided on how sub-national reference levels will be developed, nor on how these may feed into the proposed national carbon accounting system. Indonesia aims to be an example country for the nested approach, yet its R-PP only mentions the development of a national carbon accounting system with sub-national reference levels "wherever needed" (R-PP Indonesia, 2009, p. 36).

In terms of the level at which REDD+ payments are handled and distributed, Cameroon, PNG, Indonesia and Tanzania all envision a national benefit distribution system. Cameroon's R-PP states that "carbon in Cameroon belongs to the State, which is its manager" (R-PP Cameroon, 2013, p. 72), and that "the State will play an essential role in the management of carbon credits at the national level" (p. 74), but does not provide much detail on how this will be done (see also Pham et al., 2013). Also Indonesia's R-PP and ER-PIN envision a national registry and payment distribution mechanism. According to PNG's R-PP, a national board of directors will provide guidelines and goals for benefit distribution, and allocate funds to sub-national entities. Tanzania plans to develop a national REDD+ trust fund with possibility for direct payments to individuals, but does not provide any details on the latter (see also Angelsen et al., 2012; Pham et al., 2013).

As to Nepal, its R-PP contains plans to involve stakeholder committees in defining benefit-sharing at both national and sub-national levels, but both the country's R-PP and ER-PIN state that the most appropriate level for payment distribution is yet to be determined (see also Pham et al., 2013). Vietnam and Peru both envision a nested approach in distributing REDD+ payments. Peru again stands out in its plans with the most decentralized approach, its R-PP coming close to the sub-national storyline. Though reporting will be done nationally, separate accounting of emission reductions should be possible at all levels. Peru's R-PP states that "the future international rules of the REDD+ mechanism should permit the accounting of sub-national emissions and not make access to international incentives by sub-national initiatives dependent on reductions of national emissions" (R-PP Peru, 2011, p. 99). Peru's ER-PIN, however, states that in the long run benefits will be mediated by a single national fund. As to Vietnam, its R-PP and ER-PIN plan (albeit without much detail) a distribution mechanism whereby the national government will receive and distribute REDD+ payments to provincial and later also to district funds, which in turn will "receive, manage, and make use" of these payments (ER-PIN Vietnam, 2014, p. 33; see also Pham et al., 2013).

Important to note is that the level at which REDD+ payments are distributed does not necessarily determine which actors will receive REDD+ benefits. Most R-PPs, even the ones that envision a national distribution mechanism, acknowledge that REDD+

benefits need to be allocated to local people who live in REDD+ project areas. In developing benefit-sharing mechanisms, for example, Nepal, Indonesia, Vietnam and Tanzania plan to draw on experiences with community-based forest management, or in the case of Indonesia with community-based benefit-sharing in the country's poverty reduction strategy.

5.5.4 How should REDD+ be financed?

Of the four questions we analyzed, the question as to how REDD+ should be financed is given least attention in the countries' R-PPs. The ER-PINs of the four countries we analyzed provide little more detail on this issue (see also Minang et al., 2014). While some R-PPs make reference to sources of funding, most R-PPs do not contain a vision, let alone a strategy, on how to secure REDD+ financing in the long run. Though more than 30% of the policy actors across the seven countries agreed that REDD+ should only be financed through funds, none of the countries' R-PPs envision or plan to prepare for a REDD+ mechanism that is entirely fund-based. Most R-PPs implicitly or explicitly refer to a market-based REDD+ mechanism.

The countries with the strongest vision on how to finance REDD+, PNG and most notably Peru, both envision and prepare for a market-based REDD+ mechanism. Peru's R-PP takes an "approach that promotes public and private investment in forest carbon trade" (R-PP Peru, 2011, p. 11), and aims to reduce market uncertainties that may prevent such investments. It also states that most of Peru's early REDD+ initiatives are flexible enough to become part of a "possible future regulated market" (R-PP Peru, 2011, p. 74). Peru's ER-PIN even considers developing a national carbon market and envisions a market-based approach to facilitate the generation of non-carbon benefits through the earlier-mentioned "conventional", "gourmet" and "extra gourmet" carbon credits (ER-PIN Peru, 2014, p. 68-69). PNG intends to participate in a UNFCCC compliance carbon market with participation of the private sector. The country plans to revise its current land tenure system to support this envisioned market-based approach to REDD+ (see also Babon and Gowae, 2013).

Also Indonesia, Nepal and Tanzania seem to prepare for a market-based REDD+ mechanism (see also Indrarto et al., 2012). Their R-PPs mention measures such as exploring potential carbon markets, enhancing confidence and credibility in the international carbon market, and developing and reviewing legislation and institutional frameworks for forest carbon trade. None of the countries' R-PPs (or ER-PINs), however, provide much detail on these measures.

In section 5.4 we showed that Cameroon was the country with the highest percentage of policy actors disagreeing that REDD+ should only be financed through funds. Cameroon's R-PP is the only one that (though weakly) reflects the hybrid storyline by preparing for both market- and fund-based finances. Cameroon's R-PP mentions the need to mobilize expertise not only on carbon markets, but also on the

procedures of donors and fund-raising. According to Dkamela (2011), the preferred funding mechanism in Cameroon is subsidies, though Cameroon does envision a long-term transition to the carbon market.

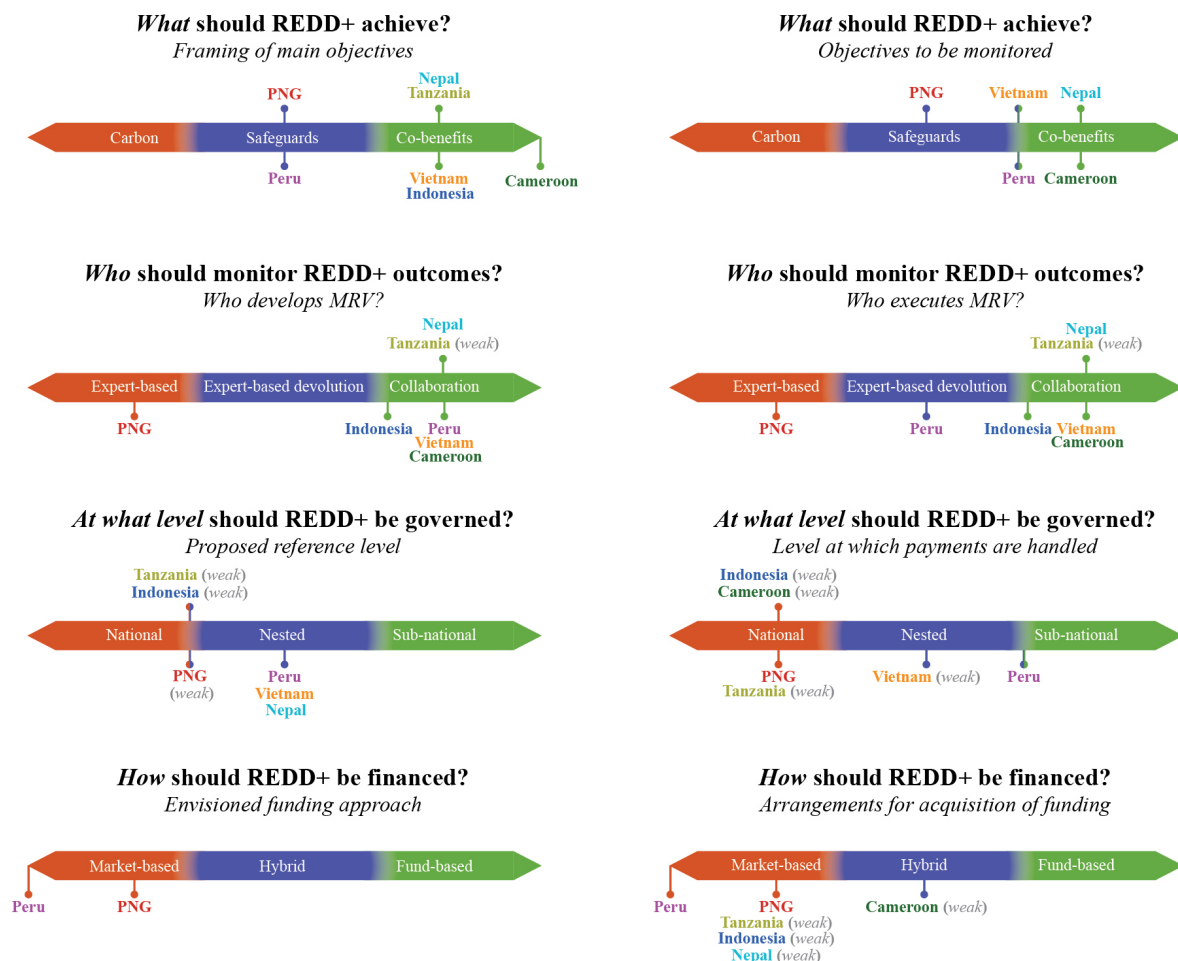


Figure 5-5: Overview of storylines reflected in the countries' R-PPs, distinguishing between the two indicators per question identified in section 5.2. N.B. the R-PPs of those countries that are missing in the figure did not provide sufficient detail to determine which storyline these reflected (source: compiled by the authors based on an analysis of the R-PPs).

5.6 Discussion

What are the possible implications of the prominence of different REDD+ storylines for national forest governance in the seven countries? We try to answer this question by assessing the likelihood that REDD+ stimulates the earlier-mentioned “carbonization”,

“technicalization”, “centralization” and “marketization” of forest governance, based on the evidence discussed above and existing literature.

Regarding the concern that REDD+ may lead to a *carbonization* of forest governance, we showed that almost all policy actors agreed that REDD+ should also realize non-carbon benefits such as poverty reduction and biodiversity conservation. In line with this, most R-PPs frame REDD+ as an important mechanism to not only mitigate climate change, but also generate non-carbon benefits, often proposing an integrated policy approach to realize this. However, only Cameroon and Nepal outline relatively detailed plans to monitor besides carbon also non-carbon benefits (see Davis and Daviet 2010 for similar observations in other countries). Our analysis of the semi-structured interviews similarly showed that though many policy actors stressed the importance of non-carbon benefits, only few actors mentioned the monitoring of non-carbon benefits. This could indicate a more rhetorical nature of such statements, with limited translation into actual policy, especially since what is being monitored largely determines what is taken into account (Gupta et al., 2012). Most REDD+ countries have a rather limited capacity to monitor environmental and social (i.e. non-carbon) benefits and safeguards, even those countries with relatively advanced forest (carbon) monitoring systems such as Indonesia and Tanzania (Angelsen et al., 2012; Jagger et al., 2014). Hence, a carbonization of forest governance remains a possibility in the five countries that did not outline plans to develop systems to monitor non-carbon benefits. This article also showed, however, that countries in later stages of REDD+ readiness, such as Vietnam and Indonesia, did make progress toward developing more detailed plans for non-carbon and safeguard monitoring systems.

With regard to the concern that REDD+ may stimulate a *technicalization* of forest governance, we showed that all R-PPs, except PNG's, contain (detailed) plans to involve local communities in the execution and/or design of REDD+ MRV systems. In contrast, many have argued that technical aspects of MRV systems dominate national REDD+ policy developments, and that this inhibits the involvement of those who do not possess technical expertise, even in countries with a long history of community-based forestry such as Nepal (Bushley and Khatri, 2013; Paudel and Karki, 2014; Astuti and McGregor, 2015). A number of studies show that even if countries plan to involve local communities in REDD+ monitoring, this does not necessarily translate into an operationalization of community-based monitoring in REDD+ MRV systems (Vijge and Gupta, 2014; Skutsch et al., 2014; Paudel et al., 2013; Ojha et al., 2013; Pham et al., 2012). Though some countries have experience with community-based monitoring, such monitoring has not been nested effectively within national level MRV systems in any one country (Pratihast et al., 2013). Additional analyses of current and planned institutional arrangements would therefore be needed to assess whether the plans for community-based monitoring in six of the seven countries we analyzed are likely to be implemented.

Our analysis showed that the concern that REDD+ may lead to a *centralization* of

forest governance is, to some extent, justified for those aspects that we focused on³⁸. Though many countries still need to further develop their reference levels and benefit distribution systems, we showed that those countries that plan to make use of national as well as sub-national reference levels - e.g. by advocating the nested approach - only allow national REDD+ accounting, with Peru being the only exception. This is in line with the idea that the nested approach is an interim solution in the process toward a national accounting system (see also Rantala and Di Gregorio, 2014; Angelsen et al., 2009). Most countries allow REDD+ payments to be handled and distributed only at the national level. Related to this, a study of 32 REDD+ readiness proposals shows that countries structurally fail to discuss how local institutions might play a role in REDD+ benefit distribution (Williams, 2013). Whether Peru - the country that most strongly advocates the nested approach - will manage to put its decentralization rhetoric into practice remains to be seen. Peru's weak governance capacity at the sub-national level poses significant challenges to the implementation of a decentralized or nested approach to REDD+ (Piu and Menton, 2014; White, 2014). Such challenges have also been identified in the case of PNG, Vietnam, Tanzania, Indonesia, and even Nepal with its long history of decentralized forest governance (Kashwan, 2015; Babon and Gowae, 2013; Murdiyarso et al., 2012; Jagger et al., 2014; Bushley, 2014; Pham et al., 2013).

Finally, the question as to whether REDD+ stimulates a *marketization* of forest governance remains unanswered. While most countries (implicitly or explicitly) assume a market-based REDD+ mechanism, only two of the R-PPs we analyzed clearly indicate what type of REDD+ funding they envision. The R-PPs contain scant consideration of how to prepare for acquisition of such funding. Minang et al. (2014) similarly show that there is very little progress on REDD+ financing mechanisms in REDD+ readiness processes in Cameroon, Indonesia, Peru and Vietnam. Our analysis of the semi-structured interviews also revealed that only few policy actors discussed their preferred funding mechanism for REDD+, with virtually no discussion of institutional arrangements to stimulate the acquisition of REDD+ funding. Given that large uncertainty continues to exist in global REDD+ policy debates on where REDD+ funding will come from and in what form (Gupta et al., 2015), most countries seem to take a wait-and-see approach to this issue. This is salient given that the bulk of REDD+ funding is spent on REDD+ readiness plans such as R-PPs and ER-PINs with the aim to prepare countries for results-based payments (Streck, 2012).

5.7 Conclusion

This article showed that though REDD+ is often framed as a mechanism to realize both carbon and non-carbon benefits, only Cameroon and Nepal translated this storyline

38 Other studies may reveal whether the same conclusion can be drawn when looking at other aspects of centralized versus decentralized governance, such as the level at which decisions regarding REDD+ are made.

into plans to monitor carbon *as well as* non-carbon outcomes of REDD+. We therefore argued that a carbonization of forest governance remains a possibility, though we also showed that countries in later stages of REDD+ readiness, such as Vietnam, Indonesia, Nepal and Peru, did outline more detailed policies for safeguarding or promoting non-carbon values of forests. The storyline to involve local communities in REDD+ monitoring has been translated into sometimes rather concrete plans. Studies show, however, only sporadic execution of these plans to date. We argued that concerns about a centralization of governance are to some extent justified given the emphasis on accounting and managing REDD+ payments at the national level and the lack of more sub-national institutional design elements in the R-PPs. We argue that if countries want to avoid a recentralization of forest governance, one way forward could be to put their participatory monitoring rhetoric into practice and direct their capacity-building efforts at sub-national levels to enable the management of results-based payments at those levels. This may also help build (often neglected) linkages between national readiness activities and sub-national demonstration or pilot activities (Peters-Stanley et al., 2013). In order for such activities to be meaningful in the long run, however, countries would do well to develop more specific funding strategies to acquire and prepare for results-based REDD+ payments.

CHAPTER 6

Conclusion

6.1 Introduction

In the past decade, a major part of the global policy agenda on combatting worldwide deforestation has been concerned with establishing the link between forest and climate governance. Governing forests for their carbon content is what I called a “carbonization” of forest governance. Reducing Emissions from Deforestation and forest Degradation (REDD+) is the most dominant and far-reaching policy instrument that embodies such a carbonization of forest governance. Never before have forests been governed for their carbon content on such a large scale. In the fifty years of international forest governance, the attention and resources given to REDD+ are unprecedented. In the introduction to this thesis I showed that carbonization through REDD+ might have positive as well as adverse consequences. While REDD+ may be(come) a win-win solution to (cost-) effectively reduce both climate change and global deforestation, governing forests for their carbon content may also pose threats to non-carbon forest services such as biodiversity conservation and the provision of local livelihoods. Since REDD+’s coming into existence, its broadened scope has significantly increased what is at stake and who has a stake in the process of carbonizing forest governance, making a study of its consequences ever more timely and pertinent.

The aim of this thesis is to analyze the consequences of REDD+ for multilevel forest governance. In order to reach this aim, the preceding chapters analyzed how a carbonization of forest governance manifests itself by looking at how REDD+ is being framed and operationalized in different contexts and at different levels of governance. In analyzing the consequences of carbonization, this thesis focuses on four dimensions of multilevel forest governance related to the complexity of the forest governance domain; the sites of authority in forest governance; the production and use of knowledge in forest governance; and the use of policy instruments. Drawing on the empirical findings, the second research objective of this thesis is to provide theoretical and empirical insights into the changing nature of environmental governance more generally. In particular, I assess whether and how a homogenization of environmental governance might be underway.

As such, the research questions that guided the research are as follows:

- 1. How does the carbonization of forest governance manifest itself at different levels, and with what consequences for multilevel forest governance?***
- 2. What does this analysis of the consequences of carbonization reveal about the prospects of a homogenization of environmental governance?***

The rest of this conclusion is structured as follows. The next section draws on the empirical findings in this thesis to answer the first research question. It covers

analyses of policy debates and institutional developments at the global, national, and project implementation level. Section 6.3 assesses the implications of the findings for the changing nature of environmental governance, particularly in the context of globalization, thereby answering the second research question of this thesis. Section 6.4 reflects on the external validity of the findings and critically considers the methods used in this thesis. The final section reflects on what a decade of REDD+ has yielded so far, and provides a future outlook on REDD+.

6.2 Carbonizing forest governance and its consequences

6.2.1 Carbonization at the global level

In analyzing how and with what consequences carbonization manifests itself at the global level, chapter 2 analyzed UNFCCC policy debates and developments around REDD+ measuring, reporting and verification (MRV) systems.

Complexity of the governance domain

Regarding the consequences of carbonization for the complexity of the governance domain, chapter 2 showed that UNFCCC policy debates and developments around MRV systems are primarily concerned with making forest carbon equivalent with other carbon units for exchange purposes. As such, in the development of REDD+ MRV systems, the focus lies mainly on monitoring carbon rather than multiple carbon and non-carbon benefits. In recent years, the UNFCCC and other international institutions engaged in REDD+ increasingly pay attention to safeguards. Such attention is, however, mainly restricted to the prevention of negative impacts on non-carbon benefits rather than also the generation of such benefits (chapter 2 and 4). Debates within the UNFCCC mainly center around safeguard *information* rather than *monitoring* systems, representing a focus on providing safeguard inventories rather than monitoring or measuring safeguards (chapter 2). The monitoring of safeguards (still) receives much less attention than carbon monitoring, and guidelines for safeguard provisions are rather generic, though one of the reasons could (also) be that addressing and respecting safeguards is considered primarily a national affair due to concerns about national sovereignty (chapter 2, see also Visseren-Hamakers et al., 2012a).

Chapter 2 showed that despite the rather simplified focus on carbon benefits and (to a lesser extent) safeguards in UNFCCC debates and policy developments, carbonizing forest governance does by no means result in a simple global governance domain. The broadened scope of REDD+ means a focus on not only avoiding deforestation, but on the wide range of forest-related activities that are now included in REDD+, including reductions in forest degradation, the sustainable management of forests, and the enhancement of forest carbon stocks. The broadened scope means that there is need not only to monitor changes in forest areas, but also to measure changes in forest carbon stock in different types of forests and from different carbon pools. This

has led to an increase in institutional and technical challenges due to the significantly expanded scope of REDD+ MRV systems, as well as a resulting intensification of the international scholarly and political debates on the topic (see also Gupta et al., 2015; Visseren-Hamakers et al., 2012a, b).

Sites of authority

Regarding the consequences of carbonization for the sites of authority in forest governance, chapter 2 showed that UNFCCC policy debates and developments around REDD+ MRV systems primarily aim at providing guidelines to build national monitoring systems that enable national governments to receive results-based payments and exchange carbon. This focus on national level state-based capacity-building features prominently not only within the UNFCCC, but also among other international institutions engaged in REDD+. To date, the largest part of REDD+ funding has been allocated to readiness programs to provide support to national governments, including national policy support and capacity-building for, among others, national forest monitoring and MRV systems (Streck, 2012). Though some have argued that the nested approach³⁹ currently features prominently in global policy debates and developments on REDD+ (see e.g. Pistorius, 2012), chapter 2 showed that these debates and developments frame national state agencies as the key agents in the operationalization and institutionalization of REDD+. Thus, based on an analysis of the global policy debates and developments, I conclude that a centralization of authority within national state agencies may well be a consequence of carbonizing forest governance. As chapter 2 also argued, however, given the struggles between the national state and a vocal civil society active in the field of REDD+, the jury is still out on who will be empowered in different contexts of REDD+ operationalization and implementation at the national and local level.

Production and use of knowledge

As to the consequences of carbonizing forest governance for the production and use of knowledge, accurate and verifiable data and access to technology are key in the rhetoric and practice of the UNFCCC and other international institutions engaged in REDD+. The many REDD+ readiness initiatives, for example, strongly focus on the development of (guidelines for) high-tech MRV (and safeguard information) systems, the improvement of access to technology, and technical and institutional capacity-building for MRV (chapter 2 and 4, see also Gupta et al., 2012). In such initiatives, accuracy, verifiability, transparency and comparability of carbon measurements are deemed crucial to be able to exchange forest carbon with other carbon units and/or pay for results-based finances. The same holds for UNFCCC debates, which strongly emphasize reliance on globally agreed high-tech methods, such as remote-sensing and

39 The nested approach combines national with sub-national level accounting (Angelsen et al., 2009).

satellite-based techniques. Though increasing attention is paid to community-based monitoring methods, most guidelines developed by the UNFCCC and its subsidiary bodies focus on high-tech methods rather than community-based monitoring approaches (chapter 2 and 4). Chapter 2 concludes that the strong focus in global policy debates and developments on expert-led MRV systems - which provide little opportunity and resources for community involvement - might well promote a technicalization of forest governance.

Use of policy instruments

Finally, regarding the consequences of carbonization for the use of policy instruments, chapter 2 showed that global policy debates on REDD+ focus on making countries ready for results-based finances to compensate for their forest-related carbon emission reductions. However, whether this should be done through international funds or markets is still undecided in global policy. This issue is part of the wider - and highly contentious - debate within the UNFCCC on whether, to what extent, and how global action on climate mitigation should rely on offset market mechanisms, and whether these should be extended to include forest carbon trading through REDD+. Partly because of disagreement within this debate, the issue of REDD+ financing has progressed much more slowly than the more technical components of REDD+, such as MRV systems. Indeed, there is still little consensus between donor and recipient countries on what REDD+ financing should cover and who (should) determine this (see also Gupta et al., 2015).

6.2.2 Carbonization at the national level

In order to analyze how and with what consequences carbonization manifests itself at the national level, this thesis drew on an in-depth case study of how REDD+ is framed in the Green India Mission, the lynchpin of India's national REDD+ strategy (chapter 3). In addition, the thesis relied on a cross-country comparative analysis of the prominence of discourses among national policy actors and in the REDD+ Readiness Preparation Proposals⁴⁰ of seven countries, namely Cameroon, Indonesia, Nepal, Papua New Guinea, Vietnam, Peru and Tanzania (chapter 5).

Complexity of the governance domain

With regard to the consequences of carbonization for the complexity of the national forest governance domain, there was a strong belief among national policy actors that REDD+ should generate carbon *as well as* non-carbon benefits such as biodiversity conservation and poverty reduction (chapter 3 and 5). Chapter 5 showed, however, that

40 In the remainder of this chapter, I will refer to these Readiness Preparation Proposals as REDD+ policy documents.

only few actors discussed the need to also monitor non-carbon benefits. Most REDD+ policy documents examined in this thesis frame REDD+ as a policy mechanism that is important to mitigate climate change *as well as* generate non-carbon benefits (chapter 3 and 5). Indeed, many countries propose a cross-sectoral approach to REDD+ by linking REDD+ policies with existing development and biodiversity policies and programs. In some countries, REDD+ is even *primarily* valued for its potential to generate non-carbon benefits. Cameroon, for example, frames REDD+ as a “development tool” that should help the country reach its sustainable development objective (chapter 5). India, on the other hand, emphasizes the potential of REDD+ to protect and enhance forest biodiversity and other ecosystem services, and frames carbon benefits as an “add-on” rather than the main objective of REDD+ (chapter 3). Papua New Guinea is rather exceptional in terms of how its R-PP frames and plans to operationalize REDD+. The country’s REDD+ policy document frames REDD+ primarily as a climate mitigation strategy, thereby encouraging a simplified focus on carbon benefits, albeit with significant attention to safeguards and their monitoring.

Despite the rhetoric among many countries to realize synergistic forest governance rather than a simplified focus on carbon benefits, only few countries (Nepal and Cameroon) have developed comprehensive plans for carbon *as well as* non-carbon monitoring systems at the national level (chapter 3 and 5). The Green India Mission, for example, does not clarify how non-carbon benefits such as biodiversity conservation and enhancement are to be monitored. It provides no information on the criteria and indicators to be used, nor on the actors to be involved in or the amount of funding to be allocated for non-carbon monitoring. Instead, the Green India Mission seems based on the assumption that the enhancement of forest carbon stock will automatically generate non-carbon benefits (chapter 3). Peru is one of the few countries studied in this thesis that provides details on how it aims to *promote* the generation of non-carbon benefits rather than to simply *prevent* negative impacts. Though chapter 5 showed that countries in later stages of REDD+ readiness outline more developed plans for non-carbon and safeguard information or monitoring systems, most countries (still) have very limited capacity to monitor non-carbon benefits and safeguards. This is even the case in countries with relatively advanced forest monitoring systems such as India, Tanzania and Indonesia (chapter 3 and 5). Despite India’s claim to be in phase 3 of REDD+ readiness, for example, the country has little experience with monitoring forest services other than forest stock, such as forest biodiversity and local communities’ dependence on forests for their livelihood (chapter 3). I conclude that a simplification remains a possible consequence of carbonizing forest governance at the national level for those countries that did not outline comprehensive plans to monitor non-carbon benefits, despite the holistic forest governance rhetoric in many countries.

Sites of authority

To analyze the consequences of carbonization for the sites of authority in national forest governance, chapter 3 studied where - i.e. at what level - decision-making authority rests to operationalize and implement REDD+. Chapter 5, on the other hand, focused on where - i.e. at what level - authority rests to account for and distribute REDD+ payments⁴¹.

Chapter 5 showed that almost all REDD+ policy documents under study show elements of the nested approach, with all documents making at least some reference to sub-national accounting. However, with the exception of Peru, all documents advocating the nested approach consider this as an interim solution in the process toward developing a national level state-based accounting system. In the development of their national REDD+ strategies, most countries under study plan to centralize authority to manage and distribute REDD+ payments within a national state agency rather than allocating this task to state and/or non-state actors at the sub-national or project level.

Notwithstanding this, most REDD+ policy documents examined in this thesis, including the Green India Mission, envision the allocation of REDD+ payments to local communities, thereby planning to draw on experiences with community-based (forest) management schemes. Such plans, however, remain relatively vague and may be challenging to implement, given that many developing countries currently lack governance and enforcement capacity at the sub-national level to account for, receive and distribute REDD+ payments (chapter 3 and 5). Chapter 3 showed that this is even the case in India, whose forest governance is often considered one of the best examples of decentralized forest management in the world. In its Green India Mission, India plans to build on and even improve its current decentralized forest policies and practices, viewing these as strong safeguards to prevent REDD+ from promoting a centralization of forest governance. How this will be done, however, is not clarified. Experiences with the implementation of such forest policies and practices show varying degrees of decentralization and empowerment of local communities. In the distribution of revenues from Indian forest management, for example, revenues often remain with State Forest Departments, despite strong requirements and mandatory schemes to share revenues with local communities. This example suggests that clear and well-functioning institutional arrangements and enforcement mechanisms are crucial in realizing countries' policy ambitions to devolve authority from national to sub-national agencies or share authority with non-state actors, such as local communities.

Production and use of knowledge

As to the consequences of carbonization for the production and use of knowledge in national forest governance, I studied who is involved in the design and execution of

41 For an explanation of these choices, see section 6.4.2.

national MRV systems and what community-based or high-tech methods will be relied on in these systems. Many authors argue that national policy developments around REDD+ primarily focus on technical aspects of MRV systems (e.g. Bushley and Khatri, 2013; Paudel and Karki, 2014; see also Astuti and McGregor, 2015), thereby deferring decision-making on REDD+ to the scientific realm. In contrast, this thesis showed that in almost all countries under study - again with the exception of Papua New Guinea - REDD+ policy documents and national policy actors pay significant attention to the involvement of local communities in the design and execution of REDD+ MRV systems (chapter 3 and 5). Five of the seven REDD+ policy documents under study in chapter 5 contain detailed plans to draw on local knowledge and to establish and involve stakeholder committees in the development of national MRV systems. These five REDD+ policy documents also contain relatively detailed plans for community-based monitoring.

However, many countries do not (yet) have adequate institutional arrangements to implement such plans. Though some countries have experience with piloting community-based monitoring, such monitoring has not yet been effectively integrated within national MRV systems in any one country (chapter 5). Chapter 3 showed that even India with its advanced forest monitoring system and its long history of decentralized forest governance does not have sufficient institutional arrangements to implement its community-based monitoring plans. The Green India Mission envisions monitoring by local communities to become the basis of REDD+ monitoring, combined with high-tech monitoring by government agencies. However, forest monitoring procedures and methods in India are often complex and inaccessible to local communities, and government agencies have little to no experience with community-based monitoring. Based on the findings of chapter 3 and 5, I conclude that without significant capacity-building among local communities and government agencies, the community-based monitoring plans and the resulting diversity in the production and use of knowledge are unlikely to be realized in the countries under study.

Use of policy instruments

Finally, regarding the consequences of carbonization for the use of policy instruments in national forest governance, most REDD+ financing allocated to date is public fund-based, though this is mainly spent on REDD+ readiness activities to prepare countries for the acquisition of results-based REDD+ finances. Most countries studied in chapter 5 implicitly or explicitly assume that such REDD+ finances will be derived through a global (compliance) carbon market in the long run. However, chapter 5 showed that there was strikingly little discussion of how to finance REDD+, both in national REDD+ policy documents and among national policy actors. This was even the case for countries in more advanced stages of REDD+ readiness, such as Indonesia, Vietnam, Nepal, Peru and India. Most REDD+ policy documents analyzed in this thesis do not contain any

vision or strategy on how to organize results-based finances, whether through fund- or market-based sources of finances (chapter 3 and 5). Countries studied in this thesis take a wait-and-see approach to the issue of REDD+ financing, anticipating the outcomes of global policy debates. This makes the consequences of carbonization for the use of policy instruments in national forest governance uncertain.

6.2.3 Carbonization at the project level

In analyzing how and with what consequences carbonization manifests itself at the project level, this thesis drew on an in-depth case study to analyze the prominence of discourses among stakeholders and in the design of the first and only REDD+ pilot project in India (chapter 4).

Complexity of the governance domain

With regard to the consequences of carbonization for the complexity of the forest governance domain at the project level, chapter 4 showed that non-carbon benefits are considered the prime objective of the project under study, both among project stakeholders and in project documents. Interestingly, project documents do not mention carbon sequestration as an objective of the project, nor did local project participants mention carbon sequestration as a motivation to be involved in the project. Rather, key motivations of local project participants to be involved in the project include the generation of non-carbon benefits such as the conservation and enhancement of forests and biodiversity, the improvement of local livelihoods, and the improvement of ecosystem services such as watersheds. The generation of carbon benefits is generally seen as compatible, synergistic, and even mutually reinforcing with the generation of non-carbon benefits. Studies reveal that the first Indian REDD+ project is not unique with respect to its emphasis on non-carbon objectives. Indeed, most REDD+ projects around the world focus primarily on the generation of non-carbon benefits. Like the project under study here, many projects existed as nature conservation or integrated conservation and development projects before REDD+ was introduced, making carbon sequestration an add-on rather than the core objective of these projects (Simonet et al., 2014). In these instances of REDD+ implementation, a carbonization of forest governance leads to an increased complexity of the forest governance domain by *adding* carbon benefits as an objective rather than promoting a simplified focus on carbon benefits alone.

Sites of authority

With regard to the consequences of carbonization for the sites of authority in project level forest governance, chapter 4 showed that local communities have a large role in the decision-making and implementation of the REDD+ project. Plan Vivo, a community-based voluntary carbon standard and the accreditation body of the REDD+ project,

allows (local) project managers to define and design REDD+ in accordance with local circumstances, by providing generic global guidelines that leave ample room for context-specific operationalization of REDD+. Plan Vivo standards were not developed by a central authority alone, but through a collaborative, bottom-up process based on experiences from a carbon forestry project. As such, in this specific instance of REDD+ implementation, carbonizing forest governance has led to a dispersion rather than a centralization of authority in the sense that with the introduction of REDD+, a wider variety of actors operating at the global and project level share authority to design the REDD+ project, including local communities, carbon forestry experts, a global carbon standard and (carbon) market actors. Though a number of equally decentralized REDD+ projects exist around the world, this project represented a distinct case due to the unique political arrangements in the project region and its accreditation by Plan Vivo, which explicitly distinguishes itself from more conventional carbon standards by devolving decision-making authority to the local level. This makes the generalizability of the findings regarding the consequences of carbonization for the sites of authority in project level forest governance rather limited.

Production and use of knowledge

Regarding the consequences of carbonization for the production and use of knowledge in forest governance, the case study of the first Indian REDD+ project showed that most project stakeholders recognize the knowledge and authority of both local communities and technical experts. Stakeholders consider the involvement of technical experts as an opportunity to build connections, knowledge and capacity among local communities, believing this would empower rather than disempower them. This is reflected in the project design and the project's institutional arrangements, which draw on both high-tech and community-based monitoring methods. Hence, in this specific case of REDD+ implementation, carbonization has led to the production and use of a diversity of knowledge rather than a technicalization of forest governance. The generalizability of these findings, however, may be limited to a number of specific community-based REDD+ projects and other Plan Vivo projects. Indeed, Plan Vivo projects, such as the one under study here, face heavy competition from other REDD+ projects that employ more rigorous or conventional carbon standards such as the Verified Carbon Standard (VCS). As such, Plan Vivo projects currently constitute a small niche in the (forest) carbon market.

Use of policy instruments

Finally, regarding the consequences of carbonization for the use of policy instruments, chapter 4 showed that the first Indian REDD+ project is designed to rely on both fund- and market-based sources of finance. Project stakeholders believe that the two types of finance can be combined and that acquisition of one type of finance can even stimulate

acquisition of the other type. Plan Vivo standards actively encourage REDD+ projects to rely on a wide range of market- and fund-based financial resources. In the project under study, carbon funding has been introduced as an additional funding approach in an already existing nature conservation project. Hence, in this specific instance of REDD+ implementation, carbonizing forest governance leads to a mix of fund-based and market-based financial instruments rather than a marketization of forest governance. These findings are not unique to projects accredited by Plan Vivo. Studies show that only few projects rely exclusively on the sale of carbon credits and typically combine market-based finances with other private and public funding. Indeed, for many REDD+ projects around the world, the sale of carbon credits is a secondary or even tertiary source of finance (Simonet et al., 2014).

6.2.4 The diverse manifestations of carbonization and their consequences

Carbonization at different levels

In the introduction I posed the question as to whether REDD+ leads to a homogenization of forest governance, a concept coined by Scott (1998). I explained that such a homogenization might happen through a combination of simplification, centralization, technicalization and/or marketization of governance. In order to analyze whether such trends are happening, I analyzed how carbonization manifests itself - i.e. is being framed and operationalized - at the global, national and project implementation level.

Chapter 2 showed that at the global level - that is, within the UNFCCC, its subsidiary bodies and among other international institutions engaged in REDD+ - REDD+ manifests itself as a mechanism to compensate for forest-related carbon emission reductions with results-based payments. At this level, REDD+ is being operationalized through the development of guidelines for national level, state-based and expert-led MRV systems in order to make forest carbon equivalent with other carbon units for exchange purposes. As such, in UNFCCC policy debates and institutional developments around REDD+ MRV systems, REDD+ is being framed and operationalized as a carbon-centric, centralized and technocratic mechanism.

Though the guidelines provided by the UNFCCC and its subsidiary bodies are used to further operationalize REDD+ in national policies and strategies, chapter 3 and 5 showed that the manifestation of carbonization in many countries is, on a number of dimensions, very different from the dominant framing of REDD+ at the global level. Most countries under study in this thesis frame and plan to operationalize REDD+ as a mechanism to generate carbon *as well as* non-carbon benefits, and draw attention - at least on paper - to the use of local knowledge and the participation of local communities in REDD+ MRV systems. This is not, however, the case in all countries. The manifestation of REDD+ in Papua New Guinea, for example, is very different from that of many other countries. The country frames REDD+ as a mechanism with a simplified focus on carbon benefits, to be monitored by high-tech expert-led MRV

systems. Overall, chapter 5 showed significant diversity in the framing and planned operationalization of REDD+ at the national level.

The REDD+ project case study presented in chapter 4 showed that there are also large differences between the manifestations of carbonization at the global and the project implementation level. This specific instance of carbonization at the project implementation level does not at all resemble the dominant framing of REDD+ at the global level as a carbon-centric, centralized and technocratic mechanism. Rather, the project case study showed how carbonizing forest governance might become a vehicle to generate multiple carbon and non-carbon benefits, diversify the production and use of knowledge and the types of actors involved therein, disperse authority among actors involved in forest governance, and differentiate the reliance on market- and fund-based finances.

In short, I conclude that the carbonization of forest governance manifests itself differently at different levels of governance and in different contexts.

Carbonization: Not yet homogenization

Given these diverse manifestations of carbonization, I argue that a homogenization of forest governance is not yet a consequence of carbonization in all the instances of REDD+ operationalization and implementation studied in this thesis. The different manifestations of carbonization do not all result in a uniform manner in simplification, centralization, technicalization and marketization of forest governance. Hence, the notion that the UNFCCC exercises authority through, as Fogel (2004, p. 104) argues, “elite global discourses and practices around trees, forests and climate change”, with effects similar to the homogenization process identified by Scott (Scott, 1998; see also Gupta et al., 2012 for an overview of literature) is not (yet) discernible in all instances of REDD+ operationalization and implementation. The multiple manifestations of REDD+ at the national and project level may be inspired or guided by the UNFCCC, but not in the way Scott (1998) or Fogel (2004) described a homogenization or standardization of “subjects” (Scott, 1998, p. 349) at lower levels of governance.

How can we explain the fact that homogenization is not yet a consequence of carbonization in all instances of REDD+ governance? First of all, UNFCCC guidelines are deliberately left vague to allow for diverse ways to operationalize REDD+ in different countries. This has in large part to do with the importance countries attach to their sovereign authority to govern forests (see e.g. McDermott, 2014). As chapter 2 showed, UNFCCC discussions on REDD+ are characterized by high-level political conflicts over national sovereignty on issues such as safeguard provisions and an international verification system for REDD+. The in-depth analysis of REDD+ policy developments in India was also illustrative of the strong emphasis countries place on their national sovereignty to operationalize REDD+ into country-specific policies and strategies, with Indian REDD+ policy actors stating that they do not wish safeguard requirements to be

“imposed” on India by the UNFCCC (chapter 3).

Second, the fact that homogenization is not yet a consequence of carbonization in all instances of REDD+ governance can also be explained by looking at how the dominant framings of REDD+ within the UNFCCC are being counter-acted by actors at global, national and local levels (see also Busch and Jörgens, 2005; Litfin, 1997; Ford, 2003). Counter-narratives may become incorporated in global policies (Fogel, 2004; Jasanoff and Long Martello, 2004). This does not, however, only result in homogenization. For example, the carbon-centric focus of the UNFCCC negotiations roused widespread concerns about the impacts of REDD+ on non-carbon forest services. Such concerns became particularly strong after the addition of the plus-activities to REDD+, especially the inclusion of the enhancement of forest carbon stocks. As a reaction to such concerns, the UNFCCC developed a set of safeguard guidelines for REDD+. The broadening of REDD+'s scope within the UNFCCC negotiations, however, also resulted in a significant increase in the number and types of actors involved in REDD+, including outside the confines of the UNFCCC. International institutions and private certification schemes, for example, are currently operationalizing the notion of safeguards, with diverse indicators and systems to monitor these. As such, diversity exists among (potentially competing) global standards in the REDD+ governance realm, which are further operationalized at the national and project levels (see also Gupta et al., 2015 on the growing institutional and organizational complexity in global REDD+ governance).

A last, and probably most important, explanation is the persistent uncertainty on how and to what extent results-based finances for REDD+ will be generated. As chapter 5 showed, most countries assume that results-based finances for REDD+ will eventually be generated through a (compliance) carbon market. Within the UNFCCC, global guidelines are being developed to standardize (the measurement of) forest carbon units in order to enable their exchange, at the global level, with other carbon units. However, how exactly a global mechanism for the compensation of forest-related carbon emission reductions will look like - whether market- or fund-based, whether part of an offset mechanism or not - is still unclear. While global policy debates on this issue are stalling, countries are already building their technical, institutional and political capacity in preparation of results-based finances for REDD+, despite their lack of vision on how exactly to acquire such financing. As a result, countries operationalize REDD+ in country-specific ways - each with their own ideas of what REDD+ entails - rather than following a dominant global paradigm.

Carbonization: Homogenization in the long run?

While a homogenization is not a present consequence of REDD+, it may well be an outcome in the long run, and is highly contingent on whether large-scale REDD+ finances will be generated. As I explained, the dominant framing of REDD+ at the global level may well lead to a simplified focus on carbon - albeit in a complex governance domain

- as well as a technicalization of forest governance and a centralization of authority within national state agencies (chapter 2). As to the consequences of carbonizing forest governance at the national level, though many countries frame REDD+ as an important mechanism to achieve carbon *as well as* non-carbon benefits, most countries under study have not developed comprehensive plans to monitor and/or pay for such non-carbon benefits. Given the large capacity gap that most countries have in monitoring forest services other than forest stock, a *simplification* of forest governance is a possible consequence of carbonization in the long run, especially because what is being monitored largely determines what is taken into account (chapter 3 and 5; Gupta et al., 2012).

Regarding the production and use of knowledge, chapter 5 argued that though many countries have prepared detailed plans to draw on local knowledge and engage local communities in the design and execution of REDD+ MRV systems, most countries currently lack the capacity to implement such plans. Given this, a *technicalization* of forest governance is not an unlikely consequence of carbonization, particularly since national state agencies generally rely on guidelines by the UNFCCC and its subsidiary bodies for (mostly) expert-led MRV systems in operationalizing and implementing REDD+.

Finally, regarding the sites of authority, chapter 5 argued that the authority to account for, manage and distribute REDD+ payments is currently being centralized in national state agencies. Most countries under study have prepared plans to further centralize authority by developing a national accounting system for REDD+ in the long run.

To conclude, given the centralization of authority in national state agencies and the possibility of a simplification and, to a lesser extent, a technicalization of national forest governance, homogenization at the national level may still be a consequence of carbonizing forest governance in the long run.

6.3 Homogenization of environmental governance?

This section reflects on what we can learn from the case of REDD+ about the changing nature of environmental governance more broadly. In this thesis I used Scott's concept of homogenization (Scott, 1998) to refer to a combination of simplification, technicalization, centralization and/or marketization (see also Agrawal, 2005; Bose et al., 2012; Litfin, 1997; Fogel, 2004; Boyd, 2010). Scott's notion of homogenization is akin to a growing similarity in institutional frameworks and policies and practices of environmental governance, also called "policy convergence". Whether and how such a policy convergence occurs has incited much scholarly debate (see e.g. Heichel et al., 2005; Falkner and Gupta, 2009; Busch and Jörgens, 2005). This debate is part of wider discussions about the changing nature of governance in the context of globalization. While some scholars argue that there are strong homogenizing tendencies in governance policies and practices in this age of globalization, others rather stress the growing

diversity in governance around the world (for overviews of literature, see Fairhead and Leach, 2003; Rosenau, 1997; Martell, 2007). Yet other scholars assert that there are both homogenizing and diversifying tendencies, with different outcomes depending on the type of globalization and the context in which globalization is experienced (Giddens, 1990; Held et al., 1999; Rosenau, 1997; see also Martell, 2007 for an overview). A related topic in these debates is the shifting sites of authority in governance policies and practices. A particularly prominent question here is whether the authority of nation-states is being reduced (e.g. Strange, 1996), redefined (e.g. Kennedy and Danks, 2001), and/or diversified (e.g. Held et al., 1999; Rosenau, 1997), for example as a result of the growing significance of global sites of state and non-state authority such as international institutions and (transnational) corporations.

The findings in this thesis regarding the consequences of REDD+ for multilevel forest governance - including a simplification or growing complexity of the governance domain, shifting sites of authority, the production and use of knowledge, and the reliance on market or non-market instruments - have much relevance for these long-standing debates. In this section I view REDD+ as part of a globalization trend, in the sense that it was introduced and currently being negotiated (as well) at the global level, with global private and public guidelines and standards to enable the global exchange of forest carbon. As I also argue below, REDD+ is part of a broader trend within the environmental governance domain to increasingly address environmental problems with governance at the global level. I draw on the findings of this thesis to discuss, first, the shifting sites of state and non-state authority in environmental governance; and second, the growing homogenization or diversity of environmental governance policies and practices in the context of globalization. The case of REDD+ can address persisting gaps in globalization literature in the global South as opposed to industrialized countries, where most research in this field has taken place (Heichel et al., 2005; for an exception, see Falkner and Gupta, 2009).

6.3.1 Shifting sites of authority

This thesis showed that significant diversity exists in how carbonization manifests itself in different countries. This happens despite the fact that the countries under study in chapter 5 are requested to comply with a common global format for REDD+ readiness proposals developed by the World Bank Forest Carbon Partnership Facility program. This finding suggests that, despite globalizing trends - such as, in this case, the influence of international organizations like the World Bank - (developing) countries retain authority to define their national policies. Indeed, as I already argued in detail above, REDD+ may result in a centralization of authority within national governments rather than within the UNFCCC due, in part, to the large importance that countries attach to their national sovereignty. The large importance of national sovereignty is by no means unique to the REDD+ governance domain. Chapter 2, for example, briefly

touched upon the disputes over the infringement of sovereignty in discussions around an international review and verification process for the broader climate governance domain. Also in the forest governance domain national sovereignty has played an important role, and has arguably been one of the bottlenecks for reaching an agreement on an international legally binding treaty to combat deforestation (e.g. McDermott, 2014). As to the REDD+ governance domain, given the influence of international institutions (including the UNFCCC) in guiding countries to get ready for REDD+, the authority that countries have to define their own policies is not without limits. This is analogous to the “bounded autonomy” of countries that has also been identified in other environmental governance domains (see e.g. Newell, 2007, p. 69).

The case of REDD+ also showed that the way in which countries retain sovereign authority in the context of globalization happens in uneven ways across the globe (see also Held et al., 1999; Rosenau, 1997; Newell, 2007). Chapter 2, for example, showed that the dominant focus on expert-led MRV systems in global policy debates and developments might well lead to diversified rather than homogenizing outcomes for countries, with some losing and some gaining authority. Countries with more monitoring capacity may be better able to participate in environmental governance schemes such as REDD+ than countries with less capacity to monitor their forest-related carbon emission reductions (on governance in the context of globalization with diverse state capacities, see e.g. Knill and Lehmkuhl, 2002). Moreover, some countries - such as industrialized states and powerful players like China, India, and Brazil - have more capacity than others to determine the scope of their national REDD+ MRV systems and align internationally negotiated (MRV) standards with their own interests, or contest them as an infringement of their sovereignty.

Globalization is often associated with a dominant neoliberal paradigm. Some globalization scholars even argue that globalization puts pressure on countries to comply with such a paradigm, thereby losing much of their authority (e.g. Strange, 1996). The case of REDD+ showed, however, that the “neoliberalization of nature” (as described in the introduction), is not yet fully underway in this governance domain. I argued that though most countries studied in this thesis assume the establishment of a carbon market in which REDD+ can be integrated in the long run, whether or not REDD+ should be financed through trading forest carbon credits remains a highly disputed issue in global policy debates. Even if REDD+ becomes part of compliance carbon markets in the long run, this is not likely to reduce state authority in a uniform manner, as any future compliance carbon market will heavily depend on state-based regulations in order to function. This suggests that neoliberalist approaches that might, according to some, reduce state authority, are not necessarily dominant across all cases of global environmental governance (see also Zelli et al., 2013).

My final point in this sub-section relates to the (shifting) authority of state versus non-state actors. So far, REDD+ governance has primarily been a state-based public

rather than private undertaking. As this thesis showed, REDD+ is mainly being operationalized through national level, state-based accounting and MRV systems. Only a small portion of total REDD+ finance allocated to date has come from the private sector (Streck, 2012). Reasons for the limited involvement of the private sector in REDD+ governance are closely related to the above-mentioned persistent disputes over the use of market instruments, which are linked to concerns about the effects of REDD+ on local governance and the fact that forest management is considered a public affair in most countries (Lederer, 2011). The limited involvement of the private sector in REDD+ governance is salient given that environmental governance domains - including the climate governance domain - increasingly consist of a plethora of public, private and public-private (i.e. hybrid) governance initiatives (see e.g. Biermann et al., 2009; Bulkeley and Newell, 2015). While forest carbon credits are currently being traded on the private voluntary carbon market, this market is still very small. Other carbon markets such as those for the Clean Development Mechanism show much higher degrees of private sector involvement, though CDM markets in their early days also heavily relied on public funding (Lederer, 2011).

Notwithstanding the limited involvement of non-state actors in the REDD+ governance domain as compared to other environmental governance domains, the thesis also showed that REDD+ as part of a globalization trend may in some cases open up space for non-state actors to be involved in national, global and/or sub-national (state-based) policy-making and monitoring (chapter 2, 3, 5). In addition, as also argued in the previous section, non-state actors are involved in operationalizing and implementing REDD+ in global private carbon standards and pilot projects on the ground, sometimes with very limited to no government involvement (see also chapter 4).

To conclude, the case of REDD+ shows that globalization trends may coincide not only with a diversity in environmental governance policies and practices, but also with diversity in the sites of state (and to some extent non-state) authority to govern such policies and practices.

6.3.2 Diversity as well as homogenization in environmental policies and practices

My argument that globalization trends, such as REDD+, can co-exist with a diversity in environmental governance policies and practices does not mean that globalization has not also coincided with the development of many environmental governance initiatives that, in one way or the other, closely resemble Scott's notion of homogenization (i.e. simplification, centralization, technicalization and/or marketization). In this age of globalization - with environmental problems that are global in scale in terms of both causes and consequences - many governance systems have been developed in order to measure and control environmental outcomes at higher (i.e. global and/or national) levels of governance. Generally speaking, the higher the level at which objects are governed, the more need to simplify and make objects legible in order to measure and

govern them, and the more need for aggregate (often scientific) information to guide such actions (see e.g. McDermott, 2014).

Despite their diversity, certain manifestations of REDD+ identified in this thesis bear close resemblance to Scott's notion of homogenization. As chapter 2 showed, the dominant framing of REDD+ at the global level has elements of Scott's homogenization: REDD+ is framed and operationalized as a mechanism to control forest-related carbon emissions at the global and/or national level, to be made legible through the use of high-tech expert-driven MRV systems. Notwithstanding countries' detailed plans to draw on local knowledge, REDD+ has spurred major investments in the development of national level, state-led MRV and carbon accounting systems, using mostly national (rather than sub-national) reference levels so as to produce aggregate information about forest-related carbon emissions (chapter 2 and 5).

Such a large focus on establishing national level state-led MRV and accounting systems to measure and regulate environmental objects is also discernible in the broader climate governance domain. Large investments are being made in countries' national carbon accounting and MRV systems to enable them to measure and report their carbon emissions (see e.g. Niederberger and Kimble, 2011). In this vein, as cited in chapter 2, Fogel (2004, p. 111) notes that "the notion that 'standardized' carbon units can be produced (...) is an expression of an instrumental 'global gaze'". This global gaze is akin to Scott's notion of homogenization as it entails simplifying objects and producing aggregate statistical data in order to measure and regulate them at the global and/or national level. Similarly, Lohmann (2005, p. 230) points to a "Kyoto technical fix" in the climate governance domain, whereby the focus mainly lies on crafting technologically and scientifically sophisticated carbon accounting systems to standardize carbon units in order to enable global exchange of such units. Creating highly complex systems in the effort to simplify environmental objects is analogous to Scott's argument that "simplifications (...) are often wielded with great sophistication" (Scott, 1998, p. 81). The same could be said for the high-tech expert-driven REDD+ MRV systems that are being operationalized at the global level (see also McDermott, 2014).

In short, I argued that globalization coincides with, on the one hand, global governance approaches that bear resemblance to Scott's *homogenization*, and, on the other hand, a *diversity* in sites of authority and in environmental governance policies and practices. My overarching - and seemingly paradoxical - conclusion is, thus, that such homogenization and diversity go hand in hand. In her analysis of REDD+ governance, McDermott (2014, p. 13) goes one step further to assert that: "governance in the context of globalization can be viewed as a technocratic quest for legibility involving diverse actors at different scales pursuing often conflicting objectives. (...) [T]he larger the scale the greater the need for simplification and standardization to achieve this legibility (...) the narrower and more globally legible the focus of global forest governance the greater the potential for displacement and fragmentation". Indeed, as I argued in the previous

section, counter-narratives to the dominant carbon-centric (i.e. simplified) framing of REDD+ within the UNFCCC not only prompted the UNFCCC to develop safeguard provisions, but also resulted in a proliferation of public and private safeguard standards, thereby increasing the diversity in sites of authority and in governance policies and practices.

Thus, rather than realizing what Scott calls the “utopian (...) goal” to simplify the “chaotic, disorderly, constantly changing social reality” (Scott, 1998, p. 82), efforts to regulate environmental outcomes at central (global and/or national) levels of governance may paradoxically produce an increasing diversity and fragmentation of governance. Similar paradoxical tendencies have also been identified in the broader environmental governance realm, for example in attempts to coordinate and create coherence in the global environmental governance system, which have led to increasingly fragmented governance outcomes (see e.g. Vijge, 2013)⁴². Irrespective of whether such fragmentation within and beyond the REDD+ governance domain is permanent or temporary, the challenge of environmental governance in the age of globalization lies not merely in measuring and controlling environmental outcomes, it lies as much in managing the diversity and fragmentation that arise from these efforts (see e.g. Gupta et al., 2015 on managing the fragmentation in the REDD+ governance domain).

6.4 Methodological reflections

6.4.1 External validity

The research for this thesis was deliberately designed so as to increase the external validity of the findings. As I explained in the introduction, this was done, among others, by comparing the consequences of carbonization for a limited set of dimensions of forest governance in a variety of cases of REDD+ operationalization and implementation at different levels of governance. Important components of this thesis’ research approach were the two case studies on REDD+ in India to study, in a more in-depth manner, the consequences of the carbonization of forest governance (chapter 3 and 4). As I also explained in the introduction, the internal validity of the case studies in this thesis was high due to triangulation of data, prolonged periods of exposure during fieldwork, member checking, reviews and discussions of research design and findings, and (in the case of the project case study) reliance on both qualitative and quantitative data analysis. The external validity of the findings from the national level case study (chapter 3) was significantly increased by the cross-country comparative analysis (chapter 5). India is a rather atypical country when it comes to REDD+ policy developments. Given that India does not receive any funding from major REDD+ readiness programs such as the Forest Carbon Partnership Facility or the UN-REDD Programme, India, quite

42 In a different vein and outside the realm of environmental governance, seemingly contradictory tendencies in the context of globalization have also been identified by, for example, Rosenau (1997, p. 350), who coined the term “framgregation”: a combination of integration and fragmentation.

unlike many other REDD+ countries, develops its REDD+ strategy without substantial interference from external parties. Part of the reason for this is the proclaimed absence of deforestation in the country (see chapter 3). Despite this, the cross-country comparative analysis showed that in many ways, the discourses reflected and operationalized in India's national REDD+ policy document are not very different from those reflected in the policy documents of many other REDD+ countries. The comparative analysis covered only seven of the 45 countries that have currently developed their Readiness Preparation Proposal under the Forest Carbon Partnership Facility program. Because the number of policy documents under study was limited, and because only one type of REDD+ policy document was analyzed, the study was complemented with a literature review of other cross-country comparative analyses (though scarce in number) (chapter 5).

Regarding the external validity of the project case study, the REDD+ project under study is quite unique to cases of REDD+ project implementation because of the specific forest governance arrangements in the project region and the project's accreditation by Plan Vivo. As I explained earlier, Plan Vivo is a carbon standard that explicitly distinguishes itself from other, more conventional carbon standards. Plan Vivo is a relatively small standard; at the time of writing, it has accredited 15 projects, with 30 projects in the pipeline (Plan Vivo, 2015). As a comparison, the Verified Carbon Standard, the largest carbon standard for REDD+ projects, lists 78 projects on its website (VCS, 2015; Simonet et al., 2014). Self-designated, voluntary REDD+ pilot projects have different dynamics than official government demonstration projects. An in-depth analysis of a government demonstration project would have been more representative for the focus in this thesis on state-based rather than private voluntary REDD+ governance. There are, however, no such projects to date in India, and, as the introduction explained, it was deemed important to select a REDD+ project in the same country as the national level case study. To check the extent to which the findings from the project case study were generalizable, the analysis was complemented with a literature review of meta-studies analyzing hundreds of REDD+ pilot and demonstration projects around the world. This showed that the REDD+ project under study regularly reflected discourses that were similar to those reflected in many other REDD+ projects.

Part of the value of qualitative case studies lies in the potential to generalize the research findings to a broader theory or analytical framework that can be applied to other cases (Yin, 2009; Creswell, 2014; Boeijs, 2010). Based on the project level case study I developed an analytical framework to analyze how and with what consequences REDD+ is being framed and operationalized in specific instances. By applying the analytical framework to the cross-country comparative analysis, I showed that the framework can be replicated and used to study the manifestations of carbonizing forest governance in other contexts than the one for which it was initially developed.

6.4.2 The use of discourse analysis

This thesis relied on discourse analysis as a key methodology. In doing so, the thesis used framings and storylines as proxies for how and with what consequences REDD+ manifests itself in a variety of cases at different levels, focusing on four dimensions of multilevel forest governance. This approach was useful as it allowed for comparisons between multiple levels and cases of REDD+ operationalization and implementation. Though this approach did not yield explanations for how and why certain discourses emerge and become prominent, it did provide valuable insights into the direction that (premature) REDD+ governance is currently taking and what consequences this might have for multilevel forest governance.

A common criticism to discourse analysis is, however, that it is less able to provide insights into the material outcomes of policies and practices (see e.g. Sharp and Richardson, 2001). Using a specific set of discourses as proxies for governance outcomes can therefore be prone to criticism. The choice of proxies might indeed have created a slight bias in the research. To give one example: chapter 3 (the national level case study of India) and chapter 5 (the cross-country comparative analysis) used different proxies to analyze the sites of authority, which may have affected the findings in the different chapters. These different proxies were nevertheless chosen because of the different research strategies in the two chapters. For the national level case study, an in-depth analysis of the decision-making authority was deemed most appropriate, while for the cross-country comparative analysis a study of a more quantifiable proxy - in this case the level of accounting and payment distribution - was most suitable.

As I also argued in the introduction, I consider discourse analysis as one among several analytical tools that are applicable to study the changing nature of environmental governance. Future studies using different analytical tools in more advanced stages of REDD+ implementation may therefore corroborate the findings in this thesis regarding the consequences of REDD+ for multilevel forest governance.

6.5 A decade of REDD+: Taking stock and future outlook

In the fifty years of history of global forest governance, the degree of interest, amount of resources invested, and number of actors involved in REDD+ are unprecedented. Never before has global deforestation received so much impetus and so many investments as with the coming of REDD+. In the past decade, the number and type of actors involved in REDD+ have increased exponentially. International conventions and organizations, research institutes, non-governmental organizations, companies and governmental agencies are now engaged in operationalizing and implementing REDD+ at the global, national and project level. Looking back on a decade of a world rich with REDD+, the question that we can now raise is: what has REDD+ yielded, and what is it likely to yield in the future?

As the pool of actors interested and engaged in REDD+ has swelled, so too has

REDD+'s scope expanded. REDD+ has come to mean many different things to many different people in many different contexts. Though this development seems laudable, it also means that if everyone wants a piece of cake, there may be very little to share. With the increase in scope of REDD+, the institutional and technical challenges to implement REDD+ - which were never small from the outset - have increased drastically. The international (research) community has proven impressively capable of addressing such challenges: solutions have been and are still being devised to address issues such as leakage, permanence, additionality, safeguards, and measuring, reporting and verifying carbon and non-carbon benefits, to name a few. Paradoxically, however, in the exercise of trying to make REDD+ implementable and serve a wide variety of interests, REDD+ becomes more and more difficult to implement.

From a climate perspective, REDD+ is not anymore the simple, cost-effective climate mitigation mechanism that it was initially intended to be (see e.g. Visseren-Hamakers et al., 2012a, b). Many different manifestations of REDD+ now exist that do not have climate mitigation as their prime objective.

From a forest perspective, large efforts have gone into capacity-building, most notably for the development of forest monitoring systems and national REDD+ policies and programs in developing countries. REDD+ has also spurred an enormous amount of research on forests and their relation to climate change. As such, REDD+ has increased knowledge of the causes and effects of global deforestation and has significantly enhanced the capacity to monitor the problem. The question is, however, whether this has also increased the capacity to combat deforestation. REDD+ is often framed as an add-on to existing forest conservation activities and programs, raising questions of additionality. Though some view REDD+ as an opportunity to improve structural transformations toward sustainable land use planning and policies (Bastos Lima et al., 2014), REDD+ national policies and programs are often developed with limited linkages to other policy sectors (Visseren-Hamakers et al., 2012a). The scant attention to monitoring and addressing the drivers of deforestation, which are often related to activities by different governmental sectors, is exemplary of this (Visseren-Hamakers et al., 2012a; Skutsch and McCall 2010), though this gap is now increasingly acknowledged and being addressed. The newest development on this front is the landscape approach, which introduces a broader set of land use changes into the climate governance domain, most notably agriculture, which is the main driver of deforestation in most developing countries. Whether the attention will eventually shift away from REDD+ to these other developments in the climate governance domain - including, for example, climate smart agriculture - remains to be seen.

Having stimulated such large institutional developments, the infrastructure of REDD+ is far ahead of the generation of results-based payments that incited such infrastructural built-up in the first place. In global policy debates, there is still large uncertainty on where results-based payments for REDD+ will come from and in what

form. As such, the bulk of investments in REDD+ has ironically gone into readiness activities to prepare countries for such results-based payments, with uncertain outcomes for the long-term financial viability of such activities. A crucial question is whether there will ever be sufficient demand to cover the large supply of forest carbon credits that is currently being developed.

If large-scale flows of results-based payments remain absent, REDD+ will not be likely to galvanize into the global mechanism to effectively combat - on a large scale - global deforestation and climate change, which it was initially expected to be. REDD+ is unlikely to meet all of the many diverse expectations people have (or had) from it. This is not to say that REDD+ may not yield positive outcomes in specific instances of implementation. As the project case study in this thesis showed, REDD+ can become a means to acquire diversified payments for not only carbon but also many non-carbon ecosystem services, empower local communities and build their institutional and technical capacity to sustainably manage forestland while simultaneously providing for local livelihoods. The question that remains, however, is whether a form of REDD+ that is (financially) feasible can serve enough interests to uphold the much-needed momentum to address global deforestation in the long run.

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Appendices

Appendix I: Number of interviews⁴³

Country	Government	Business	NGO	Research institute	International organization ⁴⁴	Other	Total	Fieldwork
Scoping exercise								
India	0	0	1	2	3	42 ⁴⁵	48	4 field visits to 3 carbon forestry projects in Uttarakhand and Himachal Pradesh, India (2011)
Chapter 3								
India	17	2	5	8	2	0	34	2 weeks in New Delhi and 6 weeks in Uttarakhand and Himachal Pradesh, India (2011)
Chapter 4								
India	2	2	19	0	0	24	47	1 week Plan Vivo stakeholder meeting in Edinburgh, 5 weeks visiting scholar at environmental finance and project development group in New Delhi, and 5 weeks at project site in Meghalaya, India (2013-2014)
Total by author								
Sub-total	19	4	25	10	5	66	129	
Chapter 5								
Nepal	14	4	21	4	10	0	53	Interviews were part of CIFOR's Global Comparative Study on REDD+, 3 months
Indonesia	20	9	22	4	9	0	64	visiting scholar at CIFOR to access data and co-author chapter 5 with CIFOR colleagues in Bogor, Indonesia (2014)
PNG	12	12	21	8	13	0	66	
Vietnam	11	8	16	4	12	1	52	
Tanzania	21	6	19	5	8	0	59	
Peru	12	9	19	3	3	6	52	
Cameroon	4	3	15	9	9	2	42	
Sub-total	94	51	133	37	64	9	388	
Total by author and from CIFOR Study								
TOTAL	113	55	158	47	69	75	517	

⁴³ This excludes people who were interviewed more than once during the same fieldwork visit.

⁴⁴ This category includes foreign government agencies.

⁴⁵ This includes group interviews. Not all the names of the participants of the group interviews are listed in appendix II.

Appendix II: List of interviewees

List of interviewees for chapter 3

1. Absalom, R. Senior Conservation Programs Officer, Ecosystem Services, World Land Trust (*NGO*). Interview 7/12/2011 and 8/12/2011, Shillong.
2. Agarwal, C. Independent consultant (*business*). Interview 10/10/2011, New Delhi.
3. Aggarwal, A. PhD candidate, University of Manchester, Institute for Development Policy and Management (*research institute*). Telephone interview 2/6/2011.
4. Ashutosh, S. Professor, Indira Gandhi National Forest Academy (*research institute*). Interview 30/11/2011, Dehradun.
5. Chatterjee, S. Head Forests and carbon, Wildlife Trust India (*NGO*). Interview 12/10/2011, New Delhi. Interviews 12/2011, Tura and Shillong.
6. Das, S. Fellow, TERI, Earth Science and Climate Change Division (*research institute*). Interview 11/10/2011, New Delhi.
7. Dhakate, P. Divisional Forest Officer, District Nainital, Uttarakhand (*government*). Written questionnaire 9/6/2011.
8. Dividi, R. Forest Survey of India (*government*). Interview 1/12/2011, Dehradun.
9. Dogra, R.K. Assistant Director General, Indian Forest Service, and Indian Council of Forestry Research and Education (*government*). Interview 30/11/2011, Dehradun.
10. Gokhale, Y. Fellow, TERI, Earth Science and Climate Change Division (*research institute*). Interview 12/10/2011, New Delhi.
11. Gupta, S. Indian Forest Service, and Secretary at Indian Council of Forestry Research and Education (*government*). Interview 30/11/2011, Dehradun.
12. Jindal, R. PhD candidate, Michigan State University, Department of Community, Agriculture, Recreation, and Resource Studies (*research institute*). Telephone interview 23/6/2011.
13. Kapoor, R.K. Chief Project Director of the World Bank CDM Bio-Carbon Sub-Project of Himachal Pradesh (*international organization*). Interview 3/11/2011, Solan.
14. Kishwan, J. Director General Wildlife, Ministry of Environment and Forests (*government*). Interview 11/10/2011, New Delhi.
15. Kohli, K. Kalpavriksh Environmental Action Group (*NGO*). Interview 21/10/2011, New Delhi.
16. Lahiri, S. National Forum of Forest People and Forest Workers (*NGO*). Interviews 20/6/2011 and 12/10/2011, New Delhi.
17. Mathur, V. Dean, Wildlife Institute of India (*government*). Interview 1/12/2011, Dehradun.
18. Pandey, S. Chief conservator of forests, Shimla Forest Department (*government*). Interview 17/11/2011, Shimla.
19. Poffenberger, M. Executive Director, Community Forestry International (*NGO*). Telephone interview 22/6/2011. Interview 8/10/2013, Edinburgh.
20. Radhakrishnan, U. Research associate, Centre for Science and Environment (*research institute*). Interview 21/10/2011, New Delhi.
21. Representative of USAID. Senior Forestry Advisor, US agency for International Development (*international organization*). Interview 13/10/2011, New Delhi.
22. Roy, S. Additional Chief Secretary Forests, Government of Himachal Pradesh (*government*). Interview 18/11/2011, Shimla.

23. Sanan, D. Principal Secretary, Government of Himachal Pradesh (*government*). Interview 9/11/2011, Shimla.
24. Sinha, P.K. Shimla Forest Department (*government*). Interview 18/11/2011, Shimla.
25. Thampi, K.B. Inspector General of Forests, Ministry of Environment and Forests (*government*). Interview 14/10/2011, New Delhi.
26. CEO of Environmental Finance and Project Development Group (*business*). Interviews November 2011, New Delhi. Multiple Skype interviews 2011-2013.
27. Representative of Forest Research Institute, Climate Change and Forests (*government*). Interview 30/11/2011, Dehradun.
28. Secretary Environment, Science and Technology, Indian Forest Service, Forest and Environment Department, Government of Himachal Pradesh (*government*). Interview 9/11/2011, Shimla.
29. Director Institute of Green Economy (*research institute*). Amity Institute of Global Warming & Ecological Studies (Noida), Institute of Climate Change and Ecology, Member of the Core Committee within the Ministry of Environment and Forests. Interview 12/10/2011, Gurgaon.
30. Principal Chief conservator of forests, Indian Forest Service, Forest Department Himachal Pradesh (*government*). Interview 18/11/2011, Shimla.
31. Statistician, Forest Survey of India (*government*). Interview 1/12/2011, Dehradun.
32. Scientist-E and statistician, Climate change division, Government of India, Ministry of Environment and Forests (*government*). Interview 13/10/2011, New Delhi.
33. Head Forestry and Ecology Division, Indian Space Research Organisation, Indian Institute of Remote Sensing, Department of space, Government of India (*government*). Interview 30/11/2011, Dehradun.
34. Watershed Management Specialist, International Centre for Integrated Mountain Development (ICIMOD) (*research institute*). Interview 31/10/2011, New Delhi.

List of interviewees for scoping exercise (excluding group interviews)

1. Administration officer of the World Bank CDM Bio-Carbon Sub-Project of Himachal Pradesh (*international organization*). Interview 10/11/2011, Dharamshala.
2. Divisional officer of the World Bank CDM Bio-Carbon Sub-Project of Himachal Pradesh (*international organization*). Interview 4/11/2011, Solan.
3. Trainer of local project officers and local communities of the World Bank CDM Bio-Carbon Sub-Project of Himachal Pradesh (*international organization*). Interview 4/11/2011, Solan.
4. Project officer, Palampur Water Governance Initiative, payment for ecosystem services project (*NGO*). Interview 19/11/2011, Palampur.
5. Project participant in payment for ecosystem services project (*other*). Interview 19/11/2011, Bohal village, Palampur state.
6. Professor North-Eastern Hill University (*research institute*). Interview 5/12/2011, Shillong.
7. Professor North-Eastern Hill University (*research institute*). Interview 7/12/2011, Shillong.

List of interviewees for chapter 4

A. Local project participants (other):

1. Youth volunteer (*other*). Group interview 16/01/2013, Tyrsad.
2. Youth volunteer, Mawmysiang (*other*). Group interview 18/12/2013, Mawjrong.
3. Youth volunteer, Hima Mylliem (*other*). Group interview 19/12/2013, Tyrsad.
4. Youth volunteer, Hima Lyngiong (*other*). Group interview 16/01/2013, Phanniewlah.

5. Youth volunteer, Hima Sohra (*other*). Group interview 18/12/2013, Mawjriong.
6. Youth volunteer, Hima Myllem (*other*). Group interview 15/01/2013, Kyrphei.
7. Youth volunteer (*other*). Group interview 10/01/2013, Mawjriong.
8. President Local Working Committee, village Umlangmar (*other*). Group interview 15/01/2013, Kyrphei.
9. Member Local Working Committee 1, Hima Mawphlang (*other*). Group interview 14/01/2013, Wahlyngkien.
10. Member Local Working Committee 2, Hima Mawphlang (*other*). Group interview 14/01/2013, Wahlyngkien.
11. Member Local Working Committee, Hima Sohra (*other*). Group interview 18/12/2013, Mawjriong.
12. Secretary self-help group, Hima Pamsanngut (*other*). Group interview 19/12/2013, Tyrsad.
13. Secretary self-help group, Hima Myllem (*other*). Group interview 15/01/2013, Kyrphei.
14. Member self-help group, Hima Mawphlang (*other*). Group interview 14/01/2013, Wahlyngkien.
15. Member self-help group, Hima Laitkroh (*other*). Group interview 18/12/2013, Mawjriong.
16. Village headman, Hima Myllem (*other*). Group interview 19/12/2013, Tyrsad.
17. Village headman, village Umlangmar (*other*). Group interview 15/01/2013, Kyrphei.
18. Village headman, Hima Laitkroh (*other*). Group interview 10/01/2013, Mawjriong.
19. Extension worker, Hima Lyniong (*other*). Group interview 19/12/2013, Tyrsad.
20. Extension worker, Hima Laitkroh (*other*). Group interview 18/12/2013, Mawjriong.
21. President farmers' club, Hima Lyngiong (*other*). Group interview 19/12/2013, Tyrsad.
22. Secretary farmers' club, Hima Lyngiong (*other*). Group interview 16/01/2013, Phanniewlah.
23. Secretary farmers' club, Hima Lyngiong (*other*). Group interview 19/12/2013, Tyrsad.
24. Member farmers' club, Mawmysiang (*other*). Group interview 18/12/2013, Mawjriong.

B. Local project managers:

1. Chief Community Facilitator (*NGO*). Interviews 14/12/2013, 15/12/2013, 18/12/2013, 19/12/2013 and 16/01/2014, Mawphlang. Personal communications via e-mail between January 2014 and March 2015.
2. President Synjuk and Special Community Facilitator, Hima Mawphlang (*NGO*). Interview 21/12/2013, Mawphlang.
3. Special Community Facilitator, Hima Lyngiong (*NGO*). Interviews 21/12/2013, Mawphlang and 16/01/2014, Phanniewlah.
4. Community Facilitator, Hima Lyngiong (*NGO*). Group interviews 19/12/2013, Tyrsad and 16/01/2014, Phanniewlah.
5. Community Facilitator, Hima Pamsanngut (*NGO*). Group interviews 19/12/2013 and 16/01/2013, Tyrsad.
6. Community Facilitator, Hima Sohra (*NGO*). Group interview 18/12/2013, Mawjriong.
7. Community Facilitator, Hima Laitkroh (*NGO*). Group interviews 18/12/2013 and 10/01/2014, Mawjriong.
8. Community Facilitator, Hima Mawphlang (*NGO*). Interview 13/01/2013, Mawphlang.
9. Community Facilitator, Hima Myllem (*NGO*). Group interview 19/12/2013, Tyrsad and 15/01/2013, Kyrphei.
10. Synjuk executive member (*NGO*). Group interview 16/01/2013, Phanniewlah.

11. Assistant project manager Synjuk (*NGO*). Interview 17/12/2013 and 15/01/2014, Mawphlang.
12. Forestry consultant Synjuk (*NGO*). Interview 17/12/2013, Mawphlang and 13/01/2014, Shillong.
13. Socio-economic expert Synjuk (*NGO*). Interview 21/12/2013, Mawphlang and 13/01/2014, Shillong.
14. Assistant secretary Synjuk (*NGO*). Interview 14/01/2013, Mawphlang.
15. Project accountant Synjuk (*NGO*). Interview 17/12/2013 and 16/01/2014, Mawphlang.

C. Project advisors:

1. Indian Forest Service officer, Department of Wildlife, East Khasi hills, Government of Meghalaya, Shillong (*government*). Interview 20/12/2013, Shillong.
2. Coordinator Regional Centre National Afforestation and Eco-Development Board, Ministry of Environment and Forests, Government of India (*government*). Professor North-Eastern Hill University. Interview 20/12/2013, Shillong.
3. Socio-economic specialist Bethany Society (*NGO*). Interview 20/12/2013, Shillong.

D. Stakeholders at the global level:

1. Program manager Plan Vivo (*NGO*). Interview 10/10/2013, Edinburgh. Skype interview 12/12/2013.
2. Former Program manager Plan Vivo (*NGO*). Skype interview 20/12/2013.
3. Executive Director Community Forestry International (*NGO*). Interview 8/10/2013, Edinburgh. Skype interview together with Swapan Mehra, 10/12/2013. Personal communication via e-mail, March 2015.
4. Employee U&We (*business*). Interview 8/10/2013, Edinburgh.
5. Executive Director Bioclimate (*business*). Interview 10/10/2013, Edinburgh.

List of interviewees for chapter 5 - those that were interviewed as part of CIFOR's Global Comparative Study - may be acquired from the author on demand.

Appendix III: Interview guides and surveys

Sample of semi-structured interview guide for chapter 3

October 2011

N.B. the interview guide was slightly adjusted and a selection of questions was made for each interviewee.

The Green India Mission (GIM) and REDD+ in India

1. What are the latest developments on REDD+ in India in terms of setting up:
 - a. A coordination body for REDD+ in India?
 - b. A national REDD+ strategy in India?
 - c. A technical group to develop methodologies for monitoring REDD+ estimates?
2. Which actors were involved in the design of the GIM? Could you describe the design process?
3. What were the most important topics of discussion during the design process of the GIM?
4. Why was it decided to develop the GIM, given the existence of several other afforestation, reforestation, and forest conservation programs?
5. Do you think the GIM was designed because of the seeming opportunities of REDD+ financing?

Trade-offs/synergies in the GIM and REDD+

6. How does the GIM relate to other national forest or biodiversity conservation policies (e.g. the Forest Rights Act, Forest Conservation Act, etc.)?
7. How will the implementation of the GIM and REDD+ policies likely affect these policies and their implementation, and vice versa?
8. What was the reason for the Government of India to make the GIM such a broad and inclusive program? Has there been any pressure from civil society groups to do so?
9. Do you perceive any trade-offs between the multiple objectives of the GIM and REDD+ policies? If so, how are these dealt with and by whom?

Measuring, reporting and verification (MRV) for the GIM and REDD+

10. What will be measured (carbon storage and/or also co-benefits) for the GIM and REDD+ in India?
11. Who are involved in the design of MRV systems for the GIM and REDD+ in India? Who are involved in the actual monitoring itself?

12. Which methods will be used for measuring, reporting and verifying the GIM and REDD+ projects?
13. In what way will non-carbon ecosystem services be measured?
14. How and by whom will the data generated through the GIM's and REDD+ MRV system be used?

Role of local governance institutions/local communities in the GIM and REDD+

15. On paper, the GIM allows for a large role of local communities and local level governance institutions. Do you foresee any challenges in implementing such a decentralized approach? Is it realistic?
16. How do you think the implementation of the GIM and REDD+ policies will affect the role of Forest Departments, Gram Sabhas/Gram Panchayats, and other local governance institutions in forest governance?
17. How and by whom will carbon credits generated by the GIM and REDD+ projects be sold, and how will the benefits from these credits be distributed?

The effects of REDD+ in India

18. Do you think that carbon forestry and the selling of carbon credits will fundamentally change forest governance in India?
19. Do you think REDD+ might lead to a (re)centralization of forest governance since funding comes in via the central government?
20. Do you think REDD+ may form a threat to local livelihoods and biodiversity in India?
21. Do you think India is ready to take on phase 3 in the REDD+ process?

Samples of interview guides for chapter 4

Preliminary interviews, December 2013

N.B. the interview guide was slightly adjusted and a selection of questions was made for each interviewee.

Interview guide for project managers

Views on the desired objectives of the REDD+ project

1. What are your priorities in terms of what the project should achieve? What are your expectations of the project?
2. The REDD+ project grew out of an earlier payment for ecosystem services project in the region. Do you think that carbon sequestration and the selling of carbon credits have provided an important additional value to the project?
3. Do you think additional financing through carbon credits is necessary to continue

- or improve the management of natural resources in this area? Why (not)?
4. The project seeks to change local governance and local institutional arrangements, e.g. in terms of gender balance, elite-based institutional structures, and local people's relations with (local/state) governmental agencies. Who drives this agenda? What do you think the role and views of local people are regarding these social transformations that the project seeks to foster?
 5. Do you think the benefit-sharing mechanism for the project has been sufficiently operationalized? By whom and how?
 6. Do you think land tenure arrangements and carbon ownership are sufficiently defined for the project to function? By whom and how?
 7. Do you think the income-generating activities proposed by the project are sufficient to tackle the drivers of deforestation? Why (not)?
 8. Do you think the Project Design Document gives a good representation of the project? Why (not)?

Process by which the REDD+ projects' objectives are defined and measured

9. Who came up with the idea to generate and sell carbon credits for the project and why? What was the role of local people in this decision?
10. How and by whom were the Project Idea Note and the Project Design Document developed? What was your own role and influence in this?
11. In what way did the project managers inform local communities about the project?
12. How and by whom are the village natural resource management plans (Plan Vivo's) developed? What was your own role and influence in this?
13. Do you feel there are any trade-offs between the project's multiple objectives? If so, have these been identified in the project? If so, how and by whom?
14. Were there any conflicting views among stakeholders on what the main objectives and impacts of the project should be? If so, how have these been dealt with?
15. How are trade-offs between communities' wishes/needs and the viability of selling the project's carbon credits been dealt with?
16. To what extent and how do you think the development of the project's design and implementation have been guided or constrained by Plan Vivo?
17. Who decided to use Plan Vivo standards? Who decided how these are being used in the project?
18. Are you aware of the monitoring requirements for the carbon sequestration component of the project? What do you think of these? Do you find them constraining or helpful?
19. Who carries out the monitoring?

Interview guide for project participants

Views on the desired objectives of the REDD+ project

1. When did you first hear about the Khasi hills REDD+ project and in what way?
2. How and by whom was the project developed? What was your own involvement in this? What do you think of this process?
3. What has been your role in the project? What is your current role in the project?
4. What are your expectations of the Khasi hills REDD+ project? What are your priorities in terms of what you want to get out of this project? What is your main motivation to be involved in the project?
5. What is your overall view on the project? Do you find it constraining, e.g. because it requires you to shift to alternative sources of income, or do you find it helpful in meeting your income or food security?
6. Do you think the project is beneficial or constraining for development priorities in the Khasi hills, such as creating employment opportunities, infrastructure, water supplies, health care, and education?
7. Are you aware of the concept of REDD+/carbon credits? Do you understand the mechanism of REDD+?
8. Do you know how the income from the sale of carbon credits will be used? What do you think of this arrangement?
9. Do you think additional financing through carbon credits is necessary to continue or improve the management of natural resources in this area? Why (not)?
10. Do you think that getting income from carbon credits might also pose a threat to the project, e.g. because the income may be unreliable or because it entails meeting the demands of actors from outside the region (CFI, the buyers of carbon credits, etc.)?
11. Do you know who (which institutions/actors) will distribute the income from the sale of carbon credits and who decides what activities should be funded? What do you think of this arrangement?
12. How and by whom are the village natural resource management plans (Plan Vivo's) developed? What was your own role and influence in this?
13. The project seeks to change local governance and local institutional arrangements, e.g. in terms of gender balance, elite-based institutional structures, and local people's relations with (local/state) governmental agencies. Who drives this agenda? What do you think the role and views of local people are regarding these social transformations that the project seeks to foster?
14. Who do you think pushed for such social transformations and why?
15. Do you think the income-generating activities proposed by the project are sufficient to tackle the drivers of deforestation? Why (not)?

Process by which projects' objectives are defined and measured

16. Who came up with the idea to sequester carbon and sell carbon credits in the original payment for ecosystem services project? What was the role of local communities/institutions in this decision?
17. What are, according to you, the main drivers of deforestation?
18. Do you feel there are any trade-offs or conflicting views between the project's multiple objectives? If so, have these been identified in the project? If so, how and by whom?
19. How are trade-offs between communities' wishes/needs and the viability of selling the project's carbon credits (or the wishes of the buyers) been dealt with and who decides on this?
20. Are you aware of the Plan Vivo standards? What do you think of these? Do you find them constraining or helpful?
21. Are you aware of the monitoring requirements for the carbon sequestration component of the project? What do you think of these? Do you find them constraining or helpful?

Surveys for chapter 4

January 2014

Surveys developed for the case study research on the REDD+ pilot project in the East Khasi hills, Meghalaya, India

Name:

Function in the project:

Hima:

Village:

Please review the statements and provide your opinion based on the below scale:

Statements:	Strongly disagree			Neutral			Strongly agree			Don't know
<i>Project's objectives</i>	-4	-3	-2	-1	0	+1	+2	+3	+4	
1. The Khasi hills REDD+ project will be successful especially if it manages to:										
<i>a. Generate carbon benefits:</i>										
b. Generate money from carbon funds										
c. Store more carbon in forests										
<i>d. Generate environmental benefits:</i>										
e. Reduce deforestation and forest degradation										
f. Protect biodiversity (flora and fauna) in the East Khasi hills										
g. Reduce soil erosion and improve watershed services in the area										
h. Improve the aesthetic beauty of the project region										
<i>i. Generate social benefits:</i>										
j. Provide people with alternative, more sustainable livelihood opportunities										
k. Reduce poverty and enhance development in the project region										
l. Strengthen indigenous governments and traditional resource management institutions										
m. Strengthen the relationship between local institutions and the state or national government										
n. Improve land tenure										
<i>o. Other, namely:</i>										

<i>Deforestation and forest conservation in the region</i>	-4	-3	-2	-1	0	+1	+2	+3	+4	Don't know
2. Deforestation and forest degradation in the East Khasi hills are big problems.										
3. Important causes of deforestation in the East Khasi hills are:										
a. Forest fires										
b. Fuelwood collection										
c. Agricultural expansion										
d. Jhum (shifting agriculture)										
e. Uncontrolled grazing										
f. Charcoal production										
g. Stone quarrying and coal mining										
h. Timber extraction										
i. Other, namely:										
4. The following activities are important ways to reduce deforestation in the region:										
a. Check forest fires										
b. Stall-fed livestock rearing										
c. Sustainable use and marketing of non-timber forest products and medicinal plants										
d. Organic crop production										
e. Establishing small-scale enterprises										
f. Eco-tourism										
g. Awareness raising campaigns										
h. Other, namely:										
5. Your community is willing to give up their income from those activities that are believed to cause deforestation, such as:										
a. Fuelwood collection										
b. Agricultural expansion										
c. Jhum (shifting agriculture)										
d. Uncontrolled grazing										
e. Charcoal production										
f. Stone quarrying and coal mining										
g. Timber extraction										
h. Other, namely:										
<i>Institutional structure and transformations</i>	-4	-3	-2	-1	0	+1	+2	+3	+4	Don't know
6. The majority of the people in your community were fully aware of the Khasi hills REDD+ project and gave full consent before the project started.										

7. There are sufficient opportunities, e.g. in the form of consultation meetings, for local people to openly express their opinion about the project, even if their opinion is different from those of village headmen, chiefs of Himas, community facilitators, or project coordinators.							
8. Local people have the biggest say in deciding about the design of the project, e.g. in identifying the objectives and activities.							
9. Actors at the international level have too big an influence on the design of the project, e.g. in identifying the objectives and activities.							
10. Local people are the ones who lead the project.							
11. The project is expected to strengthen or even revive traditional Khasi institutions and practices.							
12. There is sufficient participation of women in the decision-making about the project.							
13. More participation of women is required in the decision-making about the project, not only in the village councils but also in the Hima dorbar.							
14. The project is building good links with existing government schemes such as the Basin and NABARD ⁴⁶ projects and Joint Forest Management schemes.							
15. The project needs more linking up with existing government schemes such as the Basin and NABARD projects and Joint Forest Management schemes.							
16. Linking up with existing government schemes such as the Basin and NABARD projects and possibly Joint Forest Management schemes threatens the project because it requires a lot of investment in time and resources, as well as changes in the traditional institutional structures to meet the government's requirements.							
17. The Federation (Synjuk) needs more technical support from one or more additional organization(s).							
18. More capacity-building and guidance of self-help groups and famers' clubs is needed for the project to succeed.							

⁴⁶ NABARD is the National Bank for Agricultural and Rural Development, which funds some of the village development plans under the REDD+ project (PDD, 2012).

<i>Carbon funds</i>	-4	-3	-2	-1	0	+1	+2	+3	+4	Don't know
19. The majority of the people involved in the project are aware of the concept of carbon funds.										
20. Carbon funds are key to the survival of the project.										
21. Carbon funds alone will provide a sufficient and reliable source of income to sustain the project in the long run.										
22. Carbon funds are likely to generate significant sums of money that can be used to fund most activities in the project.										
23. The Federation (Synjuk) and the Community Facilitators have created large expectations among local people regarding the income of money from carbon funds.										
24. Most local people are involved in the project because of the prospect of receiving money from carbon funds.										
25. People involved in quarrying and charcoal making will only shift to alternative livelihood options if they are compensated by means of money from carbon funds.										
26. The insecurity of carbon funding poses significant risk to the sustainability of the project.										
27. It will be very difficult to make carbon funds trickle down to the local people (self-help groups, farmers' clubs, etc.).										
28. The way in which the benefits from carbon funds in the project will be shared as per the current design is equitable.										
29. By having to engage with international organizations and companies, the selling of carbon credits poses a threat to the culture of the Khasis and their way of living.										
30. The way in which the project's carbon credits will be sold on the market is heavily influenced by local communities' views and wishes.										
31. Aspects/activities in the project that are considered important by companies interested in buying the project's carbon credits are generally also good for local communities.										
32. At present, the local project participants have too little knowledge about the carbon market.										

33. The project is much more geared toward the wishes of local communities than toward the demands of the carbon market, thereby running the risk of taking too less consideration of how the project sells on the carbon market.										
Development priorities	-4	-3	-2	-1	0	+1	+2	+3	+4	Don't know
34. The project is helpful in meeting development priorities in the region.										
35. The project is helpful in reducing poverty in the region.										
36. The restriction of use and access of (degraded) forests enforced by the project threatens local people's livelihood, for example by restricting access to fuelwood.										
37. Some activities under the project, such as the micro-enterprises established by self-help groups, are helpful to encourage development but are not directly linked to reducing deforestation or forest degradation.										
Monitoring	-4	-3	-2	-1	0	+1	+2	+3	+4	Don't know
38. The monitoring of forest carbon in the project is easy and straightforward, and requires very little time and resource investment.										
39. Meeting the criteria for receiving carbon funds poses a risk to the project, because it requires too much influence from technical experts.										
40. Meeting the criteria for receiving carbon funds means the project runs the risk of being too heavily geared toward these criteria rather than to the local needs.										
41. Receiving carbon funds means having to adhere to criteria set at the international level, which means the project is too much formed by international standards.										
42. The project's exact carbon storage, additionality, and prevention of leakage need to be more rigorously established for the project to be credible in its claim to store carbon and sell it on the market.										
43. Plan Vivo is too loose a standard to be able to convince buyers of carbon credits to use the project for offsetting their carbon emissions, which threatens the project's sustained income from selling carbon.										

<i>General</i>	-4	-3	-2	-1	0	+1	+2	+3	+4	Don't know
44. There are some people living in the project area who are opposed to the project.										
45. Opposition to the project is only caused by ignorance; once people are aware of the importance of reducing deforestation, they will become supportive of the project.										
46. So far, the project has been successful.										

Surveys and interview guides for chapter 5 - those that were part of CIFOR's Global Comparative Study - can be found in Brockhaus et al. (2014).

Summary

Despite the fifty years of global action to combat deforestation and forest degradation, the world is still losing its forests at great scale. This has many adverse consequences for human life as well as animal and plant species depending on forests for their survival. A recent governance initiative that has raised high expectations to address global deforestation is Reducing Emissions from Deforestation and forest Degradation (REDD+), negotiated under the United Nations Framework Convention on Climate Change (UNFCCC). The idea of REDD+ is to compensate developing countries for their forest-related carbon emission reductions. Through REDD+, forests are governed for their carbon content. I therefore see REDD+ as the embodiment of what I call a “carbonization” of forest governance. The attention and resources dedicated to REDD+ are unprecedented in the history of global forest governance. Numerous state and non-state initiatives are currently operationalizing and implementing REDD+ around the world. While REDD+ might help to simultaneously reduce climate change and global deforestation, governing forests for their carbon content might also negatively affect non-carbon forest services such as biodiversity conservation and the provision of local livelihoods. Since REDD+ came into existence in 2005, its expanded scope has substantially increased what is at stake and who has a stake in the process of carbonizing forest governance. A pertinent and timely question is, therefore: what are the consequences of this large-scale carbonization of forest governance?

This thesis analyzes this question, zooming in on the consequences of carbonization for four dimensions of multilevel forest governance, namely: 1) the complexity of the forest governance domain; 2) the sites of authority in forest governance; 3) the production and use of knowledge in forest governance; and 4) the use of policy instruments. More specifically, the thesis analyzes whether REDD+ leads to 1) a simplification of forest governance through a prime focus on carbon, or a focus on multiple carbon and non-carbon benefits; 2) a centralization or dispersion of authority in forest governance; 3) a privileging of scientific knowledge - what I call a technicalization - or a diversity in the production and use of knowledge; and 4) a primary reliance on market instruments - what I refer to as marketization - or reliance on a mix of market and non-market instruments.

Since changes in forest governance along these four dimensions represent wider phenomena in other environmental governance domains, this thesis contributes important theoretical and empirical insights into the changing nature of environmental governance. More specifically, I discuss whether REDD+ can be seen as a case of increased homogenization of environmental governance through simplification, centralization, technicalization, and/or marketization, and how we can extrapolate these findings to other domains of environmental governance.

Though a number of REDD+ guidelines and frameworks have been negotiated

under the UNFCCC, these are fairly open to interpretation. Hence, the consequences of carbonization depend on how REDD+ is being conceptualized and operationalized in specific instances at different levels of governance. This thesis therefore covers analyses of a variety of REDD+ policy debates and developments at the global and national level, as well as of the design of REDD+ at the project implementation level.

The research questions are as follows:

1. How does the carbonization of forest governance manifest itself at different levels, and with what consequences for multilevel forest governance?

2. What does this analysis of the consequences of carbonization reveal about the prospects of a homogenization of environmental governance?

This thesis employs discourse analysis as a key methodology. It uses discourses as proxies for how and with what consequences the carbonization of forest governance manifests itself. The thesis analyzes how REDD+ is being framed by policy actors and practitioners, and operationalized in policy, institutional and project developments and design. It relies on a variety of research approaches, and covers analyses of UNFCCC policy debates and developments around REDD+ measuring, reporting and verification (MRV) systems; an in-depth case study of India's national REDD+ strategy; an in-depth case study of the first REDD+ pilot project in India; and a cross-country comparative analysis of national REDD+ policy debates and developments in seven developing countries. Triangulation of data is established through reliance on multiple qualitative and quantitative research methods, including semi-structured interviews, surveys, reviews of primary and secondary literature, and direct and participant observation during field visits, project meetings and conferences.

Chapter 2 analyzes how carbonization manifests itself in UNFCCC policy debates and developments surrounding MRV systems that are centrally implicated in REDD+. This chapter shows that at the global level, REDD+ is framed as a mechanism to facilitate results-based compensation for carbon emission reductions, to be measured through national, state-based, expert-led MRV systems. The chapter argues that this may well induce a simplified focus on carbon, a technicalization of forest governance, and a centralization of authority in national state agencies responsible for measuring and accounting for forest carbon units. This might marginalize non-carbon forest services and empower certain groups of actors such as technical experts at the cost of, for example, local communities. The chapter also argues, however, that who will be empowered through REDD+ ultimately depends on the context-specific operationalization and implementation of REDD+ at the national and local level. As to the use of policy instruments, while MRV systems might be inspired by a neoliberal attempt to valorize

and commodify carbon, the question as to whether REDD+ should be financed through markets or funds remains severely contested in global policy debates.

Chapter 3 contains an in-depth case study of how carbonization manifests itself in the Green India Mission (GIM), the cornerstone of India's national REDD+ strategy. In particular, the chapter analyzes whether India's REDD+ strategy induces a simplified or complex forest governance domain in its focus on carbon and/or non-carbon benefits, and a centralization or dispersion of authority among national and sub-national state and non-state actors. It shows that the GIM frames REDD+ as an opportunity to synergistically generate carbon as well as non-carbon benefits, and promote a further devolution of authority in Indian forest governance to local communities. How this will be done, however, is not clarified in the GIM, which seems based on the assumption that enhancing forest carbon stock will automatically lead to the generation of non-carbon benefits such as biodiversity conservation and the provision of local livelihoods. Though often mentioned as one of the best examples of decentralized forest management approaches in the world, India's forest governance has a mixed implementation record in terms of empowering local communities. Furthermore, India has relatively little experience with monitoring forest services other than forest stock. Chapter 3 concludes that notwithstanding India's claim to be ready for REDD+, the prominent framing in the GIM of REDD+ as a synergistic and decentralized governance mechanism is not likely to be realized without significant investments in benefit-sharing mechanisms and biodiversity and community-based monitoring systems.

Chapter 4 presents the in-depth case study of the first REDD+ pilot project in India. The chapter analyzes the prominence of a variety of REDD+-related discourses among stakeholders and in project design. The chapter shows that the manifestation of carbonization at project level can be very different from the dominant framing of REDD+ at the global level as a carbon-centric, centralized and technocratic mechanism. Rather than focusing primarily on carbon, project stakeholders consider the generation of non-carbon benefits as the project's prime objective. They prefer the monitoring of the project's outcomes to be carried out jointly by technical experts and local communities, rather than through expert-led MRV systems. Furthermore, stakeholders prefer reliance on a mix of market- and fund-based sources of finance. Stakeholders' views are reflected in the project design. The project is accredited by Plan Vivo, a carbon standard that explicitly encourages the empowerment of local communities and the devolution of decision-making authority in its projects. The project case study shows how carbonizing forest governance might become a vehicle to generate multiple carbon and non-carbon benefits, diversify the production and use of knowledge and the types of actors involved therein, disperse authority among actors involved in forest governance, and diversify reliance on both market- and fund-based finances.

Chapter 5 contains a cross-country comparative analysis of how REDD+ is framed in the national political arena in seven countries: Cameroon, Indonesia, Nepal, Papua

New Guinea, Vietnam, Peru and Tanzania. It draws on the analytical framework developed in chapter 4 to analyze the prominence of REDD+-related discourses among national policy actors and in the Readiness Preparation Proposals, the national REDD+ policy documents prepared as part of the World Bank's Forest Carbon Partnership Facility program. The chapter shows that REDD+ is mostly framed as a mechanism to generate carbon *as well as* non-carbon benefits, both among national policy actors and in policy documents. Papua New Guinea's policy document is the only exception to this. Apart from Cameroon and Nepal, however, countries pay very little attention to the monitoring of non-carbon benefits. All countries, except (again) Papua New Guinea, lay out detailed plans to diversify the production and use of knowledge through the involvement of local communities in REDD+ MRV systems, but currently lack the institutional capacity to implement such plans. Given the lack of detailed plans to monitor non-carbon benefits and the lack of institutional capacity for non-carbon and community-based monitoring in most countries under study, a simplification and, to a lesser extent, a technicalization of national forest governance are possible consequences of carbonization. With regard to the sites of authority, almost all REDD+ policy documents plan for a national state agency to account for and distribute REDD+ payments, for example through a gradual scaling-up of sub-national accounting to the national level. This shows that a carbonization of national forest governance may promote a centralization of authority within national governments. There is strikingly little discussion of how to finance REDD+, both among policy actors and in REDD+ policy documents, making the consequences of carbonization for the use of policy instruments in national forest governance uncertain.

Chapter 6 draws out the main findings from the preceding chapters. In answering the first research question, I argue that carbonization of forest governance manifests itself differently at different levels of governance, with varying consequences for multilevel forest governance. Frequently, the framing of REDD+ at the national and project level is very distinct from the dominant framing at the global level with its prime focus on valorizing and commodifying carbon through expert-led MRV systems. The diversity in framings means that REDD+ does not (yet) promote a homogenization of multilevel forest governance. I also argue, however, that homogenization may still occur in the long run, due to the centralization of authority that countries envision in accounting for and distributing REDD+ payments, as well as countries' capacity gaps in non-carbon and community-based monitoring, which make a simplification and technicalization of national forest governance possible consequences of REDD+.

In answering the second research question, I contribute insights into the changing nature of environmental governance by focusing on 1) the sites of state and non-state authority; and 2) a potential homogenization of environmental governance policies and practices. Viewing REDD+ as part of a globalization trend, I engage in scholarly debates about the changing nature of governance in the context of globalization. The case of

REDD+ shows that, notwithstanding a globalizing trend, developing countries retain authority to design policies, but in diversified ways, in part due to differences in countries' capacity to engage in and influence global environmental governance schemes. As to whether or not a homogenization of environmental governance policies and practices is underway, I argue that though diversity in policies and practices exist, this goes hand in hand with - and sometimes even flows from - efforts to homogenize in order to measure and regulate environmental outcomes at central (global and/or national) levels. As such, in this age of increased globalization, the challenges facing global environmental governance lie not only in measuring and controlling environmental outcomes, but also in managing the diversity and fragmentation that arise from these efforts.

The methodological reflections in the concluding chapter revisit the use of discourse analysis, and reflect on the generalizability of the findings, both for the REDD+ governance domain and beyond. The thesis ends with a reflection on what a decade of REDD+ has yielded as well as a future outlook.

Samenvatting

Hoewel er al vijftig jaar op mondiaal niveau actie wordt ondernomen om ontbossing en bosdegradatie tegen te gaan, vindt er wereldwijd nog steeds grootschalig verlies van bossen plaats. Dit heeft vele negatieve gevolgen voor zowel mensen als planten en dieren, die afhankelijk zijn van bossen voor hun voortbestaan. Een nieuw beleidsmechanisme dat grote verwachtingen schept om wereldwijde ontbossing tegen te gaan, is de vermindering van emissies ten gevolge van ontbossing en bosdegradatie (REDD+) dat in onderhandeling is onder het raamverdrag van de Verenigde Naties inzake klimaatverandering (UNFCCC). REDD+ is bedoeld om ontwikkelingslanden te compenseren voor het verminderen van hun bosgerelateerde uitstoot van koolstofdioxide. Door middel van REDD+ worden bossen beheerd voor koolstofopslag. Ik zie REDD+ daarom als de belichaming van wat ik een “carbonisatie” noem van het bestuur en beheer van bossen. In de geschiedenis van internationaal bosbeleid zijn de aandacht en middelen die naar REDD+ uitgaan ongeëvenaard. Wereldwijd zijn er talrijke statelijke en niet-statelijke actoren actief in het operationaliseren en implementeren van REDD+. Hoewel REDD+ enerzijds zou kunnen helpen in het gelijktijdig terugdringen van klimaatverandering en wereldwijde ontbossing, kan anderzijds het bestuur en beheer van bossen voor koolstofopslag ook negatieve gevolgen hebben voor niet-koolstofgerelateerde functies van bossen, zoals het behoud van biodiversiteit en het voorzien in lokaal levensonderhoud. Sinds het ontstaan van REDD+ in 2005 is de omvang ervan fors uitgebreid. Dit heeft ervoor gezorgd dat wat er op het spel staat en wie er belang heeft in de carbonisatie van het bestuur en beheer van bossen aanzienlijk is toegenomen. Een relevante en actuele vraag is daarom: wat zijn de gevolgen van deze grootschalige carbonisatie van het bestuur en beheer van bossen?

Dit proefschrift onderzoekt deze vraag, waarbij wordt ingegaan op de gevolgen van carbonisatie voor vier dimensies van het meerlagig bestuur en beheer van bossen, namelijk: 1) de complexiteit van het bosbeleidsdomein; 2) de situering van gezag in het bestuur en beheer van bossen; 3) de productie en het gebruik van kennis; en 4) het gebruik van beleidsinstrumenten. Meer specifiek analyseert het proefschrift of REDD+ leidt tot 1) een simplificatie van het bestuur en beheer van bossen door een primaire focus op koolstof, of een focus op verscheidene koolstof- en niet-koolstofgerelateerde baten; 2) een centralisatie of verspreiding van gezag in het bestuur en beheer van bossen; 3) een bevoorrechtiging van wetenschappelijke kennis - wat ik vertechnisering noem - of een diversiteit in de productie en het gebruik van kennis; en 4) een primair gebruik van marktinstrumenten - wat ik vermarkting noem - of een combinatie van markt- en niet-marktgebonden instrumenten.

Omdat veranderingen in het bestuur en beheer van bossen langs deze dimensies bredere fenomenen representeren in andere milieubeleidsdomeinen, levert dit proefschrift belangrijke theoretische en empirische inzichten in de veranderende aard

van milieubeleid. Meer specifiek richt ik mij op de vraag of REDD+ kan worden gezien als een case van toenemende homogenisering van milieubeleid door simplificatie, centralisatie, vertechnering en vermarkting en hoe we deze bevindingen kunnen extrapoleren naar andere milieubeleidsdomeinen.

Hoewel er een aantal richtlijnen en raamwerken voor REDD+ door de UNFCCC overeengekomen zijn, is er vrij veel ruimte voor de interpretatie hiervan. Dit betekent dat de gevolgen van carbonisatie afhankelijk zijn van de manier waarop REDD+ wordt geconceptualiseerd en geoperationaliseerd in specifieke contexten op verschillende bestuursniveaus. Dit proefschrift bevat daarom analyses van een verscheidenheid aan beleidsdebatten en -ontwikkelingen op het gebied van REDD+ op internationaal en nationaal niveau, alsook een analyse van het ontwerp van REDD+ op project niveau.

De onderzoeksvragen zijn als volgt:

1. Hoe manifesteert de carbonisatie van bosbestuur en -beheer zich op verschillende niveaus en wat zijn de gevolgen voor het meerlagig bestuur en beheer van bossen?

2. Welk inzicht geeft deze analyse van de gevolgen van carbonisatie over het perspectief van een homogenisering van milieubeleid?

Een belangrijke methodologie in dit proefschrift is discoursanalyse. Ik maak gebruik van discourses als indicatoren om te analyseren hoe en met welke gevolgen de carbonisatie van bosbestuur en -beheer zich manifesteert. Het proefschrift analyseert hoe REDD+ wordt ingekaderd door beleidsactoren en uitvoerenden en hoe dit wordt geoperationaliseerd in beleids- en institutionele ontwikkelingen en in projectontwerp. Het past een aantal verschillende onderzoeksbenaderingen toe, zoals een analyse van beleidsdebatten en -ontwikkelingen in de UNFCCC rondom systemen voor het meten, rapporteren en verifiëren (MRV) van REDD+; een verdiepende casus van India's nationale REDD+ strategie; een verdiepende casus van het eerste REDD+ pilotproject in India; en een vergelijkingsanalyse van nationale beleidsdebatten en -ontwikkelingen rondom REDD+ in zeven ontwikkelingslanden. Triangulatie van data wordt bewerkstelligd door het gebruik van verschillende kwalitatieve en kwantitatieve onderzoeksmethoden, waaronder semi-gestructureerde interviews, enquêtes, analyse van primaire en secundaire literatuur en directe en participerende observatie tijdens veldbezoeken, projectvergaderingen en conferenties.

Hoofdstuk 2 analyseert hoe carbonisatie zich manifesteert in beleidsdebatten en -ontwikkelingen binnen de UNFCCC rondom MRV systemen, die een centrale plek innemen in REDD+. Dit hoofdstuk laat zien dat op internationaal niveau REDD+ wordt ingekaderd als een mechanisme om resultaatgerichte compensatie voor uitstootvermindering te faciliteren, gemeten door middel van nationale, op staten

gebaseerde MRV systemen die geleid worden door experts. Het hoofdstuk stelt dat dit mogelijk een gesimplificeerde focus op koolstof en een vertechnisering van het bestuur en beheer van bossen teweeg kan brengen. Daarnaast kan het leiden tot een centralisatie van gezag in nationale gouvernementele organisaties die verantwoordelijk zijn voor het meten en verantwoorden van de hoeveelheid koolstof in bossen. Dit kan niet-koolstofgerelateerde bosfuncties marginaliseren en de positie van bepaalde groeperingen, zoals technische experts, versterken ten koste van bijvoorbeeld lokale gemeenschappen. Het hoofdstuk stelt echter ook dat wiens positie door REDD+ wordt versterkt uiteindelijk afhangt van de context-specifieke operationalisering en implementatie van REDD+ op nationaal en lokaal niveau. Wat betreft het gebruik van beleidsinstrumenten zijn MRV systemen geïnspireerd op het idee om op neoliberale wijze koolstof te valoriseren en te commercialiseren. In internationale beleidsdebatten blijft desondanks de zeer omstreden vraag bestaan of REDD+ moet worden gefinancierd door middel van markten of fondsen.

Hoofdstuk 3 bevat een verdiepende casus over de wijze waarop carbonisatie zich manifesteert in de Green India Mission (GIM), de hoeksteen van India's nationale REDD+ strategie. Meer specifiek analyseert dit hoofdstuk of India's REDD+ strategie een gesimplificeerd of complex bosbeleidsdomein stimuleert in haar focus op koolstof en niet-koolstofgerelateerde bosfuncties en of het leidt tot een centralisatie of verspreiding van gezag onder nationale en subnationale statelijke en niet-statale actoren. Het laat zien dat de GIM REDD+ inkadert als een mogelijkheid om op synergetische wijze zowel koolstof als niet-koolstofgerelateerde bosfuncties te genereren en om een verdere decentralisatie van gezag naar lokale gemeenschappen te bewerkstelligen in het bestuur en beheer van bossen in India. Hoe dit zal worden gedaan wordt echter niet toegelicht in de GIM, welke gebaseerd lijkt te zijn op de veronderstelling dat het vergroten van de koolstofvoorraad in bossen automatisch zal leiden tot het genereren van niet-koolstofgerelateerde bosfuncties, zoals het behoud van biodiversiteit en het voorzien in lokaal levensonderhoud. Hoewel het bestuur en beheer van bossen in India vaak wordt gezien als één van de beste voorbeelden van gedecentraliseerd bosbeheer in de wereld, heeft het een twijfelachtige reputatie in het versterken van de rol van lokale gemeenschappen. Daarnaast heeft India weinig ervaring in het meten van bosfuncties anders dan bosbestanden. Ondanks India's bewering klaar te zijn voor REDD+ concludeert hoofdstuk 3 dat het niet waarschijnlijk is dat de dominante framing in de GIM van REDD+ als een synergistisch en gedecentraliseerd beleidsmechanisme wordt gerealiseerd zonder aanzienlijke investeringen in regelingen voor het verdelen van baten, in gemeenschapsgerichte meetsystemen en in systemen voor het meten van biodiversiteit.

Hoofdstuk 4 presenteert de verdiepende casus van het eerste REDD+ pilotproject in India. Het hoofdstuk analyseert de dominante verhaallijnen uit een verscheidenheid aan REDD+-gerelateerde discoursen onder belanghebbenden van het project en in het projectontwerp. Het hoofdstuk laat zien dat de manifestatie van carbonisatie op

projectniveau zeer verschillend kan zijn van de dominante framing op internationaal niveau, waar REDD+ wordt ingekaderd als een op koolstof gericht, gecentraliseerd en technocratisch mechanisme. In plaats van zich primair te richten op koolstof, beschouwen belanghebbenden van het project het genereren van niet-koolstofgerelateerde baten als het primaire doel van het project. Belanghebbenden hebben liever dat de uitkomsten van het project gezamenlijk worden gemeten door technische experts en lokale gemeenschappen dan door middel van MRV systemen die enkel geleid worden door experts. Daarnaast prefereren belanghebbenden dat het project wordt gefinancierd door middel van zowel markten als fondsen. De opvattingen van belanghebbenden worden weerspiegeld in het ontwerp van het project. Het project is geaccrediteerd door Plan Vivo, een koolstofstandaard dat expliciet nadruk legt op het versterken van de rol van lokale gemeenschappen en de decentralisatie van beslissingsbevoegdheid. De project casus laat zien hoe de carbonisatie van het bestuur en beheer van bossen een stimulans kan zijn voor het genereren van verschillende koolstof en niet-koolstofgerelateerde baten en voor het diversifiëren van de productie en het gebruik van kennis en de typen actoren die hierbij betrokken zijn. Ook kan carbonisatie op projectniveau een stimulans zijn voor het verspreiden van gezag onder actoren die betrokken zijn bij het bestuur en beheer van bossen en voor het diversifiëren van de financieringsbronnen van het project uit zowel markten als fondsen.

Hoofdstuk 5 bevat een vergelijkingsanalyse van hoe REDD+ wordt ingekaderd in de nationale politieke arena in zeven landen: Kameroen, Indonesië, Nepal, Papoea-Nieuw-Guinea, Vietnam, Peru en Tanzania. Het maakt gebruik van het analytische kader ontwikkeld in hoofdstuk 4 om de dominantie te analyseren van REDD+-gerelateerde discoursen onder nationale beleidsactoren en in de “Readiness Preparation Proposals”, de nationale REDD+ beleidsdocumenten die zijn opgesteld als onderdeel van het “Forest Carbon Partnership Facility” programma van de Wereld Bank. Het hoofdstuk laat zien dat door beleidsactoren en in beleidsdocumenten REDD+ voornamelijk wordt ingekaderd als een mechanisme om zowel koolstof als niet-koolstofgerelateerde baten te genereren. Het nationale beleidsdocument van Papoea-Nieuw-Guinea is de enige uitzondering hierop. Afgezien van Kameroen en Nepal geven landen desondanks weinig aandacht aan het meten van niet-koolstofgerelateerde baten. Alle landen, behalve (wederom) Papoea-Nieuw-Guinea, hebben uitgebreide plannen opgesteld om de productie en het gebruik van kennis te diversifiëren door lokale gemeenschappen te betrekken in REDD+ MRV systemen. Momenteel ontbreekt het deze landen echter aan institutionele capaciteit om deze plannen te implementeren. Het hoofdstuk stelt dat in de meeste onderzochte landen carbonisatie zou kunnen leiden tot een simplificatie en, in mindere mate, een vertechnisering van het bestuur en beheer van bossen op nationaal niveau. Dit komt door het gebrek aan gedetailleerde plannen voor het meten van niet-koolstofgerelateerde baten en het ontbreken van institutionele capaciteit voor gemeenschapsgesichte meetsystemen. Wat betreft de situering van gezag in het bestuur

en beheer van bossen bevatten bijna alle REDD+ beleidsdocumenten plannen om een nationale gouvernementele organisatie verantwoordelijk te maken voor het berekenen en distribueren van REDD+ vergoedingen, bijvoorbeeld door het geleidelijk opschalen van subnationale berekeningen naar nationaal niveau. Dit duidt erop dat de carbonisatie van het bestuur en beheer van bossen een centralisatie van gezag binnen nationale overheden kan stimuleren. Onder zowel beleidsactoren als in beleidsdocumenten is er opvallend weinig discussie over hoe REDD+ moet worden gefinancierd. Dit maakt de gevolgen van carbonisatie voor het gebruik van beleidsinstrumenten in nationaal bosbestuur en -beheer moeilijk te overzien.

Hoofdstuk 6 geeft de belangrijkste bevindingen van de voorgaande hoofdstukken weer. In het beantwoorden van de eerste onderzoeksvraag stel ik dat de carbonisatie van het bestuur en beheer van bossen zich verschillend manifesteert op verschillende niveaus, met uiteenlopende gevolgen voor het meerlagig bestuur en beheer van bossen. Dikwijls wijkt de framing van REDD+ op nationaal en project niveau af van de dominante framing op internationaal niveau waarbij de focus primair ligt op het valoriseren en commercialiseren van koolstof door middel van MRV systemen die door experts geleid worden. De diversiteit in de framing van REDD+ betekent dat REDD+ (nog) niet een homogenisering van meerlagig bestuur en beheer van bossen teweegbrengt. Ik stel echter ook dat op lange termijn een homogenisering nog steeds kan plaatsvinden door een centralisatie, simplificatie en vertechnisering van het nationale bosbestuur en -beheer als gevolg van REDD+. Dit komt door de centralisatie van gezag die landen beogen in het berekenen en distribueren van REDD+ vergoedingen, alsook hun gebrek aan capaciteit voor het meten van niet-koolstofgerelateerde baten en voor gemeenschapsgerichte monitoringssystemen.

In het beantwoorden van de tweede onderzoeksvraag draag ik bij aan inzichten in de veranderende aard van milieubeleid. Ik richt mij hierbij op 1) de situering van statelijk en niet-staatelijk gezag; en 2) een mogelijke homogenisering van milieubeleid en -praktijken. In het beschouwen van REDD+ als een globaliseringstrend meng ik mij in wetenschappelijke debatten over de veranderende aard van milieubeleid in de context van globalisering. De REDD+ casus laat zien dat ondanks de globaliseringstrend ontwikkelingslanden hun gezag behouden om beleid vorm te geven. Dit gebeurt echter op uiteenlopende manieren, onder andere door de verschillen in capaciteit van landen om deel te nemen aan en invloed uit te oefenen op internationale milieubeleidssystemen. Wat betreft de vraag of er een homogenisering van milieubeleid en -praktijken gaande is, stel ik dat de diversiteit in beleid en praktijken hand in hand gaat met - en soms zelfs voortvloeit uit - pogingen tot homogenisering om milieu-uitkomsten te meten en te reguleren op centraal (internationaal en/of nationaal) bestuursniveau. Dit betekent dat in deze tijd van toenemende globalisering de uitdagingen van milieubeleid niet enkel liggen in het meten en controleren van milieu-uitkomsten, maar ook in het beheren van de diversiteit en fragmentatie die voortkomen uit deze verrichtingen.

De methodologische reflecties in het afsluitende hoofdstuk gaan in op het gebruik van discoursanalyse en de generaliseerbaarheid van de bevindingen voor zowel het beleidsdomein van REDD+ als daarbuiten. Het proefschrift eindigt met een reflectie op wat een decennium van REDD+ heeft opgeleverd en schetst tenslotte een toekomstbeeld van REDD+.

WASS education certificate

Marjanneke J. Vijge
Wageningen School of Social Sciences (WASS)
Completed Training and Supervision Plan



Wageningen School
of Social Sciences

Name of the learning activity	Department/ Institute	Year	ECTS*
A) Project related competences			
Writing PhD proposal	Environmental Policy Group (ENP), WUR	2010	6
Participatory forest management as practice and performance	WASS, Forest and Nature Conservation Policy Group (FNP) summer school	2011	3
Indian Forest Congress	Indian Council of Forestry Research and Education, New Delhi, India	2011	1
Network Manager of REDD@WUR research project	WUR	2010-2013	4
Co-organizer of post-graduate course, symposium and authors' workshop REDD+SCIENCE+GOVERNANCE: Opportunities and Challenges	WUR	2012	5
Multidisciplinary perspectives on REDD+	Centre for Development and Environment (SUM), University of Oslo, Norway	2013	10
Visiting scholar at Center for International Forestry Research (CIFOR)	CIFOR, Forest and Governance Programme, Global Comparative Study on REDD+, Bogor, Indonesia	2014	6
B) General research related competences			
Executive Education Course on Sustainable Development Diplomacy	WUR, Fletcher School, Sustainability Challenge Foundation (SCF), Ministry of Agriculture, Nature and Food Quality (LNV), The Netherlands	2010	5
"Making REDD+ transparent: the contested politics of MRV systems"	Colorado Conference on Earth System Governance, Colorado State University, Fort Collins, USA	2011	1

“The transparency of REDD+: monitoring, reporting and verification as new sites of conflict”	Nature™ Inc? conference: Questioning the Market Panacea in Environmental Policy and Conservation, International Institute of Social Studies (ISS), The Hague, The Netherlands	2011	1
“Making REDD+ transparent: The politics of measuring, reporting and verification systems”	London School of Economics and Political Science (LSE), London, UK	2011	1
“Progress and performance of REDD+ in India: recent policy formulation and implementation & results-based finance”	CIFOR Global Comparative Study workshop: Governing national REDD+ and adaptation: politics and performance-based finance, Ouagadougou, Burkina Faso	2014	1
C) Career related competences/personal development			
Co-organizer of Earth System Governance workshop on accountability, legitimacy and democracy	Earth System Governance (ESG), WUR, The Netherlands	2010	1
Teaching assistant of MSc courses International Environmental Policy (ENP30306) and Environmental Policy Analysis and Evaluation (ENP34306), and for BSc course Governance for Forest, Nature and Biodiversity (FNP24306)	Environmental Policy Group (ENP), Forest and Nature Conservation Policy Group (FNP), WUR	2010-2013	1
Co-supervisor or second reader of 9 MSc theses	Environmental Policy Group (ENP), WUR	2011-2015	1
Guest lecturer on REDD+ in various MSc and international courses	WUR	2013-2015	1
Coordinator and main lecturer of MSc course International Environmental Policy (ENP30306)	Environmental Policy Group (ENP), WUR	2014	1
Project and time management	WUR	2015	1.5
Data management planning	WUR	2015	0.4
Total			50.9

*One credit according to ECTS is on average equivalent to 28 hours of study load

About the author

Marjanneke J. Vijge was born on the 29th of January 1986 in Maastricht. After completing her secondary education (Gymnasium) at Stella Maris College in Meerssen in 2004, she started studying International Development Studies at Wageningen University. In 2009 she graduated cum laude with a specialization in environmental policy. Her MSc thesis focused on the prospects of the reform of the international environmental governance system, exploring the causes of the absence of a World Environment Organization. During her studies, Marjanneke carried out internships with the UNDP-UNEP Poverty-Environment Facility in Nairobi and with the Foundation for Ecological Security, a non-governmental organization for community-based natural resource management in India.



Upon completion of her MSc, Marjanneke started working as junior researcher with the Environmental Policy Group at Wageningen University. During this time, she developed a PhD proposal with which she secured funding from Wageningen School of Social Sciences to carry out her PhD research. During her PhD, Marjanneke helped establish and became network manager of the REDD@WUR network, an interdisciplinary research project on Reducing Emissions from Deforestation and Forest Degradation (REDD+) at Wageningen University & Research Centre and beyond. Marjanneke has also been main lecturer and coordinator for the MSc course International Environmental Policy, co-supervisor and second reader of 9 MSc theses, and teaching assistant and guest lecturer in various MSc and international courses. In 2014 she was visiting scholar at the Center for International Forestry Research (CIFOR) in Bogor, Indonesia.

Marjanneke is (co-)author of 15 publications in the field of environmental governance. In 2012 she was one of the guest editors of an interdisciplinary journal special issue on REDD+. Marjanneke's broader field of interest concerns the balance between development and environmental concerns in developing countries. Her greatest passion is travelling to enjoy and help conserve the beauty of nature and people around the world.

In the last stage of her PhD, Marjanneke developed a post-doc proposal with which she secured funding from the Niels Stensen Fellowship. After her defense, Marjanneke will start her post-doc research in collaboration with the International Institute for

Environment and Development (IIED) in London and the UNDP-UNEP Poverty-Environment Initiative in Myanmar. Her research will focus on whether enhanced transparency leads to more sustainable and democratic governance of the extractive industry sector in Myanmar.

You may contact Marjanneke at marjanneke.vijge@gmail.com.

List of publications by the author

Peer-reviewed publications

- **Vijge, M.J.**, 2015. Competing discourses on REDD+: Global debates versus the first Indian REDD+ project. *Forest Policy and Economics* 56: 38-47. (Chapter 4 in this thesis)
- Gupta, A., Pistorius, T., **Vijge, M.J.**, 2015. Managing fragmentation in global environmental governance: the REDD+ Partnership as bridge organization. *International Environmental Agreements: Politics, Law and Economics*, DOI: 10.1007/s10784-015-9274-9.
- **Vijge, M.J.**, Gupta, A., 2014. Framing REDD+ in India: Carbonizing and centralizing Indian forest governance? *Environmental Science & Policy* 38: 17-27. (Chapter 3 in this thesis)
- Gupta, A., **Vijge, M.J.**, Turnhout, E., Pistorius, T., 2014. Making REDD+ transparent: The politics of measuring, reporting and verification systems. In: Gupta A., Mason M., (Eds.), *Transparency in Global Environmental Governance: critical perspectives*. Cambridge: MIT press, 181-201. (Chapter 2 in this thesis)
- Skutsch, M., Turnhout, E., **Vijge, M.J.**, Herold, M., Wits, T., Den Besten, J-W., Balderas, A., 2014. Options for a national framework for benefit distribution and their relation to community-based and national REDD+ monitoring. *Forests* 5: 1596-1617.
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- Gupta, A., Lövbrand, E., Turnhout, E., **Vijge, M.J.**, 2012. In pursuit of carbon accountability: the politics of REDD+ measuring, reporting and verification systems. *Current Opinion in Environmental Sustainability* 4(6): 726-731.
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Other publications

- **Vijge, M.J.**, 2014. De belofte van nieuw institutionalisme: een verklaring van de afwezigheid van een Wereld of Verenigde Naties Milieu Organisatie. *Res publica: revue de l'Institut Belge de Science Politique* 56(3): 403-405.
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- Sanford, C., **Vijge, M.J.**, 2008. IIED User Guide to Effective Tools for Environmental Mainstreaming: Kenya Case Study. Report prepared for the UNDP-UNEP Poverty-Environment Initiative, Nairobi, Kenya. <http://www.environmental-mainstreaming.org/documents/Kenya>.
- **Vijge, M.J.**, 2006. Mapping the Development Context of Rajasthan. Aravali Cell, Foundation for Ecological Security, Anand, India.

Article under review

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