

FLEGT and REDD+ synergies and impacts in the Congo Basin: lessons for global forest governance

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ABSTRACT

In the past four decades, a range of policies and governance mechanisms have been created to deal with complex problems associated with the use of the world's forests. Two of the most recent international policies are the European Union's Action Plan on Forest Law Enforcement, Governance and Trade (FLEGT) and its bilaterally negotiated Voluntary Partnership Agreements (VPAs), and the United Nations mitigation policy on Reducing Emissions from Deforestation and Forest Degradation (REDD+). The emergence of these policies with some overlaps brings into question the success of these policies: do they build effective and enduring forest governance in isolation or in coordination? Focusing on the Congo Basin countries of Cameroon and the Republic of the Congo, this doctoral research explored the synergies between and the impacts of FLEGT-VPA and REDD+ processes. The key lessons for the global forest governance mechanisms are discussed in this dissertation.

Theories and methods from the fields of forestry, social sciences and political sciences were used to answering the research questions. Comparative analysis was employed to study the interactions between FLEGT-VPA and REDD+ under varying socio-political conditions. Various methods were used during data collection, including in-depth expert interviews, content analysis of policy documents, and focus group discussions with local communities and indigenous peoples.

The study results suggest that institutional and policy factors, especially political culture (e.g. corruption and vested interests), are the most important and difficult to address causes of deforestation and forest degradation (paper I). Subsistence and commercial agriculture and legal and illegal logging remain important drivers of deforestation and forest degradation. To successfully address deforestation and forest degradation, policymakers must recognize the conflicting interests (conservation vs conversion) that the governments of the countries are facing.

This research found 13 cases of interactions and potential synergies between FLEGT-VPA and REDD+ (paper II). Both processes can support each other in areas such as safeguard mechanisms, information transparency, ensuring multi-stakeholder participation, monitoring and reporting and addressing drivers of forest loss (papers II & IV). The possibilities for the synergies between and potential impacts of FLEGT-VPA and REDD+ will eventually be limited by domestic political processes, institutional silos and the vested interests of powerful actors (papers III & IV). Thus, 1) transformational change is required to achieve multilevel coordination across all sectors that affect land use (from global to local); 2) national state and non-state actors as well as global proponents (e.g. EU, World Bank, UNREDD) and donors of the processes should adopt a holistic rather than a silos approach; and 3) the processes should look beyond timber legality and reducing CO₂ emission to recognize the significant role of tropical forests in providing non-carbon benefits.

The results point to the conclusion that fundamental governance reform and a change in incentive structures and enforcement will be needed for FLEGT and REDD+ to effectively contribute to the global efforts of reducing tropical deforestation. FLEGT and REDD+ and other global policies to reduce deforestation should be mainstreamed into national economic strategies to help tropical countries shift away from extractive scenarios, otherwise the processes will have only a marginal overall impact on protecting and conserving tropical forests.

Keywords: forest governance, regime interactions, drivers of deforestation, non-carbon benefits, political economy

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PREFACE

Various factors and perspectives motivated the research presented in this dissertation. I had witnessed how fast the forest cover in my village in southern Ethiopia disappeared due to urbanization, population growth and unsustainable resource extraction. I had also witnessed how policies and incentives to encourage foreign investment can be a major cause of environmental degradation in the part of the Great Rift Valley that runs through Ethiopia. The research was also motivated by contemporary academic and policy debates, such as those related to the unintended impacts of policy implementation, environmental policy coherence and integration. My placement as a researcher at the European Forest Institute (EFI) created an excellent opportunity for me to analyse the synergies among and impacts of international forest policies of high scientific and political importance, and thus make a modest contribution to solving these problems.

This study would have not been possible without the support of many people and organizations. First, I should like to express my sincere gratitude to my supervisor, Professor Markku Kanninen, for the independence, sufficient freedom and friendly working environment he has given me during my PhD study. I am particularly thankful to Dr Marcus Lindner. Your guidance, motivation and immense knowledge helped me throughout my study, from carrying out the research to writing this dissertation. No-one could have been a better advisor and mentor. Thank you very much, Marcus! I also thank my co-supervisor, Dr Fobissie Kalame, for encouraging me along the way. I am also grateful to the two pre-examiners, Professor Olli Saastamoinen and Dr Markku Simula, for reviewing this work and providing constructive criticism.

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I apologize to anyone I have forgotten to mention.

Joensuu, 16 November 2016
Yitagesu Tekle Tegegne

LIST OF ORIGINAL PAPERS

This thesis is based on the following original papers:

- I. Yitagesu T. Tegegne, Marcus Lindner, Kalame Fobissie, Markku Kanninen. 2016. Evolution of drivers of deforestation and forest degradation in the Congo Basin forests: exploring possible policy options to address forest loss. *Land Use Policy* 51: 312–324.
- II. Yitagesu T. Tegegne, Robert M. Ochieng, Ingrid J. Visseren–Hamakers, Marcus Lindner, Kalame Fobissie. 2014. Comparative analysis of the interactions between FLEGT and REDD+ regimes in Cameroon and the Republic of Congo. *International Forestry Review*, 16(6):602–614.
- III. Yitagesu T. Tegegne, Jo van Brusselen, Diana Tuomasjukka, Marcus Lindner. 2014. Proposing an indicator framework for Voluntary Partnership Agreement impact monitoring. *Ecological Indicators* 46: 487–494.
- IV. Yitagesu T. Tegegne, Sabaheta Ramcilovic–Suominen, Kalame Fobissie, Ingrid J. Visseren–Hamakers, Marcus Lindner, Markku Kanninen. 2017. Synergies among social safeguards in FLEGT and REDD+ in Cameroon. *Forest Policy and Economics* (Accepted).

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LIST OF MAIN ACRONYMS AND ABBREVIATIONS

| | |
|-----------|--|
| CACO-REDD | REDD+ Consultation Framework for Congolese Civil Society and Indigenous Peoples |
| CAR | Central African Republic |
| CfRN | Coalition of Rainforest Nations |
| COMIFAC | Central African Forest Commission |
| COP | Conference of Parties |
| DRC | Democratic Republic of Congo |
| EFI | European Forest Institute |
| ER-PIN | Emission Reduction Programme Idea Note |
| EU | European Union |
| FCPF | Forest Carbon Partnership Facility |
| FIP | Forest Investment Program |
| FLEGT | Forest Law Enforcement Governance and Trade |
| FPIC | Free, prior and informed consent |
| GCF | Green Climate Fund |
| GDP | Gross domestic product |
| IFF | Intergovernmental Forum on Forests |
| IPF | Intergovernmental Panel on Forests |
| IPCC | Intergovernmental Panel for Climate Change |
| MEFDD | Ministry of Forest Economy and Sustainable Development (Congo) |
| MINEPDED | Ministry of the Environment, the Protection of Nature and Sustainable Development (Cameroon) |
| MINFOF | Ministry of Forests and Wildlife (Cameroon) |
| NFMS | National Forest Monitoring Systems |
| NTFPs | Non-Timber Forest Products |
| PES | Payment for ecosystem services |
| REDD+ | Emission from Deforestation and forest Degradation |
| R-PIN | Readiness Plan Idea Note |
| R-PP | REDD+ Readiness Plan |
| SFM | Sustainable forest management |
| TLAS | Timber Legality Assurance System |
| UNCED | United Nations Conference on Environment and Development |
| UNFF | United Nations Forum on Forests |
| UN-REDD | United Nations REDD Programme |
| UNFCCC | United Nations Framework Convention on Climate Change |
| VPA | Voluntary Partnership Agreement |

TABLE OF CONTENTS

| | |
|--|----|
| ABSTRACT | 3 |
| PREFACE | 5 |
| LIST OF ORIGINAL PAPERS | 7 |
| LIST OF MAIN ACRONYMS AND ABBREVIATIONS | 8 |
| TABLE OF CONTENTS | 9 |
| 1. Introduction | 11 |
| 1.1. Global forest cover: continuing deforestation and forest degradation..... | 11 |
| 1.2. The Congo Basin forests: context and drivers of forest loss | 12 |
| 1.3. Policy responses to tropical forest decline | 14 |
| 1.3.1. The evolution of international forest policy responses..... | 14 |
| 1.3.2. Policy responses to illegal logging | 15 |
| 1.3.3. The climate change regime..... | 18 |
| 1.4. Linking global forest governance mechanisms at national level..... | 19 |
| 1.5. Study aims and research questions | 19 |
| 2. Theoretical and conceptual framework | 21 |
| 2.1. Overall framework | 21 |
| 2.2. Concept of governance architectures..... | 22 |
| 2.3. Global environmental governance: fragmentation and synergies | 22 |
| 2.4. Concepts and approaches used in specific studies | 23 |
| 2.4.1. Generic drivers of deforestation and forest degradation (Paper I) | 24 |
| 2.4.2. Concept of regime interactions (Paper II) | 25 |
| 2.4.3. Policy impact monitoring (Paper III) | 26 |
| 2.4.4. Social safeguards (Paper IV) | 26 |
| 3. Materials and Methods | 28 |
| 3.1. Study countries | 28 |
| 3.2. FLEGT–VPA and REDD+ processes in Cameroon..... | 29 |
| 3.3. FLEGT–VPA and REDD+ processes in Congo..... | 30 |
| 3.4. Data collection and analysis methods used in specific studies..... | 32 |
| 4. Results | 35 |
| 4.1. Drivers of deforestation and forest degradation (Paper I) | 35 |
| 4.2. Interactions between FLEGT–VPA and REDD+ processes (Paper II) | 37 |
| 4.3. Impacts of FLEGT–VPA (Paper III) | 38 |
| 4.4. Social safeguards of FLEGT–VPA and REDD+ (Paper IV) | 42 |
| 5. Discussion | 45 |
| 5.1. Drivers and policy impacts..... | 45 |
| 5.2. Synergies and trade-offs..... | 46 |

| | | |
|------|--|----|
| 5.3. | Monitoring policy impacts | 48 |
| 5.4. | Limitations of the study approach | 49 |
| 5.5. | Lessons learnt and future research needs | 50 |
| 6. | Conclusions | 53 |
| | References | 55 |

1. Introduction

1.1. Global forest cover: continuing deforestation and forest degradation

Forests cover about one third of the Earth's land surface (FAO, 2015) and are crucial for biological diversity and the provision of ecosystem services (Gupta et al., 2013; Hassan et al., 2009). Forty-four of the world's 3,999 million hectares of forest are located in countries classified as tropical, 30% are in boreal countries, and 26% are in temperate or subtropical countries (Table 1). Natural, undisturbed forests account for a third of the total forest area, while the planted forest area accounts for around seven per cent (FAO, 2015).

The 21st Conference of Parties (COP) of the United Nations Framework Convention on Climate Change (UNFCCC) in Paris (Paris Agreement) recognized the significant role that forests play in regulating climate change and providing non-carbon benefits. Forests harbour more than 60% of the world's terrestrial biodiversity (Hassan et al., 2009, p. 601) and store roughly 289 gigatonnes of carbon in their biomass alone (FAO, 2015; Köhl et al., 2015). Nonetheless, when forests are converted to other land uses – such as agriculture and urban development – or are disturbed by, for example, disease, wildfire or insects, they can also be a source of carbon emission to the atmosphere. Furthermore, the New York Declaration on Forests states that more than one fourth of the world's population depends on forest resources for fibre, food, water, medicines, fuel and income (UN, 2014). It is estimated that “more than three quarters of the world's accessible freshwater comes from forested catchments” (Hassan et al., 2009, p. 587). In addition, forests are used for the development of pharmaceuticals and as sites for recreational, cultural, spiritual and religious activities. With regard to the recreational use of forests, nature-based tourism has increased more rapidly than the general tourism market, with annual growth rates estimated to be in the range 10–30 % (Hassan et al., 2009). Finally, “wood and manufactured forest products add more than US\$ 450 billion to the world market economy annually, and the annual value of internationally traded forest products is between US\$ 150 billion to 200 billion” (Köhl et al., 2015, pp. 1–2). The forest sector offers employment to millions of individuals, providing another set of economic gains (Hassan et al., 2009).

Although forests play a major role in maintaining global environmental health and providing services to society, the world's forest area declined by about 129 million hectares between 1990 and 2015 (FAO, 2015). During the same period, the world's area of natural forest shrank by six per cent. The vast majority of natural forest loss is happening in the tropics, and the tropical forest is disappearing at an alarming rate. “The conversion of forests for the production of commodities – such as soy, palm oil and beef – accounts for roughly half of global deforestation” (UN, 2014, p. 1). Seventy-one per cent of all tropical deforestation between 2000 and 2012 was caused by large-scale commercial agriculture (Lawson et al., 2014). It is estimated that half of the total tropical deforestation between 2000 and 2012 was a result of illegal conversion for commercial agriculture (ibid). Small-scale farmers and agro-industrial and logging enterprises are the principal agents of tropical deforestation and forest degradation (Kissinger et al., 2012).

The loss of tropical forests and changes in land use and land cover across the tropics are considered one of the most pressing environmental problems of our time (IPCC, 2013; UN, 2014). Deforestation and forest degradation, which are responsible for about 10% of CO₂ emission worldwide, are important drivers of global warming (Achard et al., 2014). The Paris Agreement urges the international community to take immediate and ambitious action to halt

tropical deforestation and forest degradation. Over the last four decades, a wide range of legally binding and non-legally binding policy responses to the global environmental problems and their diverse causes have been created and implemented, whereas others are being negotiated (Eikermann, 2015; Rayner et al., 2010; Saastamoinen, 2009).

Table 1. Reduction of forest area from 1990 to 2015 in four global climatic domains (FAO, 2015).

| Forest area (x 1000 hectares) | | | | | |
|-------------------------------|-----------|-----------|-----------|-----------|-----------|
| Domain | 1990 | 2000 | 2005 | 2010 | 2015 |
| Tropical | 1,965,542 | 1,870,112 | 1,830,799 | 1,797,757 | 1,770,156 |
| Boreal | 1,219,309 | 1,219,820 | 1,218,856 | 1,224,873 | 1,224,452 |
| Temperate | 617,997 | 640,892 | 659,176 | 673,429 | 684,468 |
| Subtropical | 325,421 | 324,777 | 323,912 | 319,613 | 320,057 |
| Total | 4,128,269 | 4,055,602 | 4,032,743 | 4,015,673 | 3,999,134 |

1.2. The Congo Basin forests: context and drivers of forest loss

The Congo Basin forests contain the second largest area of dense tropical forest in the world, after the Amazon forest. The Congo Basin forests cover 300 million hectares of land (COMIFAC, 2013), representing 18% of the world's tropical forest area, and they are spread over six countries, namely Cameroon, the Central African Republic (CAR), the Democratic Republic of Congo (DRC), the Republic of Congo, Equatorial Guinea and Gabon (Figure 1). The dense rainforests of the Congo Basin sequester two thirds of the carbon stored in live vegetation in tropical Africa (COMIFAC, 2013). Approximately 100 million people inhabit the region, with an annual human population growth rate of about 2.5%. There are more than 150 different indigenous people groups, whose lives and wellbeing are intimately linked with the forest (COMIFAC, 2013). About 75 million people directly or indirectly depend on these forests for food and nutrition, shelter and traditional livelihoods (Megevand et al., 2013). In terms of biodiversity, the rainforests of the Congo Basin is the richest vegetation type in the African continent, containing about 60–70% of Africa's fauna and flora (COMIFAC, 2013).

Furthermore, the forests of the Congo Basin have considerable economic importance, through the export of timber and non-timber forest products (Nkem et al., 2010). Every year the governments of the six countries in the Congo Basin receive millions of US dollars as logging fees and export revenue. The formal and informal timber sector contributes about 10–15% of the regional GDP and is an important source of employment and foreign exchange (Megevand et al., 2013). In addition to tangible products, the Congo Basin forests also provide important ecosystem services including water flow regulation, soil and biodiversity conservation, and carbon sequestration.

The Congo Basin is still considered a high forest cover, low deforestation rate region (Megevand et al., 2013). Nonetheless, unsustainable utilization is putting increasing pressure on the Basin's forests, which has resulted in increasing rates of annual deforestation, namely from 0.05% in 1990–2000 to 0.09% in 2000–05 (COMIFAC, 2013). Other sources (e.g. FAO, 2015) give slightly higher figures of around 0.33% in 1990–2000 and 0.36% in 2005–10. The causes of deforestation and forest degradation are diverse and vary geographically. Agricultural expansion, urbanization and mining in forested areas are the principal direct drivers of deforestation, while unsustainable logging and fuel wood collection for charcoal are the major causes of forest degradation in the region (Céline et al., 2013; COMIFAC, 2013;

Hosonuma et al., 2012). The underlying causes of deforestation in the Congo Basin include population growth, poverty, formal and informal policy and institutional factors, and international market fluctuations (Céline et al., 2013; Megevand et al., 2013).

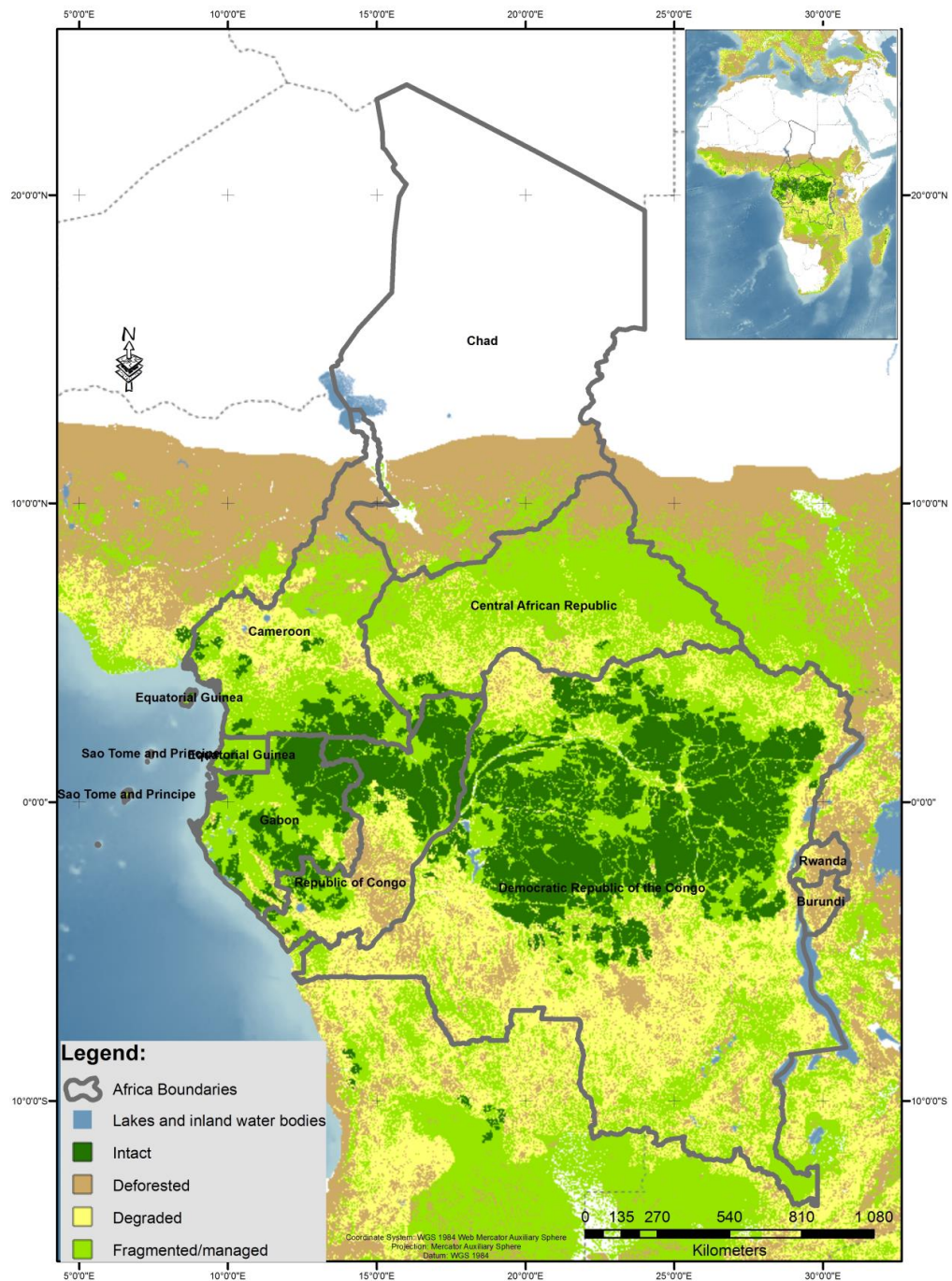


Figure 1. Map showing Congo Basin forests.

1.3. Policy responses to tropical forest decline

1.3.1. The evolution of international forest policy responses

The decline of the world's forests has attracted global political attention (Douglas and Simula, 2010; Kanninen et al., 2007). During the FAO's World Forestry Congress in Mexico in 1985, the Tropical Forestry Action Plan (TFAP) was created to combat deforestation. The TFAP was directed by the Food and Agriculture Organization (FAO) of the United Nations, in partnership with the World Bank, the United Nations Development Programme (UNDP) and the World Resource Institute (WRI). Over the course of 10 years, more than one hundred countries embarked on TFAP processes, and bilateral and multilateral donor agencies accepted it as a framework for their activities and funding related to tropical forests. However, the initiative failed to deliver the intended impacts and "FAO got a major part of the criticism" (Saastamoinen, 2009, p. 499). The TFAP was later replaced by the United Nations Conference on Environment and Development (UNCED).

In an effort to halt global deforestation, several attempts were made by international policymakers during the run-up to the 1992 UNCED to bring about the introduction of an international forest treaty at the conference, as well as through such forums as the Intergovernmental Panel on Forests (IPF), the Intergovernmental Forum on Forests (IFF) and the UN Forum on Forests (UNFF) (Eikermann, 2015; Humphreys, 2005; Mackenzie, 2012). The two forest outputs from the UNCED negotiations were the non-legally binding Authoritative Statement of Principles for Global Consensus on the Management, Conservation and Sustainable Development of All Types of Forests, and a separate chapter on "Combating Deforestation". According to Mackenzie (2012, p. 251), the outputs that emerged from UNCED "were little more than symbolic reform since their 'soft' rather than 'hard' legal status rendered enforcement impossible". The period 1992–95 was characterized by the change in the focus of the UN to develop coordinated policies to promote the conservation and sustainable management of all types of forests (Eikermann, 2015). In 1995, the UN Commission on Sustainable Development (UN CSD) created the IPF, with a two-year lifespan. The IPF was concluded in 1997 with several proposals for actions related to, inter alia, sustainable forest management (SFM). One of the outcomes of the IPF was the creation of an IFF. The work of the IFF was concluded in 2000 with a report that noted the need for an international agreement on forests and made more than 270 proposals for actions related to SFM. In 2000, the UN Forum on Forests (UNFF) was created. Its mandate was to, for example, strengthen political commitment and action at all levels to effectively implement the sustainable management of all types of forest and to achieve the shared global objectives on forests, to enhance the contribution of forests to the achievement of the internationally agreed development goals. In 2007, the seventh session of the UNFF agreed on the Non-Legally Binding Instrument on all Types of Forest. Nonetheless, "UNFF is characterized by limited effectiveness" (Mackenzie, 2012, p. 251).

Furthermore, intergovernmental and bilateral and multilateral development organizations gave billions of US dollars as official development assistance to promote SFM and trigger forest sector reforms in tropical countries (Rayner et al., 2010). However, most of these efforts have not been successful in reaching the desired policy goals (Humphreys, 2005). In the 1990s, private sector and environmental non-governmental organizations developed sustainable forest management certification schemes such as the Forest Stewardship Council (FSC). The

ability of these voluntary certification schemes to properly address the underlying causes of tropical deforestation – which is mainly linked to poor governance – has been considered limited (Damette and Delacote, 2011).

The past decade has been marked by innovative proposals and further attempts to address the disappearing tropical forest, focusing mainly on forest governance mechanisms (Broekhoven, 2012; Corbera & Schroeder, 2011). Such mechanisms have been considered a key pillar of a long lasting solution to halt tropical deforestation and forest degradation, and they vary in substantive focus (e.g. from climate change mitigation to global trade), geographic scale (global to regional) and institutional type (e.g. from intergovernmental/multilateral to bilateral).

Two international forest policies¹ have recently been developed to address the loss of tropical forests in developing countries: 1) the EU's Action Plan on Forest Law Enforcement, Governance and Trade (FLEGT); and 2) the UNFCCC's policy on Reducing Emissions from Deforestation and Forest Degradation, and the role of conservation, sustainable forest management and enhancement of forest carbon stocks in developing countries (REDD+). Although FLEGT and REDD+ are two distinct policies that have developed in different political arenas (Broekhoven and Wit, 2014), they can be considered efforts to coordinate human actions towards reducing the loss of tropical forests. For that and other reasons, they can be regarded as global forest governance mechanisms, which include all the global environmental and social governance arrangements (Bernstein and Cashore, 2010).

The complex nature of the causes and drivers of tropical forest loss, and the varied contexts in which they arise, requires the application of the full range of available policy mechanisms. Rayner et al. (2010, p. 16) states that the “complex forest problems require synergetic approaches involving a wide range of policy instruments”. Thus, both legally and non-legally binding governance mechanisms and other forms of rules, authority and steering are potentially useful for achieving sustainable forest management and reducing the loss of tropical forests. An exclusive focus on one or the other overlooks the critical importance of developing a portfolio of mutually supportive policy instruments (Gupta et al., 2013; Leonard et al., 2016). To that end, there is an urgent need to understand how global forest governance mechanisms that have been built up over the last two decades interact and reinforce each other to contribute to meeting the complex challenges facing the tropical forests.

1.3.2. Policy responses to illegal logging

Illegal logging and the international trade in illegal timber are major problems that have negative impacts on governance, economies, societies and the environment (Tacconi, 2007). They pose significant obstacles to the achievement of sustainable development (Lawson et al., 2014). Illegal logging also causes massive losses of tax revenues, amounting to an estimated US\$ 5 billion a year. Trade in illegally harvested timber is cited as a major source of income for criminal activities (Nellemann and INTERPOL, 2012). Moreover, illegal logging is a major factor in tropical forest loss with the highest rates of deforestation taking place in the regions where illegal logging is at its worst – the Amazon Basin and Southeast Asia (Hoare, 2015; Lawson et al., 2014).

¹ Policy refers to a ‘course of action or principle adopted or proposed by government, party, business or individual’ (Gupta et al., 2013, p. 34).

Illegal logging is an endemic problem in the African continent. Lawson (2014a) estimated that up to 70% of all harvested and exported timber from the Republic of Congo was informal or illegal (including logging in breach of various regulations by licensed logging concessionaires), while in Cameroon 33% of the total log production was illegally harvested (Hoare, 2014). In Ghana, 70% of the total harvest during 1996–2005 was illegally cut (Hansen and Treue, 2008). Lawson (2014b) notes for the Democratic Republic of Congo that nearly 90% of logging is illegal or informal. The issue is also prevalent in Tanzania, where at least US\$ 58 million are lost each year due to illegal logging practices, including harvesting, fraud, evasion and forgery of documents (Kweka et al., 2011).

The severity and consequences of illegal logging and the trade in illegal timber first received international recognition at the G8 meeting in 1998. The G8 Forestry Action Programme on Forests of 1998 identified illegal logging as one of the five areas of particular importance for addressing loss of global forests. This helped catalyse many subsequent policy developments such as Forest Law Enforcement and Governance (FLEG) and the EU FLEGT Action Plan. The FLEGT Action Plan is an expression of policy commitments by the EU and its member states to tackle the global problem of illegal logging (European Commission, 2007). The key difference of the FLEGT Action Plan from the previous processes (e.g. FLEG, Criteria and Indicators) was the addition of “T” (i.e. “Trade”). This highlights the role of market leverage, along with governance and enforcement issues, as a way to promote the sourcing of and trading in legal and sustainable timber. The Action Plan defines a set of processes and measures to prevent illegal timber from entering the EU market, and by so doing the Action Plan aims to improve the supply of legal and sustainable timber (*ibid*). The Action Plan has acknowledged the shared responsibility of exporters and importers to address illegal logging as a global problem by putting in place both supply and demand side measures.

Voluntary Partnership Agreements (VPAs) between the EU and the governments of non-EU timber producing and exporting countries form the cornerstone of the EU FLEGT Action Plan. A VPA is a bilateral trading agreement that becomes legally binding upon signature (European Commission, 2007). Through a VPA, the EU and the partner country agree to establish and maintain the support necessary to guarantee that the timber and timber products exported to the EU are from legal sources and have a so-called FLEGT license. This shows that all relevant laws of the producer country have been complied with (*ibid*). An important element of the VPA mechanism is the Timber Legality Assurance System (TLAS), which sets out the tracking procedures by which a partner country will ensure that timber products originate from legal sources.

The first VPA to be formally concluded was with Ghana in late 2009. In the second quarter of 2016, six VPAs between the EU and timber producing countries were finalized: Ghana, Cameroon, Liberia, Republic of Congo, the Central African Republic, and Indonesia. These countries are in the process of preparing for VPA implementation (Figure 2). Negotiations are ongoing with nine other tropical countries, and several others have also expressed interest in VPAs.

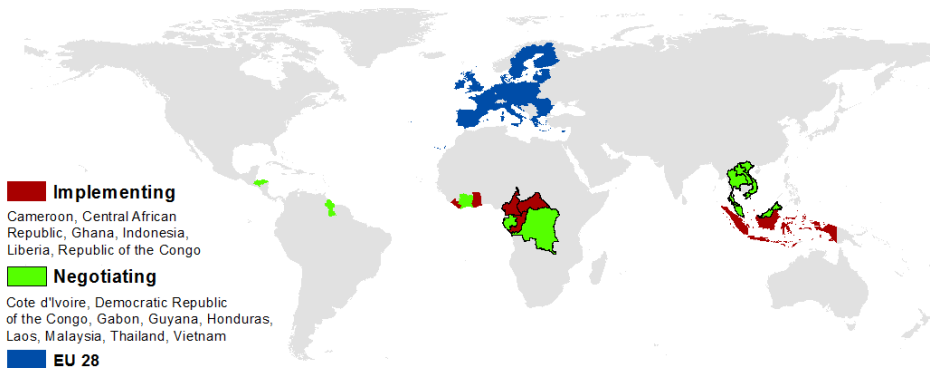


Figure 2. The FLEGT–VPA process in different countries.

The demand side measure of the EU FLEGT Action Plan is the EU Timber Regulation (EUTR), which places the responsibility for the legality on businesses that import timber and timber-related products into the EU (i.e. importers/suppliers). The EUTR came into force in March 2013. It applies to timber originating from non-EU countries as well as from the EU domestic market. The EUTR represents the demand side measure of the FLEGT Action Plan, whereas VPAs aim at the supply (export) side. VPAs and EUTR are meant to reinforce each other (Jonsson et al., 2015).

In addition to measures introduced by the EU, similar policies have been implemented by major timber consuming countries such as the United States, Australia and Japan. In 2008, the USA amended the Lacey Act to prohibit the import of a wider variety of prohibited plants and plant products, including products made from illegally logged wood. The EUTR and the amended Lacey Act prohibit trade in plants that are harvested in violation of the national laws of producer countries (Jonsson et al., 2015). Like the EUTR and the Lacey Act, Australia's Illegal Logging Prohibition Regulation 2012 prohibits the import of illegally sourced wood into the Australian market. The Australian law also applies to Australian-sourced wood and wood products. In 2006, the Japanese government introduced the Green Purchasing Law, which requires verification and proof of the legal and sustainable origin of wood and wood products placed in the Japanese market (the "Goho wood" system). Together, these policies have been portrayed as forming a newly emerging global legality verification regime (Overdevest and Zeitlin, 2014).

The emergence of these global mechanisms to address illegal logging has encouraged scholars to examine and understand their effectiveness in reaching the desired objectives and impacts on forest dependent communities (Jonsson et al., 2015; Overdevest and Zeitlin, 2016). Such an understanding could enable the EU, the USA, Australia, Japan and timber exporting countries to investigate the match and/or mismatch between policy goals and policy tools (i.e. policy instruments and means proposed to achieve the desired goals). However, complex interactions among mechanisms and policies aimed at combating illegal logging and other related efforts (e.g. REDD+; large-scale agricultural policies) make assessing the effect of individual policies (e.g. a VPA process) a challenge. This requires robust and context specific approaches and assessment frameworks that are still lacking.

1.3.3. The climate change regime

The international community recognizes the role of tropical forests in climate change (Angelsen et al., 2012b; Sills et al., 2014) and therefore pays them considerable attention, notably under the UNFCCC. Forests are both carbon sinks and sources of emissions of carbon dioxide. Stern (2006) emphasizes cutting emissions from deforestation in developing countries as one of the most cost-effective ways to mitigate climate change.

In 2005, the Coalition of Rainforest Nations (CfRN) proposed an initiative² called RED (Reducing Emission from Deforestation). This proposal to reduce emission from deforestation through a market-based approach highlighted the failure of the UNFCCC and the Kyoto protocol to address global emission from deforestation. Two years of discussion expanded the RED concept to include forest degradation, an idea strongly supported by the Central African Forest Commission (COMIFAC) (Gupta et al., 2013). In 2007, at COP-13 REDD (Reducing Emission from Deforestation and Forest Degradation) was included in the Bali Road Map as one of the building blocks of a post-2012 climate change regime. Since then, the scope has evolved to include the role of conservation, sustainable forest management and enhancements of forest carbon stocks. In 2010 in Cancun, the evolved approach was termed REDD+. The new climate agreement reached at COP-21 of the UNFCCC in Paris features a very explicit standalone article devoted to REDD+ (see Article 5 of the Paris Agreement, UNFCCC, 2015). This sends a clear message that REDD+ and forests will play a major role in combatting climate change.

Based on the COP-13 decision in Bali, REDD+ can be broadly defined as “local, national and global actions whose primary aim is to reduce emissions from deforestation and forest degradation and enhance forest carbon stocks in developing countries” (Angelsen et al., 2012, p. 32). The underlying rationale of REDD+ is to make forests more valuable than alternative land-uses by creating a financial value for the carbon stored in them. In turn, countries participating in the REDD+ mechanism would receive performance-based payments for verified emission reductions from deforestation and forest degradation and from removals of CO₂ from the atmosphere by forest sinks.

Several tropical forest countries are participating in the REDD+ process, and many REDD+ pilot projects are being implemented through a number of bilateral and multilateral initiatives (Sills et al., 2014). The two main multilateral initiatives are the Forest Carbon Partnership Facility (FCPF) coordinated by the World Bank and the United Nations REDD programme (UN-REDD). Multilateral financial sources for REDD+ include the Forest Investment Program (FIP), the World Bank’s Carbon Fund and the UNFCCC’s Green Climate Fund (GCF). Germany, Japan, Norway, the UK and the USA are the main bilateral providers of REDD+ finance.

The REDD+ mechanism is considered one of the cost effective ways to mitigate climate change (Angelsen et al., 2012b; Gupta et al., 2013). Nonetheless, there are still numerous unresolved controversies around REDD+, for example national design and implementation, land tenure, carbon rights, drivers of deforestation, safeguards and technical challenges, such

² “Official expressions of support for the inclusion of an agenda item on ‘Reducing emissions from deforestation in developing countries: approaches to stimulate action’ have been sent by the following Parties: Bolivia, Central African Republic, Chile, Congo, Costa Rica, Democratic Republic of the Congo, Dominican Republic and Nicaragua.” (UNFCCC, 2005, p. 11)

as monitoring, reporting and verification (Sills et al., 2014; Sunderlin et al., 2015; Visseren-Hamakers et al., 2012).

1.4. Linking global forest governance mechanisms at national level

As indicated in the previous sections, a range of policies and governance mechanisms have been created to deal with complex problems associated with forests. The emergence of these regimes – with some overlaps and duplications – raises the question whether these different regimes act in isolation or in coordination in ways that build effective and enduring forest governance (Gupta et al., 2016; Keohane & Victor, 2011; van Asselt & Zelli, 2014). To meet the key governance challenges, such as tenure insecurity, inequitable benefit sharing and lack of coordination across ministries, problem-focused learning about policy interactions and synergistic coordination that promotes legitimate, meaningful and effective forest governance are required (Orsini et al., 2013; Rayner et al., 2010). Although international forest policymakers, practitioners and actors have long recognized this problem and have repeatedly called for it to be addressed (Eikermann, 2015; Gupta et al., 2016; Morin and Orsini, 2013; Ochieng et al., 2013; Somorin et al., 2016), identifying and promoting effective policy coherence, regime coordination and collaboration remains a difficult task.

The fact that the broad objectives of FLEGT and REDD+ are similar (i.e. reducing forest loss and promoting sustainable forest management) and that they are simultaneously being implemented in several tropical countries, raises the question how these policies influence one another's development and implementation (Savaresi, 2013; Young, 2002). Because of the multi-scalar nature of forest governance, interactions and synergies between FLEGT and REDD+ may take place not only at the global level, but also at the national and subnational level (Smouts, 2008; Bernstein & Cashore, 2010). Nevertheless, this approach to policy learning and interactions between FLEGT and REDD+ at the national level is still poorly known (Duguma et al., 2014; Somorin et al., 2016). A recent evaluation of the FLEGT Action Plan (European Commission, 2016) also underlines close cooperation and integration between FLEGT and REDD+ to effectively combat global deforestation and forest degradation. Knowledge of how they interact is necessary to harmonize the aims, objectives and implementation of the processes and to develop synergies and coordination between them (Broekhoven and Wit, 2014; Leonard et al., 2016; Ochieng et al., 2016). It would be highly beneficial to speed up the national and location-specific implementation of FLEGT and REDD+ and increase their cost-effectiveness (McDermott et al., 2012; Rey et al., 2013).

1.5. Study aims and research questions

The overarching objectives of this research were to investigate the potential impacts of and synergies between FLEGT–VPA and REDD+ processes at the national level, and to draw lessons from the implementation of the FLEGT–VPA and REDD+ processes in the Congo Basin to effectively inform the ongoing implementation of global forest governance mechanisms. The research was conducted in two forest-rich African countries: Cameroon and Republic of the Congo.

The specific objectives were to:

- I. Analyse the evolution of the direct and indirect causes of land use/land cover change and explore possible policy options to address forest loss (paper I).

- II. Analyse how international forest governance mechanisms interact and influence each other at the national level and compare such interactions between countries (paper II).
- III. Develop an indicator-based framework to assess the social, economic, environmental and governance impacts of FLEGT at the national level (paper II & III).
- IV. Investigate how social safeguards are addressed and respected in the implementation of international forest governance mechanisms (paper IV).

The specific research questions were:

- I. *What is driving deforestation and forest degradation in the Congo Basin countries?* This question was further elaborated into the following sub-questions: What do experts at the national level think of the drivers of deforestation and forest degradation and their evolution? What should and must be done at the national level to curb deforestation? And how and where should governments focus their limited resources and capacity to address deforestation and forest degradation?
- II. *How do international forest governance mechanisms influence one another's implementation at the national level?* Here, the specific research sub-questions included: What are the convergence and divergence points of FLEGT–VPA and REDD+ processes at the national level? How could FLEGT–VPA and REDD+ reinforce each other, leading to better forest governance? What are the challenges that may stand in the way of enhancing the synergies between FLEGT–VPA and REDD+ at the national level?
- III. *How can the social, economic, environmental and governance impacts of FLEGT–VPA be monitored and reported at the national level?* This question was addressed further in the following sub-questions: What are the short-term and long-term potential impacts of FLEGT–VPA? How can the intended and unintended impacts be assessed and monitored at the national level? What are the possible challenges of effective VPA impact monitoring at the national level?
- IV. *What are the relationships between social safeguards for REDD+ and the promotion of forest governance within the FLEGT–VPA process?* Here, specific research questions included: What are the commonalities and differences between the social safeguard approaches of FLEGT–VPA and REDD+ in Cameroon, and how can these be explained? What are the potential synergies between the social safeguard approaches of FLEGT–VPA and REDD+, and what challenges stand in the way of realizing them?

Together papers I–IV contribute to a broader understanding of the drivers, interactions and impacts of FLEGT–VPA and REDD+ in the Congo Basin countries and elsewhere in the tropics. Theories and methods from the fields of forestry, social sciences and political sciences were used to develop this research, resulting in a multidisciplinary approach to answering the research questions. Comparative analysis was employed to study the interactions and impacts of FLEGT–VPA and REDD+ under varying socio-political conditions, thus providing information that is useful for a wide range of similar situations elsewhere in the tropics.

2. Theoretical and conceptual framework

2.1. Overall framework

A wide range of policies and regimes have been initiated to address global forest decline. It is no longer apposite to focus exclusively on one regime/policy in isolation (van Asselt, 2014). Instead, acknowledgment of the relevance of other regimes in addressing a problem and the degree of overlap and interactions need to be taken into account (Biermann et al., 2009; Gehring & Oberthür, 2009; Gupta et al., 2016). To that end, there is an urgent need to understand the nature and consequences of the overlaps and relationships between interacting policies (e.g. FLEGT and REDD+). Such overlap and relationships between different elements of policies and regimes can result in both synergetic and conflictive outcomes and influences (Gehring and Oberthür, 2009; Keohane and Victor, 2011). They can also pose a threat to the coherence and desired impacts of global forest governance (van Asselt, 2014).

This dissertation is composed of four interlinked papers (Figure 3). Paper I explores the causes and drivers of tropical forest loss and presents the reasons why countries in the Congo Basin are actively engaging in global forest governance mechanisms, namely FLEGT and REDD+. Paper II assesses the overlaps, synergies and interactions between FLEGT–VPA and REDD+ at the national level. Paper III identifies the key impacts of FLEGT–VPA implementation and suggests a method for practical and country-level FLEGT–VPA impact monitoring. The results presented in paper II indicate that for better integration and coordination between FLEGT–VPA and REDD+ there is an urgent need for an in-depth analysis of problem-focused, on-the-ground interactions, particularly on cross-cutting issues that interest FLEGT–VPA and REDD+ actors. Finally, in response to this need, paper IV analyses the synergies among safeguards of FLEGT–VPA and REDD+ and explores how the mechanisms can support each other in designing and implementing respective safeguard systems.

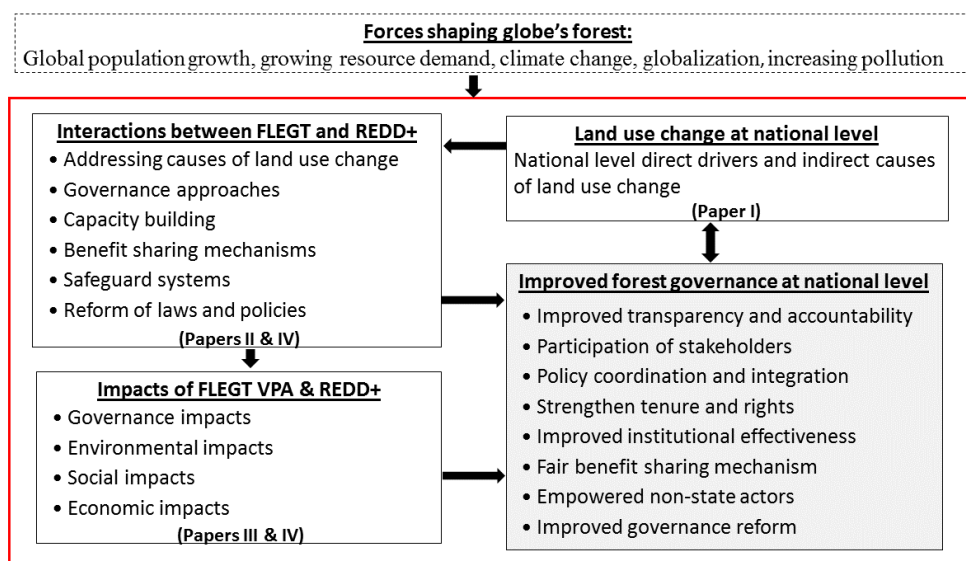


Figure 3. Links between the various components of the study.

2.2. Concept of governance architectures

Governance has become an increasingly important concept in recent decades, as efforts to improve government and public sector performance in solving societal problems turned out to be inadequate (Gupta et al., 2013). Consequently, there has been increasing recognition of the role of non-state actors (such as the private sector, civil society organizations and civilians) in solving societal problems and creating societal opportunities. Important aspects of the broadened meaning of governance are multi-actor governance and multilevel governance (Larson and Petkova, 2011).

In the forest sector, the issue of governance is gaining currency and a variety of governance related problems can be identified, for example a lack of transparency and accountability, and corruption and weak enforcement capacity (Larson and Petkova, 2011). These governance problems can lead to, for example, high levels of illegal forest activities (Nellemann and INTERPOL, 2012) and negative environmental impacts (Alemagi and Kozak, 2010) and socioeconomic impacts (Eba'a Atyi et al., 2013). Myers et al. (2006) defined forest governance as the decisions and actions that remove the barriers and install the policy and institutional systems that spread local forestry successes. The main aim of good forest governance is to guarantee fair decision making and benefit sharing so as to ensure sustainable forest management. However, good forest governance alone cannot prevent the ongoing loss of tropical forests: what is needed are appropriate governance reforms across all sectors that have impacts on forests.

There is no internationally agreed definition of global governance. Finkelstein (1995, p. 369) defines it as "... governing, without sovereign authority, relationships that transcend national frontiers. Global governance is doing international what governments do at home." Biermann et al. (2009, p. 15) define global environmental governance as "the overarching system of public and private institutions active in a given issue area of world politics [such as protection of the environment]. This system comprises organizations, regimes, and other forms of principles, norms, regulations, and decision making procedures."

2.3. Global environmental governance: fragmentation and synergies

As mentioned, governments and international organizations have produced a wide range of legally binding and non-legally binding policies or regimes for managing global environmental problems (e.g. climate change) and their diverse causes (Eikermann, 2015; Rayner et al., 2010). The present research examined how these policies and regimes interact, influence and reinforce each other, as well as their actual and potential synergies, conflicts and impacts. The impacts of and interactions between policies often depend on the overall political and institutional setting in which the interacting policies or regimes exist and interact (Biermann et al., 2009; Gupta et al., 2016; Keohane & Victor, 2011; Orsini et al., 2013). The institutional setting varies depending on three forces: the decision making system, and the core rules (and principles) and coalition of actors (Gupta et al., 2016; Keohane & Victor, 2011). These forces help to account for variation in institutional outcomes and relationships, from synergetic (or full integration) to conflictive (fragmentation) (Biermann et al., 2009; Keohane & Victor, 2011). The degree of outcomes (and fragmentation) affect institutional performance (Biermann et al., 2009; Isailovic et al., 2013).

Following an extensive review of the burgeoning body of literature, this research drew on a typology developed by Biermann et al. (2009) to assess 1) how synergetic or fragmented

FLEGT–VPA and REDD+ processes are, and the causes of this; and 2) how this compares across countries. Biermann et al. (2009) identified three attributes to assess the types of fragmentation between policies (Table 2): (1) level of intuitional integration and overlaps in decision-making systems; (2) extent to which core norms conflict; and (3) existence of actor constellations (i.e. which actors support which policy process). Following these criteria, the authors distinguish three types of fragmentation, namely synergetic, cooperative and conflictive fragmentation:

- Synergetic fragmentation occurs when interacting policies or regimes are defined and managed by core (global, regional and/or national) institutions that provide “effective and detailed general principles that regulate the policies in distinct yet substantially integrated institutional arrangements” (Biermann et al., 2009, p. 20).
- Conflictive fragmentation occurs when policies or regimes (a) are hardly connected and are managed by different institutions (or different state ministries) that have unrelated decision-making procedures; (b) have conflicting or inconsistent sets of principles, norms and rules; and (c) major (state and non-state) actors support different policies and have conflicting interests.
- In between the two is a cooperative fragmentation, which occurs when (a) interacting regimes are defined and monitored through different institutions with loosely integrated and cross-referenced decision-making procedures; (b) core norms are not in conflict; and/or (c) there is some level of cooperation between major actors.

Such relationships and influences can occur at different scales (from global to national to sub-national), but the types and degrees of influences is more evident between two policies and regimes in the same issue area (e.g. FLEGT and REDD+) (Biermann et al., 2009; Gupta et al., 2015). Furthermore, differentiating the types of influences as such enables an investigation of possible political, legal and institutional strategies to move away from what Biermann et al. (2009) termed conflictive fragmentation.

Table 2. Framework for assessing the types and degrees of fragmentation in global environmental governance (Modified after Biermann et al., 2009).

| Criteria | Synergetic | Cooperative | Conflictive/ fragmented |
|---|--|--|---|
| Institutional integration | One core institution, with other institutions being closely integrated | Core institutions with other institutions that are loosely integrated and cross-referenced | Different, largely unrelated institutions |
| Norm^a conflicts | Core norms of institutions are integrated | Core norms are not conflicting | Core norms conflict |
| Actor^b constellations | All relevant actors support the same institutions | Some actors remain outside main institutions, but maintain cooperation | Major actors support different institutions |

^a Refers to the norms, principles and rules (e.g. legal frameworks) of interacting institutions.

^b Includes state and non-state actors.

2.4. Concepts and approaches used in specific studies

2.4.1. Generic drivers of deforestation and forest degradation (Paper I)

Academic research on drivers of deforestation has yielded some noticeable contributions in the field of forest land use change (Amacher et al., 2009; van Kooten & Folmer, 2004). One such contribution is the forest transition theory (Mather, 1992). Forest transition theory provides an overview of forest decline in the long run. Whereas forest land areas initially retreat at a high speed, at same point depletion starts slowing down (Figure 4). There is even a critical point at which the process of depletion reverses and forest land is recovered by expanding into new areas. Three broad pathways of forest transition are distinguished in academic literature: the economic development path, the forest scarcity path (see Rudel et al., 2005 for detailed explanation) and a combination of multiple pathways (for detailed explanation, see Meyfroidt & Lambin, 2011, p 347–349; Gupta et al., 2013, p. 27).

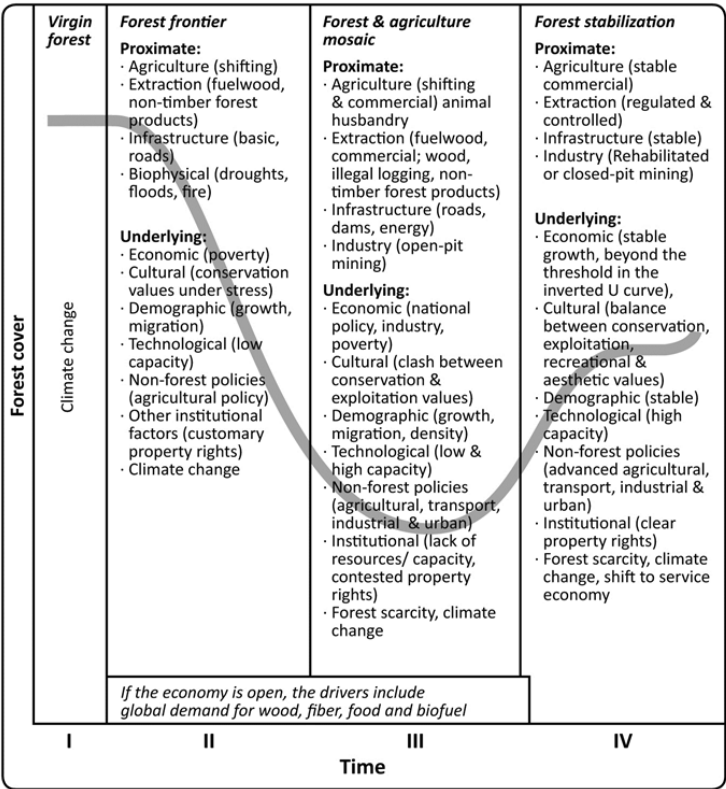


Figure 4. Drivers and forest transition (adopted from Gupta et al., 2013).

The research of Geist & Lambin (2002) on direct drivers, indirect causes and agents remains the key point of departure to understand what drives tropical deforestation. Paper I uses the often-cited theoretical framework that Geist & Lambin (2002) employed to systematically identify the possible drivers and causes underlying deforestation in the Congo Basin. Geist & Lambin (2002) classified the generic drivers of deforestation and forest degradation into two classes (Figure 4). First, direct or proximate drivers directly induce agents (e.g. small-scale farmers) to engage in deforestation and forest degradation, which results in the loss of carbon stocks. Geist and Lambin grouped direct drivers into three general categories: 1) expansion of subsistence and commercial agricultural (also supported by (Céline et al., 2013; Megevand et

al., 2013; Meyfroidt et al., 2014; Weatherley–Singh and Gupta, 2015), 2) wood extraction (Mitchard and Flintrop, 2013), and 3) infrastructure extension (Laurance et al., 2009; Laurance, 2009). Second, indirect or underlying causes indirectly shape the direct drivers and via that contribute to deforestation and forest degradation. The main indirect causes include population growth (also supported by DeFries et al., 2010; Gupta et al., 2013; Megevand et al., 2013), technological, policy and institutional factors (Angelsen et al., 2012b; Kissinger et al., 2012; Wehkamp et al., 2015), economic factors (Megevand et al., 2013; Schueler et al., 2011) and cultural factors. Whereas direct drivers are national to local in scope, indirect causes can be global (e.g. international demand for tropical forest goods and services), national (e.g. political will (or lack thereof) of the government) or local (e.g. poverty, attitude) (Gupta et al., 2013).

Drivers of deforestation and forest degradation are context-specific and vary across regions and countries (Gupta et al., 2013); they include cattle ranching in Brazil, subsistence agriculture and fuelwood in Africa (Megevand et al., 2013) and commercial agriculture in Asia (Hosonuma et al., 2012; Meyfroidt et al., 2014). Taking this situation as a starting point, paper I contributes to the existing literature by analysing policy documents and the opinions of experts to investigate the evolution of direct drivers and causes of deforestation and forest degradation in Cameroon and the Congo.

2.4.2. Concept of Institutional interactions (Paper II)

An analysis of the interactions between REDD+ and FLEGT–VPA processes in Cameroon and the Republic of Congo was guided by the theoretical perspectives of regime interaction proposed by Gehring and Oberthür (2009). The framework identifies four causal mechanisms through which institutional interplay can occur (Figure 5; please see Gehring & Oberthür (2009) for a detailed discussion of mechanisms of institutional interaction). The first causal mechanism – cognitive interaction – mirrors institutional learning, since for example “the members of an institution may discover, and decide to adopt, an institutional innovation introduced within another institution” (ibid, p. 133). The authors identify two ideal types of cognitive interaction: a policy model and a request for assistance. Policy model interaction occurs when the target regime unintentionally uses institutional innovations or ideas developed by the source regime. A request for assistance occurs when one regime intentionally requests the other regime to adapt.

The second causal mechanism – interaction through commitment – occurs when commitments made in the source regime induce stakeholders to modify their preferences regarding issues related to another regime. Gehring and Oberthür (2009) identified two ideal types of interaction through commitment based on differences in the membership, objectives and governance instruments of the interacting regimes:

- Jurisdictional delimitation occurs when regimes address similar issues and have similar membership but different objectives.
- Additional means of implementation happen when one of the regimes having similar membership and pursuing the same objective provides additional instruments or means for implementing commitments in the other regime.

The third causal mechanism is behavioural interaction. Here, the source regime triggers behavioural changes that affect the implementation of the target regime. The fourth causal mechanism is impact-level interaction that occurs when a regime's impact on its ultimate target or goal directly influences the ultimate target or goal of the other regime provided there is a

linkage in the ultimate target of the two regimes (Gehring and Oberthür, 2009).

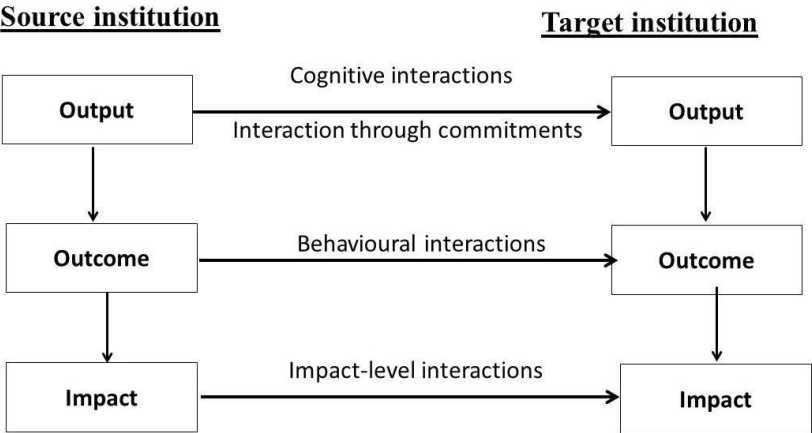


Figure 5. Conceptual framework for a systematic analysis of the interactions between international forest regimes (based on Gehring & Oberthür, 2009).

2.4.3. Policy impact monitoring (Paper III)

Monitoring the efficiency of a VPA and its impact is one of the activities assigned to the joint EU–(VPA) partner country committees in charge of overseeing the implementation of the VPA. Given the FLEGT Action Plan’s overarching aim of reducing poverty, VPAs include a specific requirement to monitor the social, economic and environmental impacts of the agreement on the life of local and indigenous communities (Brack and Léger, 2013). Assessment of VPA impacts involves analysing, monitoring and managing the intended and unintended consequences, both positive and negative, of VPA intervention and any change processes induced by the VPA.

VPA impact monitoring is a tool for assessing the effectiveness of a VPA in achieving its objectives. As such, it should enable the EU and partner countries to test the assumptions underlying the VPAs. Examples of such assumptions are that greater transparency, improved accountability and better law enforcement will lead to improvements in forest condition and livelihoods, or that VPA implementation will lead to increased revenue from taxes and duties and to improved access to EU timber markets.

There is no single agreed upon approach to developing an indicator framework for an impact monitoring process; as such a system should vary according to the local context and the type of issue or policy it deals with. However, some general lessons can be drawn from the analysis of existing monitoring initiatives. The practical knowledge in this paper was therefore mainly gathered by reviewing and analysing such initiatives that have developed indicators and/or indicator frameworks and the processes behind them (e.g. Proforest, 2013; Kishor and Rosenbaum, 2012; FAO and PROFOR, 2011; ITTO, 2005; WRI, 2009). Important inferences have also been drawn from analysis of the content of official documents such as EU FLEGT Action Plan, the VPA texts and FLEGT policy briefs.

2.4.4. Social safeguards (Paper IV)

The theoretical framework for paper IV was derived from the growing body of literature on local social aspects in forest policy and forestry. The paper presented a list of issues and concerns, also derived from a literature review, that should be included in any social safeguards approach. Scholarly literature identified three important social issues and concerns associated with the implementation of forestry policies: rights to access and tenure insecurity (Awono et al., 2013; Sunderlin et al., 2014); inadequate avenues for indigenous peoples and local communities' participation (Chhatre et al., 2012); and inequitable benefit sharing and adverse impacts on livelihoods (Awono et al., 2013; Blom et al., 2010; Hayes & Persha, 2010). FLEGT Action Plan (European Commission, 2007) and REDD+ related policy documents (e.g. Cancun safeguards 1–5, UNFCCC, 2011) also spell out the importance of tenure clarification, social benefits and equitable benefit sharing, and full and effective participation. Fobissie et al. (2012) and Fobissie (2014) identified similar social concerns in Cameroon. To analyse and compare social safeguards approaches under FLEGT–VPA and REDD+ in Cameroon, the list of social risks and concerns identified from extensive review of literature on social safeguards (e.g. Awono et al., 2013; Blom et al., 2010; Chhatre et al., 2012; Chomba et al., 2016; Dunlop & Corbera, 2016; Hayes & Persha, 2010; Sunderlin et al., 2014) was reformulated to cover the requirements and assumptions of the FLEGT–VPA and REDD+ safeguards. The three social issues related to safeguards considered in paper IV are 1) full and effective participation of local communities and free, prior and informed consent (FPIC); 2) land and forest tenure; and 3) social benefits and benefit sharing.

3. Materials and Methods

3.1. Study countries

Cameroon and the Republic of the Congo (Congo) (Figure 6) are lower middle income countries (Table 3) and their economies are highly dependent on natural resource extraction – especially mining and timber harvesting. Cameroon has a population of 22.82 million with a population density of 414 people per square kilometre, in 2014, it had an annual GDP growth rate of 5.9%. Congo has a population of 4.56 million with a population density of 12 people per square kilometre and, in 2014, a GDP growth rate of 6.5%.

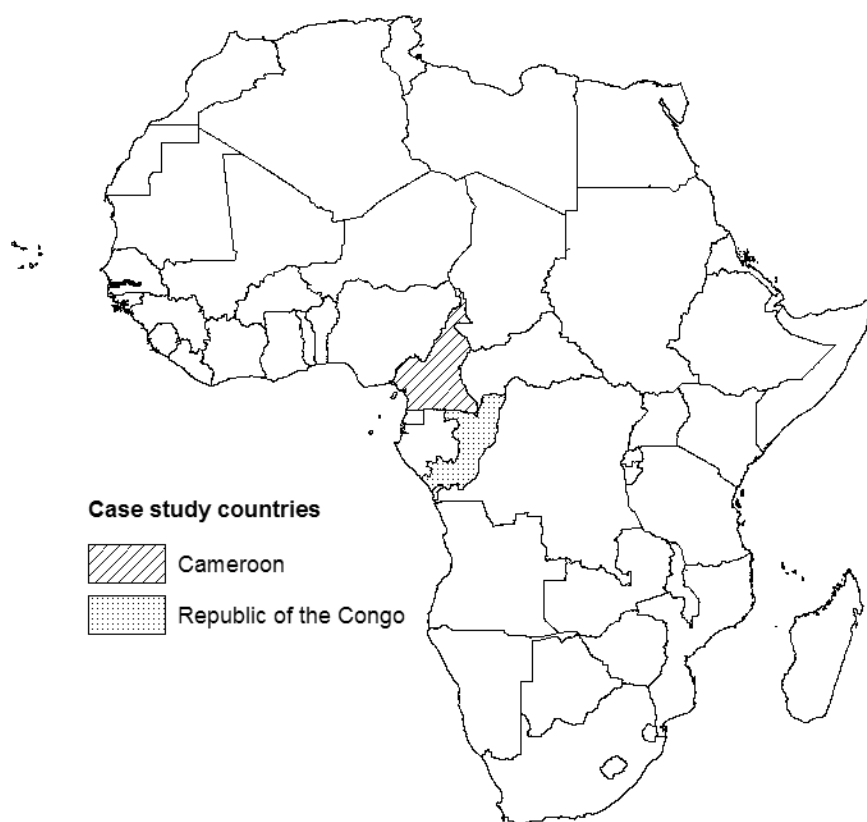


Figure 6. Location of case study countries.

About 18.8 million hectares of Cameroon are covered by forest, which sequesters about 2.5 million tonnes of carbon in above- and below-ground biomass (FAO, 2015). The forest is made up of two major types: dense forests and other forests. Dense forests are estimated to cover 17 million hectares. The main forest type is rich forest (covering more than 80% of wooded area), 73% of which is designated for production (COMIFAC, 2013). About 75% of Cameroon's forests are subjected to intense pressure, and deforestation is mainly occurring in the southwest, a biodiversity hotspot (Céline et al., 2013). In 1990–2000 and 2000–05 Cameroon had a gross deforestation rate of around 0.1% and 0.17%, respectively (COMIFAC, 2013).

Congo has one of the greatest tropical rainforests in Africa, covering more than 22 million hectares (FAO, 2015), which provides refuge for a multitude of flora and fauna species. Primary forests comprise 52% of the total forest area, whereas secondary forest and swamp forest cover 4% and 44%, respectively, of the total forest area. The prevailing forest type is humid dense forest, especially in the northern part of the country; in the south there are both savannahs and dense forests. The rate of deforestation remains low with gross annual deforestation rates estimated at 0.08% and 0.07% for the periods 1990–2000 and 2000–2005, respectively (COMIFAC, 2013).

Table 3. Land area, population and GDP of Cameroon and Congo (FAO, 2015; World Bank, 2014)

| | Cameroon | Republic of the Congo |
|---|---|--|
| Total land area | 47 million ha | 34 million ha |
| Total forest area | 18.8 million ha (40 % of total land area) | 22.3 million ha (65.4% of total land area) |
| Gross deforestation rate | | |
| • 1990–2000 | 0.10(±0.05) | 0.17(±0.14) |
| • 2000–05 | 0.08(±0.02) | 0.07(±0.16) |
| Total population in 2014 | 22.82 million | 4.56 million |
| Population density | 414 people/km ² | 12 people/km ² |
| Percentage of population below poverty line | 28% | 33% |
| GDP in 2014 | US\$ 32.55 billion | US\$ 14.14 billion |
| GDP per capita in 2014 | US\$ 1,350 | US\$ 2,680 |

3.2. FLEGT–VPA and REDD+ processes in Cameroon

FLEGT–VPA process in Cameroon

Formal negotiations between the EU and Cameroon started in 2007 and continued until 2009. The signing of the FLEGT–VPA was done in 2010 and ratified into national law in 2011. The ministry in charge of the FLEGT–VPA in Cameroon is the Ministry of Forests and Wildlife (MINFOF), and several institutions have been created to negotiate and implement the Cameroon VPA (Table 4). The aim of the Cameroon VPA is to ensure that all timber is legally sourced, transported and exported, and to promote sustainable forest management that supports the livelihoods of local populations. It is also focused on strengthening forest governance, promoting Cameroon’s timber products, improving Cameroon’s competitiveness in international markets, encouraging investments in sustainable forest management and strengthening the capacity of forest stakeholders (ibid). The VPA process in Cameroon is in the implementation phase; that is, it is developing a timber legality assurance system (TLAS) and methods of monitoring the impacts of the FLEGT–VPA.

REDD+ process in Cameroon

Cameroon is a member of two multilateral REDD+ initiatives: the Forest Carbon Partnership Facility (FCPF) of the World Bank (since September 2010) and the UN’s Collaborative Programme on Reducing Emissions from Deforestation and forest Degradation in developing countries (UN–REDD) (since November 2011). The country’s Readiness Plan Idea Note (R–PIN) was validated in 2008 and the national REDD+ Readiness Plan (R–PP) was approved in

2013. Cameroon is in the first phase of the REDD+ process. In 2015, Cameroon submitted an Emission Reduction Program Plan Idea Note (ER-PIN) to the Carbon Fund of the World Bank, which was rejected by the participants in the Carbon Fund. The country submitted a revised ER-PIN in May 2016. Cameroon is also, for example, revising forestry and mining codes, building the capacity of different stakeholders and establishing reference levels. The Cameroonian REDD+ process involves both state and non-state actors (Table 4) and is coordinated by the Ministry of the Environment, the Protection of Nature and Sustainable Development (MINEPDED).

3.3. FLEGT-VPA and REDD+ processes in Congo

FLEGT-VPA process in Congo

To ensure the legal exploitation of forests, the government of Congo began VPA negotiations with the EU in June 2008. Congo signed the VPA with the EU in May 2010, making Congo the first Central African country to sign a VPA with the EU. The Ministry of Forest Economy and Sustainable Development (MEFDD) negotiated the VPA process and is responsible for implementing it. The VPA process in Congo is currently (November 2016) being implemented, and the country is engaged mainly in developing a timber legality assurance system (TLAS).

REDD+ process in Congo

Congo is a member of both the World Bank's FCPF (since 2008) and the UN-REDD programme (since 2012). The country began its REDD+ readiness activities in 2008 by submitting its R-PIN to the FCPF as a REDD+ pilot country. The latest version of Congo's R-PP was approved in 2011. The R-PP outlines, among other things, the country's intention to carry out analytical studies on national drivers of deforestation and the possible options for the development of a legal and institutional framework for REDD+ (MEFDDE, 2016). In 2011, the UN-REDD Programme Policy Board identified Congo as a priority country in Africa, and in October 2012 the country signed an agreement to establish a UN-REDD National Programme. Congo's ER-PIN was approved and validated in 2014 (MEFDDE, 2016).

In Congo, REDD+ is managed by MEFDD and the National REDD+ Coordination (CV-REDD) is tasked with coordinating and implementing a nationwide REDD+ strategy. The national REDD+ Committee is responsible for steering the REDD+ process and coordination across important sectors. The REDD+ Consultation Framework for Congolese Civil Society and Indigenous Peoples (CACO-REDD) is responsible for the engagement of civil society and indigenous peoples in the REDD+ process. The CACO-REDD Steering Committee has 29 members: 16 members from civil society and 13 members representing indigenous peoples (MEFDDE, 2016).

Table 4. Key stakeholders of and institutions established for FLEGT and REDD+ processes in Cameroon and Congo (source: paper II).

| Regime | Key stakeholders and institutional arrangements | | Role | Coordinating ministries |
|------------------------|---|--|---|-------------------------|
| Cameroon | | | | |
| VPA | Stakeholders | Representatives from various ministries, parliament, private sector and civil society. | | |
| | Institutions | Joint implementation council | Facilitate and evaluate the implementation of VPA process | |
| | | Joint Monitoring Committee | Ensure and facilitate the monitoring and evaluation of implementation of VPA | |
| | | National Stakeholder Committee | Facilitate active participation of different stakeholders in the VPA process | |
| REDD+ | Stakeholders | Government ministries, parliamentary, regional political bodies, research, civil society, international organizations and development partners | | |
| | Institutions | REDD+ Steering Committee | Formulate policy, provide strategic directions on REDD+, and decision making | |
| | | REDD+ Technical Secretariat | Oversee day-to-day activities of REDD+ | |
| | | REDD+ national coordination | Develop and implement the national REDD+ strategy; assist with the various activities of the Technical Secretariat. | |
| Congo | | | | |
| VPA | Stakeholders | Government, civil society and private sectors | | |
| | Institutions | Joint Implementation Committee | Oversee and facilitate the implementation of the VPA | |
| | | Multi-stakeholder Technical Secretariat | Facilitate the multi-stakeholder dialogue | |
| | | National Consultation Group | Facilitate the negotiation phase of the VPA process | |
| REDD+ | Stakeholders | Government, civil society, indigenous people and private sector | | |
| | Key institutions created | National REDD+ Committee | Define overall vision and strategic options for REDD+ | |
| | | National REDD+ Coordination | Oversee the day-to-day activities of REDD+ at the national level | |
| | | REDD+ Departmental Committees | Implement REDD+ at the local level | |
| MEFDD coordinates both | | | | |

3.4. Data collection and analysis methods used in specific studies

General

A mix of qualitative and quantitative research methods was adopted. Qualitative research techniques (e.g. in-depth interviews) allow respondents to express themselves freely, which enables the elicitation of a comprehensive view and insights into the setting of a problem. Another qualitative research technique employed was content analysis of relevant official and policy documents (Bryman, 2008). The results of the analysis were used to develop protocols for interview and questionnaire surveys.

Quantitative research techniques (e.g. rating factors on Likert scales or responses to pre-formulated questions) were used to gather quantifiable responses (see paper I). The interpretation of data and results was performed using different theoretical standpoints. The research can therefore also be described as methodological and theoretical triangulation, as it employed a “between-method approach” at different stages of research (Creswell, 2007). The data were analysed using descriptive statistics.

Paper I: Evolution of drivers of deforestation and forest degradation

For paper I, the data collection was carried out through 1) an extensive review of the scientific literature and an analysis of relevant sectoral strategies and national land use policies and 2) in-depth expert interviews. A snowball approach (Miles and Huberman, 1994) was used to recruit a total of 50 respondents (30 in Cameroon and 20 in Congo) (Table 4). The respondents were asked about current and emerging, direct and indirect drivers of deforestation and forest degradation; and policy options to address forest loss in both countries.

In April–June 2013, most of the experts were interviewed face-to-face in English in Cameroon, whereas the interviews in Congo were mainly conducted in French. The interviews were recorded with respondent’s consent and translated into English (where needed). The respondents were asked to weigh the drivers of deforestation and forest degradation on a five-point Likert scale ranging from not at all important (1) to very important (5) to indicate, determine and demonstrate the perceived level of the importance of various statements (Bryman, 2008). The respondents made quantitative estimates of direct and indirect drivers in the questionnaire and described their reasoning and argumentation during the interviews. The questionnaire was prepared in English and then translated into French. Finally, the gathered data were analysed through descriptive statistics to determine the numbers and percentages of the respondents sharing any given views and opinions.

Paper II: Linkages between FLEGT–VPA and REDD+

For paper II, an extensive review of official documents (including policy briefing notes, R–PP, R–PIN and VPA texts) was conducted. The results of the literature review and policy document analysis were used to prepare a semi-structured interview. Second, in-depth multi-stakeholder interviews with 30 experts from state and non-state organizations involved in the FLEGT–VPA and REDD+ processes in Cameroon and the Republic of Congo were conducted. All interviewees from both countries were asked nearly the same set of questions. The face-to-face expert interviews were conducted in March–May 2013 and recorded with the consent of the interviewee. The aim of the interview survey was to obtain information about: existing and anticipated, synergetic and disruptive interactions between FLEGT and REDD+; and

strategies to enhance synergies and mitigate disruptive interactions between the policy instruments of FLEGT–VPA and REDD+. The questions were open-ended to allow the interviewees to express their personal experiences and perceptions of the most important issues identified from the review of literature and policy documents. Follow-up questions were asked for further elaboration. Responses were analysed through descriptive statistics to determine the numbers and percentages of the interviewees sharing any given views and opinions.

Paper IV: Social safeguard approaches of FLEGT–VPA and REDD+

An extensive review of scientific and grey literature, including policy documents, briefing notes and policy updates, was carried out. The literature review provided important information that was used to create a protocol for the interview survey. This enabled the collection of more specific and relevant data for the study. The second step was to gather information through expert interviews. A snowball approach (Miles and Huberman, 1994) was used to define relevant interviewees from state and non-state actors. Thirty-seven respondents representing governmental, national and international civil society, donor and technical partners, and academic and research institutes participated in the interview survey. The respondents were first contacted by email, phone or skype and were then interviewed in face-to-face discussions in Cameroon. These interviews took place in September–December 2015.

To investigate the matches and mismatches between policy plans and communities' expectations of social safeguards, six focus group discussions with indigenous peoples (IPs) (Table 5) and local communities participating in forest carbon payment for ecosystem services (PES) projects in southern and eastern Cameroon were conducted. The focus group discussions were structured around a set of questions related to IPs' and communities' perceptions and expectations of participation and FPIC in the forest carbon PES projects, tenure and rights, and arrangements for sharing benefits. The focus group participants were purposefully selected (Bedford and Burgess, 2001) and included village elders, a village chief and representatives from the forest entity. The discussions were conducted in the mother tongue of the participants and facilitated by a moderator, assisted by the author of this study. Each discussion lasted 45–90 minutes and was tape recorded with the participants' consent. The discussions were analysed for content.

The face-to-face interviews were aimed at capturing different aspects of social safeguards as distilled from the theoretical framework. Specifically, we aimed to capture interviewees' perspectives on the content and process of social safeguards under FLEGT–VPA and REDD+; and the differences and similarities between safeguard approaches under FLEGT–VPA and REDD+ and reasons for the differences and similarities. Concerning synergies and obstacles to realizing the synergies in safeguards, the interviewees were also asked to respond to a variety of open-ended statements distilled from the literature review. Each interview was recorded with the interviewee's consent. A standard list of questions was used with all interviewees. The questions were open-ended to allow the interviewees to express their personal experience and perceptions of the most important issues identified from the review of literature and policy documents, and follow-up questions were asked for elaboration. Responses were analysed through descriptive statistics to determine the numbers and percentages of the interviewees sharing any given views and opinions.

Table 5. Basic characteristics of the six sampled villages

| | PES project ^a | | REDD+ Ngoyla–Mintom project ^b | | | |
|--------------------------|--|---|--|------------|---------------|----------------|
| Village | Nomendjoh | Nkolenyeng | Etekessang | Zoulabot | Messok–Messok | Ndimako |
| Total inhabitants | 896 | 555 | 212 | 198 | 147 | 186 |
| Ethnic groups | Mainly Baka | Bantu (92%), Baka (8%) | Bantu only | Bantu only | Bantu only | Only Baka |
| Total forest area | 1942 ha | 1042 ha | 3135 ha | 3254 ha | 1480 ha | – ^c |
| Main economic activities | Agriculture labour in Bantu fields, hunting, gathering NTFPs | Bantu: agriculture, logging, gathering NTFPs. Baka: agriculture labour in Bantu fields, hunting, gathering NTFPs | Agriculture, logging, gathering NTFPs. | | | |
| Drivers of forest loss | Expansion of food and cash crops such as plantain, cassava and peanut; timber exploitation; unsustainable exploitation of non-timber forest products (NTFPs) | | | | | |

^a National NGO Centre for Environment and Development is the leading proponent

^b WWF lead the REDD+ Ngoyla–Mintom project

^c Ndimako is part of the community forestry of Etekessang

Table 6. List of respondents by category, organization, country and research paper

| Categories of interviewees | Number of respondents interviewed | | | | | |
|--------------------------------------|-----------------------------------|-------|------------------|-------|-----------------|---------------|
| | Paper I (N=50) | | Paper III (N=30) | | Paper VI (N=37) | |
| | Cameroon | Congo | Cameroon | Congo | Cameroon | Total (N=118) |
| International organizations | 10 | 3 | 7 | 3 | 11 | 34 |
| | 11 | 12 | 8 | 7 | 10 | 48 |
| National civil society organizations | 4 | 3 | 3 | 2 | 14 | 26 |
| Private sector | 5 | 2 | – | – | 1 | 8 |
| National academic institutes | – | – | – | – | 2 | 2 |

4. Results

4.1. Drivers of deforestation and forest degradation (Paper I)

Experts' opinions on important indirect causes of deforestation and forest degradation are summarized in (Figure 7), which combines the data from both countries. The research behind paper I found that 1) institutional and policy factors are the most important underlying causes of current and future land use change and (2) commercial agriculture and mining are emerging direct drivers of deforestation and forest degradation in Cameroon and Congo.

Besides institutional and policy factors, the majority of respondents considered demographic and economic factors as important underlying causes. Important demographic factors were population growth in Cameroon and the uneven spatial distribution of population and immigration in Congo. The demographic factors are correlated with expansion of agricultural land, infrastructure and demand for fuel wood (Cohen, 2014; Geist and Lambin, 2002). The most important economic factors driving forest loss in the Congo Basin were market/demand growth and specific economic structure (e.g. poverty). Furthermore, technological factors (e.g. agricultural inputs) and socio-cultural factors (e.g. concern about the welfare of future generations and the environment) were mentioned by respondents as less important underlying causes.

Figure 8 summarizes respondents' opinions on the evolution of direct drivers of deforestation and forest degradation, combining the data from both countries. A majority of respondents (68%) rated unsustainable agricultural expansion by smallholder farmers as currently an important or very important driver of forest loss in Cameroon and Congo. Some respondents (38%) rated cash-crop farming (small-scale cultivation of e.g. cacao and coffee) and agro-industrial plantation as moderately contributing to deforestation in Cameroon at present. Moreover, industrial (64%) and illegal/informal logging (56%) along with energy wood extraction (46%) – one of the most used forms of energy in the region – were rated as currently important or very important drivers of forest degradation. Even though Megevand et al. (2013) reported that infrastructure development and mining operation in the countries are already causing deforestation, respondents scored the present impacts of infrastructural expansion (80%) and mining operation (72%) as low or not at all important in both countries. Nevertheless, the expansion of agro-industrial plantations (86%) and mining operations (74%) in forested areas were identified as the most important emerging drivers of deforestation in the coming years for two main reasons. First, the respective government's priorities of promoting mining expansion and large-scale agriculture schemes as part of the national economic development plans. Second, a lack of political will at the national level to harmonize cross-sectoral development plans. The result indicates that the main threats to the forests of the Congo Basin will come from outside the forest sector, a finding consistent with the reviews carried out by EIA (2016) and Kissinger et al. (2012). Subsistence farming and wood extraction (industrial and illegal logging) will continue to be important drivers in the future. This trend can be explained by population growth, a potential rise in food demand, and weak enforcement of laws and regulations. However, livestock farming may not be that important at least in the immediate future (i.e. in the coming 5–10 years). The increase in livestock and thus the expansion of pastureland is mainly expected to occur in the Sudano–Guinean and Sudano–Sahelian zones of the countries.

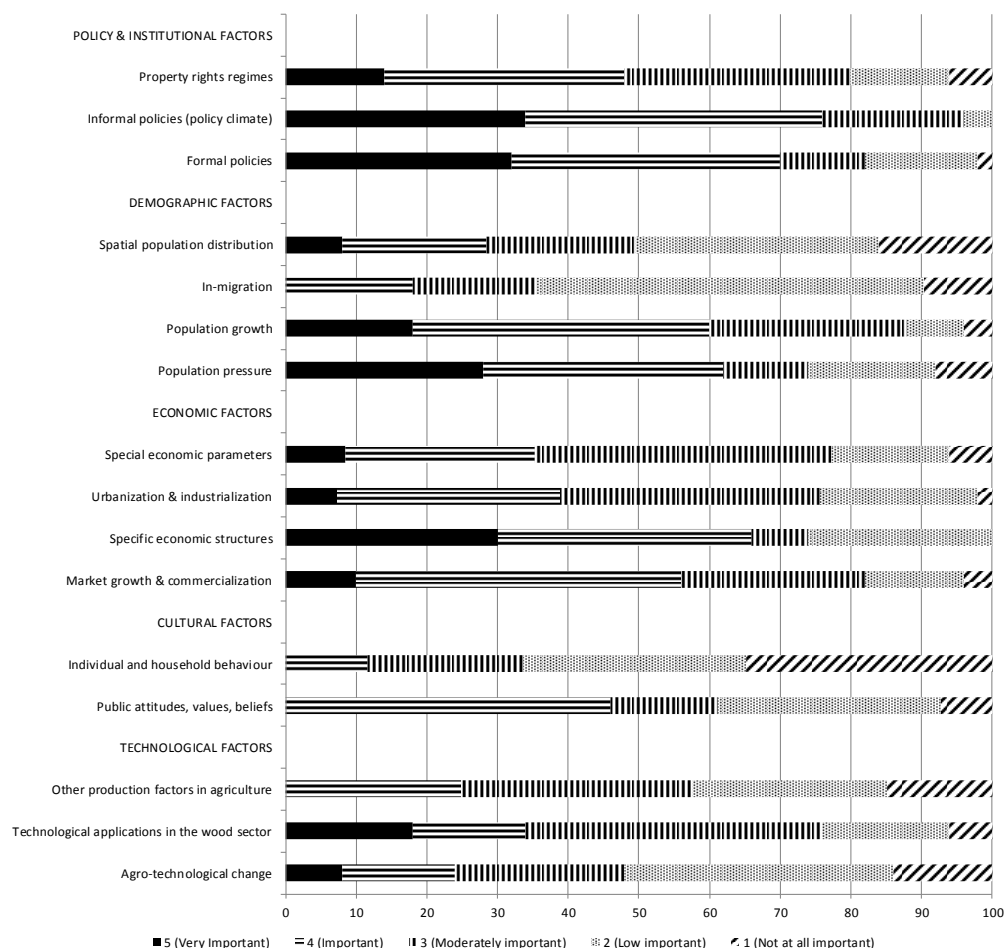


Figure 7. Underlying causes of deforestation and forest degradation (modified based on figure 3 in paper I, combining data from Cameroon & Congo).

Given the complexities of the drivers and causes, it will not be easy to reduce the forest loss. The first approach to redress deforestation is to intensify inter-ministerial communication and coordination and adopt consistent nationwide land use planning and policy. This should be translated into practical reality by having clear objectives to be achieved within a definite time limit, and should be accompanied by a legal framework committing all actors and stakeholders to actively participate in the nationwide approaches to address deforestation. See paper I for the details of cross-sectoral and sector-specific strategies proposed by respondents to address deforestation and forest degradation.

Although there will be expansion of agro-industrial plantation and subsistence agriculture, paper I concluded that land use policy should give high priority to mapping and allocating degraded and low carbon lands for the establishment of agro-industrial plantations and improving their productivity. To that end, clear political commitments from the governments of Congo Basin countries are needed to ensure that forest-friendly plans are incorporated into different land use activities designed and implemented by the ministries of agriculture, mining, forests and energy.

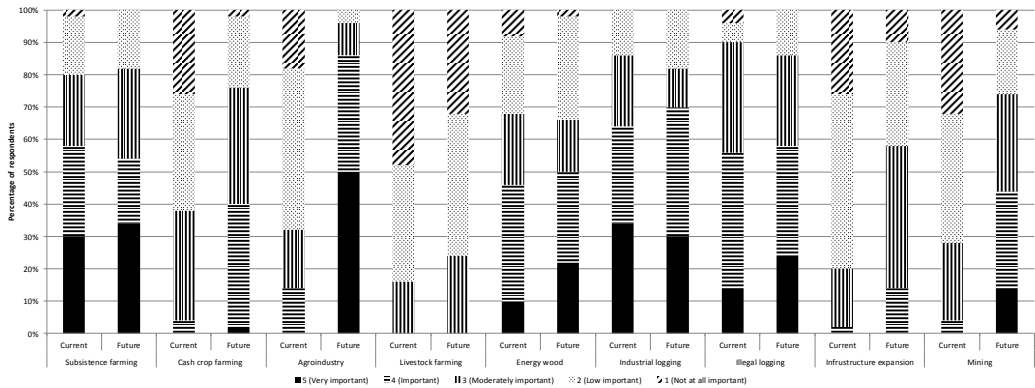


Figure 8. Evolution of direct drivers of deforestation and forest degradation (modified based on figure 2 in paper I, combining data from Cameroon & Congo).

4.2. Interactions between FLEGT–VPA and REDD+ processes (Paper II)

The research underlying paper II examined and compared the interactions between FLEGT–VPA and REDD+ in Cameroon and Congo by applying an institutional interaction approach (Gehring and Oberthür, 2009). Thirteen cases of interactions between FLEGT–VPA and REDD+ were identified. FLEGT–VPA was the cause of influence in seven cases and REDD+ played that role in three cases, and both processes affected each other in three cases. A majority (85%) of the cases of interactions identified were synergetic interactions, implying that FLEGT–VPA and REDD+ processes can support each other in certain areas, including ensuring stakeholder participation, revising regulatory frameworks, addressing drivers of forest loss, and building the capacity of state and non-state actors. There were, however, some disruptive interactions (15%) that could potentially produce conflictive outcomes.

Following the institutional interaction framework of Gehring and Oberthür (2009), the 13 cases were categorized into four causal mechanisms: cognitive interactions, interactions through commitments, behavioural interactions and impact-level interactions. The distribution of interaction cases across causal mechanisms varied considerably. Cognitive interactions accounted for 23 % of the causes of interactions, whereas interactions through commitment accounted for 44 %, behavioural interactions for about 15 % and impact-level interactions for about seven per cent. The cases of cognitive interaction (mainly policy model, which refers to institutional learning) could be underrepresented in the finding because policy learning may be a tacit process and thus difficult to detect (Böhmelt and Spilker, 2014).

All interviewees but one perceived that the VPA process has served as a policy model and provided useful knowledge that has influenced some aspects of the REDD+ process in both countries. Among those identified cognitive interactions, the multi-stakeholder participation and consultation plan of the VPA seems to be the most important idea transferred to the REDD+ process in both countries. The same networks of stakeholders that were engaged in the VPA process were also very actively engaged in the national discussion about the REDD+ process (and the current revision of laws) in Cameroon and Congo. For instance, in Congo a platform of civil society and indigenous peoples (CACO–REDD) created for REDD+ was built on the experiences of a similar platform created to follow up the negotiation and implementation of the FLEGT–VPA process.

Because the FLEGT–VPA and REDD+ processes work on overlapping objectives, employ similar means and have overlapping memberships, commitments agreed on within, for example, FLEGT–VPA can affect decision-making within REDD+ by influencing the payoffs of available options. In a similar vein, overlapping commitments are made under FLEGT–VPA and REDD+, such as legislative and regulatory reforms, monitoring impacts of the processes on forest-dependent communities, safeguards, and strengthening land tenure and property rights. To that end, a majority of respondents noted that both processes can provide additional means to foster compliance with and implement the overlapping commitments made under the two processes. Whereas VPA provides additional legal means, REDD+ could bring additional financial resources. Moreover, REDD+ could provide additional means and resources to build the capacities of state and non-state actors and enhance effective coordination and communication among sectoral agencies.

With regard to anticipated behavioural interactions, the majority of interviewees mentioned that stricter enforcement of the law due to the implementation of the VPA’s TLAS and its transparency annex could change the behaviour of state and non-state actors in (or even beyond) the forestry sector, thereby supporting the REDD+ process. This could happen in reality if improved transparency through information disclosure, as planned under FLEGT–VPA, empowers the weak and holds the powerful accountable, which remains to be seen in both countries. Finally, a high proportion of experts claimed that FLEGT–VPA and REDD+ can help each other in addressing direct and indirect drivers of forest loss. FLEGT–VPA can address forest loss caused by wood extraction, illegal forest conversion to commercial and subsistence agriculture, infrastructure and mining by, for example, improving governance, reviewing the legislative frameworks, enhancing transparency and creating space for multi-stakeholder participation. It is important to note that FLEGT–VPA cannot target legal activities that lead to forest loss, for instance legal forest conversion to commercial and subsistence agriculture. In this context, REDD+ can support the goals of FLEGT–VPA by providing incentives to reduce conversion through, for example, policies that clarify land tenure rights and benefit-sharing arrangements.

4.3. Impacts of FLEGT–VPA (Paper III)

The FLEGT Action Plan and VPAs involve a theoretical commitment to impact monitoring, which must be followed by an effective, practical system tailored to a country’s context and capacity. VPA impact monitoring is a tool to help stakeholders assess the effectiveness of a VPA in achieving its desired objectives, and also helps to identify unintended negative impacts and to manage them. To that end, paper III provided a five-stage approach to the development of a VPA impact monitoring process (See paper III for the details of these stages). The process should begin by building a common understanding of the importance of impact monitoring, followed by a multi-stakeholder discussion to identify the key impact areas and assumptions regarding the changes the partners expect to see through VPA implementation. Only then will parties be able to seek agreement on the most suitable indicators for measuring the impacts, on potential data sources and on the practical aspects of carrying out the monitoring. These stages should lead to a practical VPA impact monitoring framework.

The proposed indicator framework was composed of a set of 46 indicators grouped under 10 impact areas, which are shown in Table 7. It is important to underscore that the indicator framework proposed in paper III is generic and needs to be adapted to suit the needs of a specific VPA country or specific situation. This is because each VPA is slightly different, as

the agreements are developed in response to the national reality of each VPA country and are shaped by the in-country multi-stakeholder dialogue and the bilateral negotiations. Impact monitoring therefore needs to be able to measure the specific areas in each country where its agreement really aims to have an impact.

Table 7. Key impact areas of FLEGT–VPA in partner countries.

| Key impact area | Description |
|--|--|
| Forests, market and livelihoods | |
| Forest condition | This impact area focuses on how VPAs influence forest conditions and its implications for sustainable forest management. |
| Economic development | This impact area focuses on the contribution of forest sectors to the national economic development. |
| Domestic market development | VPA countries have included considerations to support reforms of their domestic markets. |
| Livelihood and poverty | This impact area helps to see what has been achieved in relation to poverty reduction. |
| Governance | |
| Effectiveness of stakeholder involvement | VPAs require that relevant stakeholders are appropriately and adequately represented and that their contributions are considered. |
| Accountability and transparency | The assumption is that greater transparency leads to improved accountability and better law enforcement. |
| Illegal logging | This impact area considers the VPAs' impact on illegalities in timber operations and the volume of legally produced timber. |
| Institutional effectiveness and efficiency | This impact area addresses whether government institutions are effectively and efficiently carrying out their mandates in relation to the forest sector. |
| Right of access and forest tenure | This is related to the VPAs' objective of strengthening regulation to secure and protect access and ownership rights. |
| Forest law enforcement and compliance | This impact area focuses on VPAs' impact on the extent of implementation of and compliance with laws and regulations. |

The 10 impact areas identified fit with the overall objectives of the FLEGT Action Plan as related to the wider context of sustainability and improved governance. The impact areas are comprised of two groups of different natures: 1) forests, market and livelihoods, and 2) governance (Figure 9). The first group focuses on changes on the ground and is composed of four key impact areas: forest condition, economic development, domestic market, and livelihoods and poverty. The second group is composed of elements of a more supporting, enabling nature to achieve the desired impacts of VPA on the ground. It includes six key impact areas: law enforcement and compliance, rights of access and forest tenure, accountability and transparency, stakeholder involvement, institutional effectiveness, and illegal logging. These impact areas should not be considered a blueprint because it is essential to have an open, participatory, stakeholder-led discussion to develop a nationally agreed set of impacts. A total of 46 indicators that can be used to capture evidence of change across the impact areas were proposed.

Paper III also indicated that the development of the impact monitoring system must capitalize on the multi-stakeholder approach and be managed as an open democratic process. Such a process helps to build broad-based ownership of the whole process. It also enhances the ownership and understanding of the key elements, such as the targeted impacts of a VPA and the indicators by which these are to be measured. In addition, it is useful for any country that is about to begin developing a VPA impact monitoring system to turn to the VPA for inspiration on indicators at the outset. The more the features of the VPA impact monitoring system reflect the issues arising in VPA negotiations, and the more familiar stakeholders are with the content of the VPA document and key issues, the easier and faster the whole process is likely to be. Finally, VPA countries could face a myriad of problems and constraints that could influence effective monitoring. A lack of quality baseline data for reliable monitoring, a lack of cross-sectoral coordination and institutional capacity, and a shortage of skilled manpower are among the main obstacles hindering the success of a VPA impact monitoring system at the national level. Political interferences and corruption could also pose serious problems.

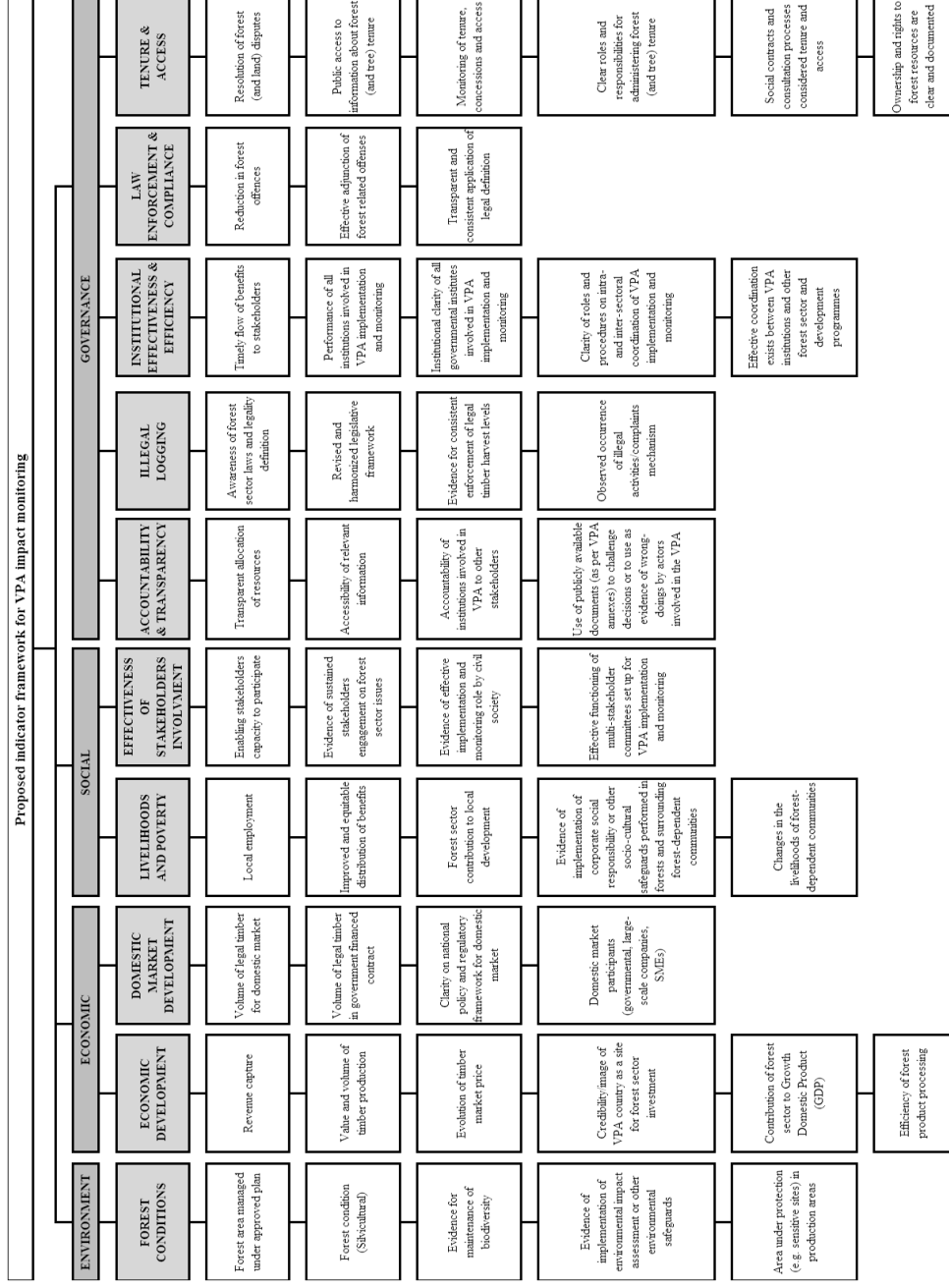


Figure 9. Proposed indicator framework for VPA impact monitoring (Paper III)

4.4. Social safeguards of FLEGT–VPA and REDD+ (Paper IV)

The implementation of FLEGT–VPA and REDD+ raises concerns about unintended effects on the livelihoods of local communities and the environment (Chhatre et al., 2012; Eba’a Atyi et al., 2013). This is why both processes envisage developing so-called safeguards, including social and environmental safeguards, so that they “do no harm” (Jagger et al., 2014; McDermott et al., 2012). The efficient design and implementation of a country safeguard system at the national level necessitates an exploration of synergies and experiences from other safeguard systems of related processes (Rey et al., 2013). Failure to do so can result in the insufficient use of resources and confusing messages, especially in the same landscape where FLEGT and REDD+ processes are being implemented. Paper IV presents a comparison of the social safeguards of the FLEGT–VPA and REDD+ processes and an explanation of their commonalities and differences, as well as an exploration of the potential synergies and the challenges to realizing them.

The policy documents of Cameroon’s FLEGT–VPA (e.g. Cameroon VPA, 2010, Art. 17) and REDD+ (e.g. MINEPDED, 2013) highlight the importance of assessing the potential impacts of the processes on forest-dependent communities through integrated social safeguard systems. However, the legal requirements for that are so far largely lacking. The analysis revealed important similarities and synergies (for details, see paper IV) among the social safeguards of the FLEGT–VPA and REDD+ processes. The synergies include strengthening community land and forest rights; improving forest governance, including reform of policies and law; designing and implementing communication and multi-stakeholder consultation strategy; and implementing the commitment of information transparency and FPIC. This is in addition to the crucial synergies in monitoring and reporting tools and procedures, as well as gathering baseline information on compliance. A crucial purpose of VPA impact monitoring is to assess and report changes related to such topics as the effective engagement of stakeholders, tenure and rights, and distribution of benefits (See paper III). VPA’s TLAS also include several requirements for monitoring and reporting on-the-ground legal compliance, independent third-party monitoring and companies’ social obligations. Much of this information is particularly relevant for REDD+ safeguards information systems. The observed similarities in social safeguards can be attributed to the common origins of safeguards and the overlaps in the policy goals of the FLEGT Action Plan, FCPF and UN–REDD, and the general trend and pressure from CSOs to emphasize similar issues in all processes. The similarities can also be attributed to recent trends in bilateral and multilateral policy processes to develop and use criteria and indicators for monitoring, reporting and verifying results and impacts.

A comparison of the safeguard approaches of FLEGT–VPA and REDD+ revealed important differences (Table 8). While VPA adopts legality-based safeguards, REDD+ uses right-based safeguards. The VPA makes a legally binding commitment to monitoring and reporting the social safeguards, but this is not the case for REDD+. While neither the FLEGT Action Plan nor the Cameroon VPA elaborates the details of social safeguards, several mechanisms and options are under consideration in the REDD+ safeguard. Whereas VPA makes no reference to FPIC, in 2014 the REDD+ process adopted and validated FPIC guidelines, although FPIC requirements have not been fully met in the field. Moreover, REDD+ social safeguard compliance is a trigger for result-based incentives; under the VPA process it is a legal obligation and linked to market access. In addition, whereas VPA mainly includes plans for a vertical distribution of benefits, REDD+ considers the vertical and horizontal modes of sharing benefits. A majority of interviewees attributed the observed differences in social safeguards to the difference in approaches between the processes. The Cameroon VPA was negotiated and

formulated as an agreement that aims to ensure legality, improve governance and alleviate poverty. In this context and with the view of addressing negative unintended effects that could arise, the article on social safeguards and commitment for VPA impact monitoring were included in the VPA agreement. REDD+, on the other hand, was not considered a mechanism aimed at improving governance, and therefore stakeholders ensured the inclusion of social safeguards.

Another interesting finding presented in paper IV is that neither FLEGT–VPA nor REDD+ can effectively address the crucial issue of tenure and customary rights in Cameroon. This is mainly because of the weakness inherent in the approach and design of the processes as well as the existing political and institutional setting of the country. For instance, to strengthen the rights of local communities and indigenous peoples, both processes mainly refer to the existing national laws, which limit local communities’ and indigenous peoples’ rights to access and user rights, rather than allowing them full ownership. The approach of basing the legality definition on existing legal systems is crucial to gain national ownership, but it has direct ramifications for the legitimacy of full and effective participation, benefit sharing mechanisms and livelihoods of local communities. Yet again, FLEGT–VPA and REDD+ risk repeating the weakness of earlier revenue distribution models, as both plan to base the benefit sharing mechanisms on existing laws and revenue distribution models, which have been criticized for high transaction costs and marginalization of indigenous peoples and local communities (Assembe-Mvondo et al., 2015).

Furthermore, paper IV shows important discrepancies between the safeguard approaches of FLEGT–VPA and REDD+ and the expectation of indigenous peoples and local communities (Table 8). First, while both the FLEGT–VPA and the REDD+ plan take consultations as the main form of stakeholder participation during the design and implementation of the respective safeguard systems, indigenous peoples and local communities would prefer a partnership form of participation, which could give them more bargaining and implementation power. Second, whereas the provisions included in VPA and REDD+ mostly recognize access or use rights, the focus group discussions revealed that local communities would like to have, in addition to access rights, legal rights of management and exclusion. Third, whereas FLEGT–VPA and REDD+ consider the preventive and mitigative roles of safeguards, indigenous peoples and local communities, as observed during focus group discussions, would like to have promotive safeguards (cf. Arhin, 2014). Promotive safeguards refer to “doing something better” to provide spaces for indigenous peoples and local communities to contribute to decision making, improve their livelihood and benefit from the processes. That said, the question is what should be done to close the gap between the plans in the policy documents and the field implementation realities and thus bring about a more just FLEGT–VPA and REDD+? To that end, there is an urgent need to reform the tenure and forestry laws that regulate the engagement of non-state actors, the distribution of benefits, and land ownership and access to resources (Mbatu, 2015). This is in addition to a need to adapt the policy instruments of the REDD+ and FLEGT–VPA processes with field implementation realities and local context.

Table 8. Comparative analysis of the social safeguards of FLEGT–VPA and REDD+ in Cameroon.

| Aspect of social safeguards | FLEGT–VPA | REDD+ | Expectation of local communities and indigenous peoples |
|--------------------------------------|---|--|--|
| FPIC | VPA text makes no reference to FPIC Indigenous peoples and communities have a pre-emptive right to refuse allocation and claim their rights. | Adopted and validated FPIC guidelines FPIC requirements have not been met in the field | Grantor of FPIC |
| Participation of IPs and communities | Requires “consultation” rather than “participation”, which does not by itself ensure full and effective participation The CCS ¹ has included IPs and communities in recent meetings | Consultation is the defining form of participation in REDD+ implementation Consultation of indigenous and local communities is a right | Prefer partnership form of participation |
| Land and forest tenure | Promotes recognition of access or use rights; does not extend to full ownership rights for IPs and communities There is no mention of IPs and communities | Recognizes IPs’ and communities’ user and access rights, not full ownership Recognizes the conflicts between state and customary right, but does not provide any guidance | Would like to have in addition to user and withdrawal right, legal right of management and exclusion |
| Social benefits and benefit sharing | Acknowledges the need for vertical benefit sharing but provides no guidance Recognizes the need to consider the livelihoods of IPs and communities | Plan to develop vertical and horizontal benefit sharing mechanisms The plan to base the benefit sharing mechanism on existing models could create effectiveness, efficiency and equity problems | Effective, efficient and equitable benefit sharing mechanism |
| Monitoring and reporting commitments | VPA has a legally-binding commitment to monitor and report VPA plans to meet the reporting obligations by making the monitoring reports available online | The R–PP makes provisions for the monitoring and reporting of social safeguards through the institutionalization of Strategic Environmental and Social Assessment | N/A ² |

¹ CCS (Comité Conjoint de Suivi) is one of the two bodies of Joint Implementation Council of the VPA process in Cameroon.

² Not mentioned during focus group discussions.

5. Discussion

5.1. Drivers and policy impacts

In the context of REDD+, it is becoming increasingly relevant to conduct in-depth analyses of drivers of deforestation and forest degradation and their evolution over time, and to prioritize efforts to address drivers that are relevant for policy responses (Angelsen et al., 2012). The research underlying paper I contributed to meeting this need by identifying and prioritizing current and emerging drivers of deforestation and forest degradation considered by experts at the national level to have a high priority for policy responses. As discussed in paper I, subsistence agriculture and both legal and illegal forest exploitation are important current and future direct drivers, and agro-industrial plantations and mining exploitation are emerging direct drivers in the region. This situation could be aggravated as the Congo Basin countries continue to implement ambitious economic plans for promoting soft commodities (e.g. palm oil) as well as logging and mining activities, thus accelerating both legal and illegal forest conversion. Economic expansion in tropical countries often leads to the conversion of forestlands for large-scale agriculture and mining (Barney, 2011; Meyfroidt et al., 2014). This calls for a stable regulatory oversight and the enforcement of strong social and environmental standards to ensure that resource-led economic development is both legal and sustainable. Although little has been reported about the illegal conversion of forest for commercial agriculture and mining in the region (Lawson et al., 2014), paper I makes it clear that this is already happening and is set to change in the near future for the Congo Basin. Furthermore, paper IV reveals the inability of FLEGT–VPA and REDD+ to address the illegal (and legal) conversion of forest. This point is detailed in the following subsection.

Another important finding is that institutional and policy factors are the most important indirect cause driving deforestation and forest degradation in Cameroon and Congo (Paper I). This result supports similar findings by Wehkamp et al. (2015), who concluded that institutional and policy factors are the most important cause of deforestation across African countries. Institutional and policy factors fall into three categories: formal state policies, political culture and property regimes. Important formal state policies include weak and inconsistent legal frameworks, a lack of coordination in formal state policies, and economic development strategies to become “emerging economies” by the year 2035 (Cameroon), 2025 (Congo) and 2030 (DRC). The development strategies seek to transform the economies by expanding large-scale agriculture, mining and logging. This coupled with the recent falling price of oil has driven the governments to aggressively attract international investments in palm oil and mining, which have profound impacts on the countries’ forest cover.

According to the research presented in papers I and IV, the political culture (e.g. corruption, vested interests, lack of accountability of officials) is the most difficult cause of forest loss to tackle. There are two possible reasons: these factors are inherent in the countries’ political economy and are often sensitive issues linked with national sovereignty. It can be argued that to effectively address tropical deforestation explicit attention should be given to these, often hidden and difficult to quantify causes. Moreover, from a cost-benefit analysis perspective, FLEGT and REDD+ may not be the most profitable land use options compared to mining and agribusinesses such as oil palm plantations.

Papers I and IV demonstrated that for a region like the Congo Basin, there should be more focus on sustainable forest management (SFM) and non-carbon benefits, such as poverty reduction and biodiversity. To date, the VPA and REDD+ processes in the countries have

focused mainly on technical issues, for example the development of the TLAS and reference level. Less emphasis has been placed on pursuing the objectives of SFM, poverty alleviation, the provision of other ecosystem benefits within REDD+ initiatives and sustainable development that is resilient to the impacts of climate change. Going beyond carbon and timber legality and including socioeconomic development objectives could make the FLEGT–VPA and REDD+ processes more successful and attractive to local communities, as well as attract multilateral and/or bilateral funding (paper IV; see also Vijge et al., 2016).

5.2. Synergies and trade-offs

Despite the proliferation of forest governance mechanisms to address tropical deforestation and achieve SFM, little is known about how these instruments influence each other's implementation and performance (Somorin et al., 2016; van Asselt, 2014). Such knowledge could help identify ways in which the influences could be managed to enhance synergy (Gupta et al., 2016). Moreover, there is little understanding of how these interactions and influences compare across countries and how countries could learn from one another to foster synergistic interactions and manage negative ones. As discussed in papers I and IV, although FLEGT–VPA and REDD+ actually originated from different environmental governance arenas, there are 13 cases of interactions between the processes. These include improving law enforcement and governance, addressing drivers of deforestation, building the technical capacity of state and non-state actors (e.g. strengthening the role of civil society), designing multi-stakeholder consultations, and conducting monitoring, reporting and verification. It is practically impossible to make progress on REDD+ without addressing issues of customary rights, conflict, compliance and governance (paper IV). These are among the intended key impact areas of FLEGT–VPA (Table 7) – in that sense, the VPA activities can be considered fundamental to REDD+. Furthermore, paper II pointed out an important linkage and synergies between the VPA's TLAS and the National Forest Monitoring Systems (NFMS) of REDD+ with a view to supporting the generation of verified, legal and traceable carbon credits under REDD+. Integrating TLAS and NFMS will bring crucial benefits to both processes, as Broekhoven & Wit (2014, p. 166) “reduced emissions could be traced back to their source, just as timber is traced to its place of harvest for FLEGT. This would help validate emission reductions and qualify them as tradeable carbon credits, where relevant.”

Overall, the main findings presented in papers II and IV on synergies between FLEGT–VPA and REDD+ corroborate similar findings of earlier studies in Ghana (Hajjar, 2014; Marfo et al., 2013; Ochieng et al., 2013), Cameroon (FAO and UNREDD, 2013), Indonesia (Luttrell & Fripp, 2015) and Central African Republic (FAO, 2011). These studies identified potential areas for cooperation with regards to stakeholder consultation processes, data collection, law enforcement and the revision of regulatory frameworks. The present study differs from these earlier studies in two important ways: 1) it analysed the opinions of private sector and local communities, which was not the case in most of the previous studies; and 2) it employed comparative analysis between countries, providing cross-country learning and experiences that are useful for a wide range of situations elsewhere in the tropics.

Even though there has been synergy, coordination between the two processes has not been very effective. There are five possible reasons for the weak links between the processes:

- FLEGT–VPA and REDD+ are coordinated by different ministries/institutions with competing interests and often supported by different donors. In the countries, ministries are often working against each other in the same landscape where FLEGT–VPA and REDD+ are simultaneously being implemented. The stories linked to the Ngoyla–

Mintom forest and the agro-industrial Herakles Farms in Cameroon (See Ongolo, 2015), the Mai Ndombe landscape in DRC and the Atama Plantation SARL in Congo (see Rainforest Foundation UK, 2013) are quintessential examples that illustrate how competing land uses and the associated interest groups can develop in the field, despite the World Bank, EU, UN-REDD and USA seeking to convince the governments to show more concern for the conservation and protection of tropical rainforest.

- In Cameroon and Congo there is a strong division between state actors favouring conservation or conversion. There is also similar division among national CSOs and within local communities (paper IV). This is widely discussed elsewhere (e.g. Ongolo, 2015; Assembe-Mvondo et al., 2014).
- FLEGT and REDD+ are two separate processes globally, under two disconnected global proponents. In addition, the synergy approach to policy processes by itself is an emerging issue even at the international level (e.g. at UNFCCC and the World Bank), which has not yet fully moved to national and subnational policies and strategies (See also Duguma et al, 2014). For instance, REDD+ implementers in Cameroon and Congo have focused on constructing a national monitoring, reporting and verification system according to the general criteria provided by the World Bank, which do not make any cross-reference to the EU FLEGT-VPA TLAS. Although the national implementers have the opportunity to adjust this approach by integrating related components of the processes, the global proponents should also ensure that policy goals and tools are cross-referenced to each other.
- Another obstacle – as also identified by FAO (2013) and FAO and UNREDD (2013) – is the lack of communication between and about the processes.
- Finally, there is no defined financial mechanism for efforts promoting and implementing synergies at subnational, national and global levels.

Mapping out the relationship between FLEGT and REDD+ on the topology of Biermann et al. (2009) revealed two types of fragmentation: cooperative and conflictive. There is an essence of cooperative fragmentation between the processes in the sense that the core norms and principles of FLEGT-VPA and REDD+ are not conflicting. Both FLEGT and REDD+ have several non-conflicting requirements and principles, such as the principles of social and governance safeguards, SFM, multi-stakeholder consultation and a credible, measurable, reportable and verifiable system. These are some of the opportunities for synergies between the processes (papers II & IV).

Nonetheless, the overall types of fragmentation between FLEGT and REDD+ at national and international levels, can at present be best characterized as an example of conflictive fragmentation. In terms of institutional integration criteria of the Biermann et al. typology, FLEGT and REDD+ are operating in “institutional silos” (Morin & Orsini, 2013, p. 46) at national and international levels. At the national/local level, they are completely separated processes, managed and coordinated by different state ministries (or departments) that have unrelated decision-making procedures. In Cameroon there is conflicting leadership between MINFOF (in charge of FLEGT-VPA) and MINEPDED (in charge of REDD+) on forests and REDD+ (Ongolo & Karsenty, 2015; Somorin et al., 2014), and hence the processes are dissociated. In Congo, forests are managed by the Ministry of Forest Economy and Sustainable Development (MEFDD) but this is not the case with the environment, which is now managed

by the Ministry of Environment and Tourism. Yet again, FLEGT and REDD+ are totally separated processes globally, with almost no coordination or cross-referencing between the global proponents of the processes (EU vs the World Bank and UN-REDD). In addition, the key policy documents of the processes lack cross-referencing. These “institutional silos” are an indication of strong conflictive fragmentation between the processes at the international level.

With regards to the actor constellations criteria of Biermann’s typology, FLEGT–VPA and REDD+ in Cameroon and Congo are, as mentioned above, driven and supported by a constellation of state and non-state actors with conflicting interests. The history of R–PP and ER–PIN in Cameroon illustrates this conflictive constellation among non-state actors. The Civil Society Platform for REDD+ and Climate Change expressed its support for the World Bank’s approval of Cameroon’s R–PP in 2011 and ER–PIN in 2015; whereas the Forest and Communities Platform³ requested further improvements to R–PP before approval and rejected ER–PIN. Such conflictive constellations among major actors hamper the collective ability of non-state actors to advocate for synergetic approaches.

5.3. Monitoring policy impacts

Paper III identified the key impacts of FLEGT–VPA and proposed an indicator framework for a country-level VPA impact monitoring, which can be tailored to fit the specific conditions of the 15 countries that are negotiating or implementing a FLEGT–VPA, and help in the development of the theoretical debate on policy impact monitoring. In 2014-15, a team of experts applied the indicator framework for the independent evaluation of 11 years of the implementation of the EU FLEGT Action Plan commissioned by the European Commission (2016).

As stated in paper III, the nine countries that are currently negotiating a VPA should start developing the monitoring framework as part of the final VPA negotiation. This will help them to define the baseline, identify the key changes that stakeholders want to see as a result of the VPA implementation, the potential data sources, etc. Furthermore, a constraint on VPA impact monitoring lies in defining forest governance (and SFM); neither FLEGT Action Plan nor VPA provide a clear definition of forest governance. This constrains assessing the changes in forest governance due to the implementation of a VPA. Similar problems were encountered in assessing the governance impacts of the FLEGT Action Plan (European Commission, 2016). To that end, just after the VPA agreement is initiated and before the monitoring framework is developed, the representatives of key stakeholder groups should agree on a general definition and specify the desired characteristics of forest governance and SFM that they would like to see improved due to the VPA implementation.

As discussed in papers I, III and IV, neither FLEGT–VPA nor REDD+ will, with their current approaches to governance and legality, achieve one of the common objectives of addressing SFM issues: improving the tenure rights of forest-dependent communities. One of the weaknesses of the FLEGT–VPA is defining legality with reference only to (often outdated) national policies and laws (paper IV), which is vital for national ownership and legitimacy (Lesniewska and McDermott, 2014; Wiersum and Elands, 2013). It is important to note that the national laws of most African countries are an inheritance from colonial times (Movuh, 2012) and do not recognize customary rights, thus limiting the rights of indigenous and local

³Forest and Communities Platform (FCP) is a CSO platform of about 40 organizations created within the framework of EU FLEGT–VPA.

communities to user and access rights (paper IV, see also Assembe-Mvondo et al., 2014). This approach of FLEGT–VPA could erode the legitimacy of VPA’s licensing scheme. If land tenure remains in dispute, the FLEGT–VPA and REDD+ processes will not be sound. It is too late to change the legality definition in the Action Plan and the VPAs during the implementation stage: countries that are negotiating a VPA should define legality by integrating customary and international laws in their national statutory laws.

Regarding REDD+, all six villages surveyed during the research are facing tenure insecurity, but none of the countries’ R–PP, ER–PIN and ER–P have developed credible plans to secure enduring tenure rights for local communities and indigenous peoples (paper IV). There are three reasons for this. The first relates to one of the weaknesses of the World Bank’s Carbon Fund Methodological Framework, which only requires that land tenure should be assessed, not that indigenous people and local communities should have secure land and forest tenure (EIA, 2016; Luttrell et al., 2013). The second reason relates to the weak position of the ministries in charge of the FLEGT and REDD+ processes in the countries (paper IV). In the Congo Basin, “forest agencies and environment ministries are often side-lined over land use and investment decision by the generally more powerful agriculture, mining and finance ministries” (EIA, 2016, p. 5). The third reason relates to the existing tenure arrangements in the countries that give privileged access to forest resources to powerful actors (see also Assembe-Mvondo et al., 2014; Dkamela et al., 2014). This analysis corroborates a similar finding by Cerbu et al. (2013), Nkemnyi et al. (2016) and Sunderlin et al. (2014), who state that resolving tenure insecurity under REDD+ and the current political economy of the country will prove difficult. One potential solution to this problem could be an overhaul of the existing national tenure and forestry laws to permanently and legally recognize the customary, management and exclusion rights of indigenous peoples and local communities, a solution that is consistent with other scholars such as Cerbu et al. (2013), Hajjar (2015) and Mbatu (2015).

5.4. Limitations of the study approach

The study results should be interpreted with caution; as certain limitations have to be acknowledged.

- First, the study relied on perception-based data. The disadvantage of perception-based methods is the tendency of respondents to answer questions according to their recall abilities and understanding of concepts, which may vary widely even if attention is paid to the way questions are formulated and concepts are explained to respondents. To address this limitation, a wide range of opinions and perceptions were gathered from diverse groups of stakeholders, including focus group discussions with indigenous Baka people and local communities.
- The second limitation relates to data representation. To gain a regional understanding about the topic, the study was initially designed to collect empirical data from two countries. Whereas this was possible for papers I and III, it was not possible for paper IV, which was mainly due to resources and time limitations. However, Cameroon can be seen as a miniature version of the Congo Basin, and is thus representative for understanding the governance context of FLEGT and REDD+ in the Congo Basin.
- The third limitation relates to the weak representation of private sector actors and indigenous people in the interview surveys and focus group discussions, respectively. FLEGT is a trade instrument and the implementation of VPA in the Congo Basin could imply significant effects on the activities of the private sector (Carodenuto, 2015; Eba’a

Atyi et al., 2013). Whereas private sector actors are key REDD+ stakeholders, and also an important part of the global effort to reduce tropical forest loss (Henderson et al., 2013), the empirical studies in Cameroon and Congo included only eight interviewees (out of 118) from the private sector (Table 6). Although considerable attempts were made to contact private sector actors, many declined to be interviewed, some of them citing that all the information they could provide is available on the company's website. There is little doubt that a better consideration of the perceptions and opinions of private sector actors could have provided additional insights. With regard to the representation of indigenous peoples, although the study gathered the opinions and perceptions of pygmy indigenous peoples in eastern and southern Cameroon, the situation in the pygmy communities of Congo could be different.

- Fourth, some policy documents in French had to be translated into English and this might have caused some inaccuracy. Furthermore, the sample size of respondents in Congo was small mainly because of the limited number of experts with knowledge of the FLEGT and REDD+ processes in the country.
- The fifth limitation relates to the delay in the implementation of FLEGT and REDD+ at the national level and the fact that national and international arrangements for the processes are still evolving. This might have had an impact on the availability of data and the interpretation of the results.

5.5. Lessons learnt and future research needs

The findings of this research offer lessons to the global forest governance mechanisms in many ways.

- First, the emission reduction programmes of the World Bank and the UN-REDD assumed that tropical countries, driven by anticipated incentives, will implement and enforce policies and measures that could lead to deforestation reduction (Karsenty and Ongolo, 2012). The findings of this research show that such approaches ignore the existing realities and political economies of the tropical countries (papers I, II and IV), and thus call for rethinking of these approaches, otherwise any efforts towards deforestation reduction in the tropics may be unsuccessful.
- Second, although experiences and knowledge of enhancing synergies and managing conflictive interactions are still insufficient in practice (Duguma et al., 2014), this study offers some clear lessons. The key among these is integrating both processes into a long-term vision and development plan of the country to secure the much needed political commitment of the national governments. The synergies between FLEGT-VPA and REDD+ can be managed by: 1) raising awareness and improving communication across the processes and their main actors at global, national, and subnational levels; 2) sharing experiences and lessons collected by the processes; 3) identifying financial sources to realize unified policy implementation; and 4) mapping out cross-cutting issues that interest actors of both processes through inclusive governance approaches. Because socio-political systems may be quite variable and the manner in which global forest policies are adapted at national level varies between countries (Wiersum and Elands, 2013), possibilities for creating synergies between related forest governance mechanisms are country-specific. Most importantly, the strategies to enhance synergies between FLEGT and REDD+ in tropical countries should be facilitated by one lead

governmental agency with high political visibility, for example the prime minister's or president's office. Such a stronger position in the country's political hierarchy could facilitate the synergy approach to policy formation and implementation.

- Third, the objectives, assumptions and policy instruments of forest governance mechanisms should periodically be reviewed to align them with the changes that have occurred since their establishment. Here, research could play a paramount role by, for example, deducing lessons from past policy implementations and forecasting and modelling emerging changes. Important changes have occurred since the FLEGT Action Plan was conceived in 2003, such as the increasing importance of domestic markets in timber-producing countries and regional timber markets, changes in political priorities in timber-producing countries and the growing trend of permanently converting forests to agriculture or mining (papers I and IV). The changes not only reduce the chances of the EU, Australia and the USA of regulating illegal timber entering their markets, but also foil the efforts of other major importing countries, such as Japan (under the Green Purchasing Law of 2006), that have also adopted legality verification as a means to regulate access to their markets. Emerging legality verification regimes – particularly the China Timber Legality Verification Scheme should also learn from the experiences of FLEGT and adopt a flexible approach.
- Fourth, contrary to the ultimate goal of FLEGT and REDD, illegal and informal logging will continue driving tropical deforestation and forest degradation (paper I). Domestic demand for timber in the Congo Basin countries is increasing, and timber markets in many developing and emerging economies (e.g. China, India and Vietnam) are burgeoning. “This means that the progressive policies of Western importers, such as the EU and US, have less influence overall” (Hoare, 2015, p. 1). Meanwhile, the growing importance of the domestic timber market and the increasing volume of conversion timber have resulted in challenges that REDD+ and FLEGT policies cannot overcome. This implies that REDD+ and FLEGT actors must re-examine the technical approaches of the processes and adapt them to the local context to effectively address the problems embedded in the informal timber market.
- Fifth, the governments of tropical countries will remain reluctant to meet the global governance demands as long as the FLEGT–VPA and REDD+ processes fail to demonstrate their contributions to national economic and social developments. This is already compromising the activities of REDD+ on the ground and making it less competitive relative to clearing the forest for mining, logging or agricultural commodity (papers I, II and IV). It is argued here that even with financial and political promises from the Paris Agreement supporting forest conservation worldwide, much remains to be proven about the potential contributions of REDD+ to the global forest-based mitigation efforts. In the same vein, the economic development strategies of tropical countries have become major drivers of deforestation and forest degradation.
- Sixth, international negotiations, which have so far focused only on providing incentives, should also turn their attention to strategies to strengthen forest governance and build the capacity of law enforcement authorities in forested countries as well as to conservation and sustainable forest management. It is important to note that initiatives that successfully reduced deforestation in tropical countries during the past decade include stronger law enforcement in the Brazilian Amazon forest (Nepstad et al., 2014). It is therefore important that incentives, regulations and enforcement must all be

simultaneously implemented in order to promote sustainable management of tropical forests.

This doctoral study contributes to the existing literature on the drivers of forest loss, institutional interactions and policy impact monitoring in important ways. Needless to say, many questions remain unanswered and various avenues for further investigation exist. The following are a few of them.

- This study indicates that policy and institutional factors are important causes of forest loss. Future research might want to analyse the possible losers and winners from a change in status quo, and how the benefits of more forest-friendly institutions and policies could also benefit them.
- Further research is needed to investigate how to integrate national economy development plans with low-emission, forest-friendly development paths. There is also a need to study how global systems of economic incentives tied to emission reductions could influence domestic forest land use and associated conflicts.
- Paper III presented a methodological framework to assess and monitor the impacts of VPAs. The framework should be field tested to verify whether the proposed indicators and the associated information are suitable to monitor and report the intended and unintended impacts of VPA and explore whether important aspects are uncovered in the framework.
- The research underlying paper II applied the concept of institutional interplay (Gehring and Oberthür, 2009) to analyse the interactions between FLEGT–VPA and REDD+. The institutional interaction concept is based on the argument that knowledge of working procedures and regulations can spread through connections between source and target institutions, and that this affects the performances of the target regime. However, the exclusive focus of the concept on the performance of regimes ignores an important facet, namely whether and, if so, how institutional performance is influenced by regime design (Böhmelt and Spilker, 2014, p. 1). Furthermore, the institutional interaction concept has been found to be less suitable for identifying disruptive interactions between governance mechanisms (paper II). Future research on synergies and linkages should consider combining a social network analysis (Böhmelt and Spilker, 2014) with the concept of institutional interaction. This could help to address these shortcomings. It is worth emphasizing that the ideal type of cognitive interaction is not as broad and precise as the one in social network analysis. The concept of social network analysis advances the ideal type of cognitive interactions by elucidating four specific evolutionary steps through which cognitive interactions occurs: generation of information by the source institution, incorporation of the generated information into the decision-making processes of the target regime, which leads to changes in preferences of the actors within target regimes, and subsequently influences the negotiation processes and outputs of the target regime.

6. Conclusions

Innovative efforts have been made in the past decade to address tropical deforestation, focusing mainly on forest governance and market based approaches. From policymaking and implementation as well as research perspectives, it is crucial to understand whether these different policies act in isolation (i.e. silos approach) or in coordination. The aim of the present study was to explore the synergies between and the impacts of FLEGT–VPA and REDD+ processes at the national level in two Congo Basin countries, namely Cameroon and the Republic of the Congo. By doing so, lessons could be drawn to inform the ongoing implementation of global forest governance mechanisms.

Political culture (especially corruption and vested interests) and institutional factors are the most important and difficult causes of deforestation to address because they are inherent in the countries' political economies. These factors are not likely to be changed through the implementation of FLEGT–VPA and REDD+. Additionally, the national economic development strategies of tropical countries are becoming major drivers of tropical deforestation. This implies that any national, regional and/or international policy to combat deforestation can only succeed if it introduces sufficient incentives or recognizes opportunities that will not harm the national economic development.

There are important linkages and synergies between FLEGT–VPA and REDD+ with regard to advancing forest governance reforms, clarifying land tenure, strengthening stakeholder engagement and balancing competing interests. This provides an opportunity to make better progress on delivering the objectives of both FLEGT–VPA and REDD+. Whereas relevant international actors recognize the crucial benefits of policy coherence, the main challenge to FLEGT and REDD+ synergy in the Congo Basin lies at the domestic political processes, vested interests and institutional 'silos' at local, national and international levels. More needs to be done to explore how to integrate and streamline domestic politics related to land use with the global efforts of enhancing linkages and creating synergies between the processes.

As the FLEGT–VPA and REDD+ processes approach the implementation stage, certain problems with the FLEGT Action Plan and Forest Carbon Partnership Facility (FCPF) of the World Bank remain unresolved. The problems include the FCPF's narrow focus on market-based carbon credit systems (rather than non-carbon benefits) and the fact that FLEGT and FCPF promote existing regulatory instruments that may not necessarily promote sustainability and effective participation. The risks also include difficulties in advancing tenure security, as well as governance and law enforcement on the ground. Unless this situation is rectified, the implementation of the processes is unlikely to protect tropical forests. Instead, it will hurt indigenous peoples and local communities and serve only the interests of powerful individuals. Forest governance mechanisms should look beyond timber legality and reducing CO₂ emissions, to recognize the significant role of tropical forests in providing non-carbon benefits.

Fundamental governance reforms and a change in incentive structures and enforcement are needed if FLEGT and REDD+ are to effectively contribute to the global efforts to reduce tropical deforestation. As FLEGT and REDD+ are fragmented at national and global levels, there is an urgent need to adopt a holistic rather than a silos approach to the design and implementation of the processes. In addition, FLEGT, REDD+ and other global policies aimed at reducing deforestation should be mainstreamed into national economic and social strategies to help tropical countries shift away from resource-intensive economic development scenarios.

Without such efforts, the processes will have marginal overall impacts on protecting and conserving tropical forests.

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Appendices

Questionnaire survey (Paper I)

1. Respondent's details

Name:..... Organization:.....

Email address:..... Telephone number:

2. Direct⁴ causes of deforestation⁵ and forest degradation⁶ (DD)

Each of the items listed below has been identified from literature as a possible direct driver of DFD. You are kindly asked to: (A) identify (and rate from 1 to 5) which of the listed direct causes are CURRENTLY applicable/important in the Cameroonian context; and (B) rate from 1 to 5 the potential of each direct cause to be a threat to DD in the FUTURE.

[illegible]

⁴ **Direct (immediate) causes** are human activities that directly affect the environment and thus constitute proximate sources of change.

⁵ **Deforestation** means direct human-induced conversion of forested land to non-forested land.

⁶ **Degradation** of forests is human-induced, long-term reduction in forest carbon stocks.

3. Underlying⁷ causes of deforestation and forest degradation

Each of the items listed below has been identified from literature as a possible underlying cause (UC) of deforestation and forest degradation (DD). In this part, you are kindly asked to: (A) identify which of the listed UCs are CURRENTLY important in the Cameroonian context; and (B) rate the potential of UCs as FUTURE indirect causes of DD. Please use the scale of 1 to 5 to indicate the current and future perceived level of importance.

| 1 | 2 | 3 | 4 | 5 |
|----------------------|--------------------|----------------------|-----------|----------------|
| Not at all important | Not very important | Moderately important | Important | Very important |

| Underlying causes | Categories | Perceived level of importance | | | | | Tick examples |
|--|-----------------------------------|-------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--|
| | | 1 | 2 | 3 | 4 | 5 | |
| Economic factors (economic growth, change or development, commercialization) | Market growth & commercialization | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Unspecified: rapid market growth, rise of cash economy, increasing commercialization, incorporation into world economy |
| | | | | | | | Increased market accessibility |
| | | | | | | | Growth of sectoral industries |
| | | | | | | | Lucrative foreign exchange earnings |
| | | | | | | | Growth of demand for consumer goods and services procured with cash due to a rise in wellbeing |
| | Specific economic structures | | | | | | Other: |
| | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Large individual (mostly) speculative gains |
| | | | | | | | Poverty & related factors |
| | | | | | | | Economic downturn, crisis conditions |
| | | | | | | | Indebtedness, heavy foreign debt |
| | Urbanization & industrialization | | | | | | Other: |
| | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Urbanization: growth of urban markets |
| | | | | | | | Industrialization |
| | Special economic parameters | | | | | | Other: |
| | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Comparative advantages due to cheap, abundant production factors in resource extraction & use |
| | | | | | | | Special, mainly artificially low kept production conditions |
| | | | | | | | Price (value) increases (of fuel, land, cash crops) |
| | | | | | | | Price decreases (of cash crops) |

⁷ **Underlying causes** are societal factors, such as human population dynamics or agricultural policies that drive the proximate causes.

| | | | | | | | | |
|---------------------------------------|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|---|--------------------------|
| Cultural (or socio-political) factors | Public attitudes, values, beliefs | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Lack of public concern or lack of public or political support for forest protection and sustainable use | <input type="checkbox"/> |
| | | | | | | | Lack of concern about the welfare of others and future generations | <input type="checkbox"/> |
| | | | | | | | Beliefs about how environmental conditions affect those things that individuals value | <input type="checkbox"/> |
| | | | | | | | Other: | <input type="checkbox"/> |
| | Individual and household behaviour | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Individuals' lack of concern about the environment | <input type="checkbox"/> |
| Demographic factors | | | | | | | Rent-seeking, non-profit orientation, continuation of inherited modes of resource use | <input type="checkbox"/> |
| | Population pressure (unspecified) | | | | | | Other: | |
| | Population growth (unspecified) | | | | | | | |
| | Natural increment (fertility, mortality) | | | | | | | |
| | In-migration | | | | | | | |
| | Population density | | | | | | | |
| | Uneven spatial population distribution | | | | | | | |
| | Lifecycle features | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

4. Agents responsible for the causes of deforestation and forest degradation

Please identify the objectives, motivations and incentives of various agents responsible for the proximate and underlying causes of deforestation and forest degradation in Cameroon.

| Agent | Motivations and incentives of the agent |
|----------------------|---|
| Smallholder farmer | |
| Agri-business | |
| Agro-industry | |
| Forest concessioners | |
| Logging companies | |
| Artisanal logging | |
| Mining industries | |
| Artisanal mining | |
| Governments | |
| Other: | |

5. Challenges/barriers to addressing the causes

Can you identify potential barriers or challenges to addressing the drivers of deforestation in Cameroon/Congo?

.....
.....

6. Policy options/strategies to reduce deforestation

Can you identify measures or policy options to reduce deforestation and forest degradation in Cameroon/Congo?

6.1. Sector-specific measures (agriculture, energy, mining etc.):

6.2. Cross-sectorial measures:

Interview protocol (Paper II)

1. Respondent's details

Name: Organization:

2. Current and anticipated interactions between REDD+ and FLEGT VPA

- 2.1. In your opinion, how do REDD+ and FLEGT interact and overlap in their design and implementation?
- 2.2. Please (A) identify the type and source of interactions between VPA and REDD+; (B) indicate whether the interaction is current or anticipated; and (C) specify the nature and quality of the effects of the interactions in Cameroon/Congo.
- 2.3. Are the legal reforms envisaged and implemented under FLEGT consistent with reforms promoted by REDD+ initiatives? Or are they disruptive?
- 2.4. Does FLEGT influence the implementation and enforcement of the national forest sector legal framework in ways that are different from REDD+ initiatives?
- 2.5. In which areas might FLEGT and REDD+ work at cross-purposes?

3. The challenges and risks

- 3.1. What kind of challenges do you think will hinder the implementation of synergies between VPA and REDD+ processes in Cameroon/Congo?

4. Recommendations for interactions management

- 4.1. At a practical level, can you identify the (A) actions, (B) actors and (C) initiatives needed to create synergies between REDD + and FLEGT VPA?
- 4.2. Do you know any provisions or institutions that are designed to strengthen the synergies between REDD + and FLEGT VPA?
- 4.3. How should the potential conflicts or interactions be managed in order to enhance the effectiveness of the two processes?

Interview protocol (Paper IV)

1. What are the plans to design and implement a participatory and consultation strategy under FLEGT/REDD+?
2. What land tenure and ownership practices may or may not work under the FLEGT/REDD+ regime in Cameroon?
3. What are the plans to clarify the legal foundation of the rights of local forest-dependent communities to forestlands?
4. What are the plans to create a mechanism for an equitable benefit-sharing mechanism under REDD+/FLEGT?
5. What attempts are being made to ensure that the grassroots communities are the real beneficiaries of the REDD+/FLEGT process?
6. How can one learn lessons from the experiences of previous benefit-sharing mechanisms?
7. What benefit-sharing mechanism could work under REDD+/FLEGT in Cameroon?
8. What are the key challenges or risks in relation to designing and implementing the mechanism for sharing benefits?
9. What kind of safeguards could work for FLEGT and REDD+?
10. What are the similarities and differences in safeguard approaches of FLEGT and REDD+ and what are the reasons for those similarities and differences?
11. What are the next steps the Cameroon government and the international community should take to effectively implement social safeguards under FLEGT/REDD+ Cameroon?