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UNIVERSITY OF SOUTHAMPTON

FACULTY OF SOCIAL SCIENCES

Department of Sociology, Social Policy and Criminology

**Policy Implementation in a Frontier Region: the case of deforestation in the
Amazon**

by

Carolina Navarrete-Frías

Thesis for the Degree of Doctor of Philosophy

July 31st, 2020

UNIVERSITY OF SOUTHAMPTON

ABSTRACT

FACULTY OF SOCIAL SCIENCES

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Doctor of Philosophy

POLICY IMPLEMENTATION IN A FRONTIER REGION: THE CASE OF DEFORESTATION IN
THE AMAZON

By Carolina Navarrete-Frías

The Amazon Forest is changing at unprecedented rates and is facing significant forest-cover loss. While governments have made important progress in addressing some major threats and pressures, current policies have still failed to halt the decline. While there is a growing body of evidence on the limitations for the implementation of public policies (implementation gaps), this only explains to a certain degree the limits for public policy implementation in the Amazon.

The aim of this study is to understand and explain policy implementation in a complex policy context such as the frontier and to advance knowledge on how to improve natural resource governance with a specific focus on reducing deforestation and forest degradation in the Amazon rainforest. The current literature does not sufficiently explain the limits of policy implementation in frontier economies. It was developed for advanced industrial democracies and assumes rule of law and therefore, the theory needs to be modified for frontier economies. This thesis contributes new knowledge to address this research gap by investigating the question: what are the limits to implementing forest policies that aim to reduce deforestation and degradation in the forest-agriculture interface in the Peruvian Amazon? Its aim is twofold: i) to expand the understanding on some of the main obstacles for environmental policy implementation in the specific policy context of a frontier economy, and ii) to analyse and contrast stakeholders' perspectives on the main factors underpinning policy implementation outcomes. In doing so, this thesis analyses the implementation of Forest Policies and their interaction with other key sector policies in Ucayali, a frontier region in the Peruvian Amazon. It applies thematic analysis and case study research to fifty six stakeholders' interviews from the local, regional and national levels over a period of three years. The methodology for data collection in this research relied on a qualitative multi-method approach which includes key informant interviews (semi-structured), focus groups, case study research and policy mapping.

This thesis makes contributions in three critical knowledge domains: politics of implementation, policy implementation in a frontier economy context and application of MLG outside of the European context. The thesis uses four case studies to explore the link between policies and deforestation which are: State Capacity (Multi-Level Governance), Land Use Planning (Network Governance) and Forest Policy (Policy Implementation and Implementation in the Frontier). The first case study demonstrates that the interdependence dynamics taking place within multi-level governance are leading to an erosion of State Capacity in Ucayali. The key elements identified to shift erosion into transformation are the allocation of authority, resources and competences, distribution of power and coordination. It also finds a growing interdependence between governments and nongovernmental actors at the regional and local levels as an indicator of a burgeoning MLG. The involvement of non-State actors can support the fulfilment of policy's goals, therefore, complementing State capacity. This will require more coordination to prevent the duplication of actions of various actors working towards similar objectives.

The second case study shows that in a frontier context, the 'rules of the game' within networks apply for only some cases. While in Ucayali there is evidence of network governance integrating a vast array of elements of land use planning under a set of agreed rules of the game, this thesis also finds that policy networks resist policy change and can foster corruption. The absence of agreed 'rules of the game' for forests and land use planning reveals the absence of 'shared policy

objectives.’ The results also show that in the frontier agreement on a set of rules is relevant, yet rigid rules and institutional complexity can deter the transition from illegality to legality. The findings show that the lack of trust is a prevalent characteristic in the frontier, which is fertile ground for illegality, where covert networks collaborate to achieve their goals. Network management is a fundamental tool for breaking through sectoral silos and economic interests in the frontier through the application of metagovernance - network steering, bureaucracy, and markets. The co-existence of various networks in the frontier requires a more hierarchical intervention to deter covert networks in action. Further, metagovernance strategies must address horizontal integration across sectors as a key determinant for forest governance. In the frontier, network governance takes a predominant role in the local level as there is fewer presence of the State. This also shows the way that MLG and network governance are interconnected, and how MLG is important to strengthen network governance in the local levels.

The third case study shows that power – dependence, politics and policy ambiguity underly and affect the dynamics taking place in Ucayali in relation to forest governance. While the politics of implementation are closely intertwined with inequality. Further, the role of the State is changing as there is an upward trend of non-State actors having an active participation in forest governance which will require the strengthening of decentred governance.

The fourth and last case study showed that implementation in the frontier interacts with six core conditions that interface with implementation and which are not considered in the Western literature of implementation gaps. These are informality, corruption, weak rule of law, unfair market conditions, covert networks and inequality and they feed into each other. While there are barriers to reduce informality such as the high costs of formalisation and weak enforcement; corruption in the frontier is entrenched reaching the highest levels of authority providing a fertile ground for covert networks; and longtime seated social structures support inequality. In this context, is key to consider the politics that underpin decisions being made and the synchronicity between the various components of policies across sectors.

Table of Contents

Table of Contents	i
Table of Tables	v
Table of Figures	vii
Declaration of Authorship	ix
Acknowledgements	xi
List of Abbreviations	xiii
Chapter 1 Introduction	1
1.1 The Problem.....	1
1.2 Research Question	4
1.3 The Research Context	6
1.3.1 Case study site: economic drivers and deforestation in the Peruvian Amazon	6
1.3.2 Institutional and Policy Context.....	14
1.3.3 Forest Laws	23
1.4 Thesis structure.....	26
Chapter 2 Drivers of Deforestation	29
2.1 Drivers of deforestation.....	29
2.1.1 Which are the main drivers of deforestation in the Amazon?.....	29
2.1.2 Deforestation and forest degradation: definition and how it is measured ...	29
2.1.3 Deforestation drivers: proximate causes and underlying driving forces	30
2.1.4 Proximate Causes.....	30
2.1.5 Underlying Driving Forces.....	34
2.2 Concluding Remarks.....	39
Chapter 3 Implementation in the Frontier Society	41
3.1 Where were we: A Return to Implementation	41
3.2 Policy Implementation and the Politics of Implementation	46
3.3 Frontier Economy.....	47
3.4 Concluding remarks and research gaps	50

Chapter 4	Governance	53
4.1	An introduction to governance	53
4.2	Multi-Level Governance	56
4.3	Network Governance	61
4.4	Metagovernance	66
4.5	Contribution to the political science field	68
4.6	Concluding remarks and research themes.....	71
Chapter 5	Methods.....	75
5.1	Qualitative Methods.....	75
5.2	Field Site and Community Selection.....	76
5.2.1	Case selection: field site	76
5.2.2	Case selection: communities.....	78
5.3	Research design and data collection methods.....	79
5.3.1	Semi-structured interviews and focus groups	80
5.3.2	Interviewee Selection.....	82
5.3.3	Policy selection	84
5.3.4	Data collection in the field	86
5.4	Methods for Data Analysis	89
5.4.1	Thematic Analysis.....	89
5.4.2	Case Study Research.....	90
5.4.3	N-Vivo	92
5.4.4	Interview Transcription	93
Chapter 6	Multi-Level Governance: Whistling in the wind?	95
6.1	Introduction.....	95
6.2	State Capacity.....	96
6.2.1	Administrative	96
6.2.2	Resources	103
6.2.3	Control of corruption.....	106
6.3	Steering.....	110
6.4	Distribution of authority and competences.....	116

6.5	Interdependence and non-State actors.....	119
6.6	Coordination of MLG across policy sectors	122
6.7	Discussion and Conclusions	125
Chapter 7	Network governance and land use planning	131
7.1	Introduction	131
7.2	Dependence	132
7.3	Steering	136
7.4	Complexity	138
7.5	Networks as obstacles	144
7.6	Coordination	147
7.7	Discussion and Conclusions	152
Chapter 8	Implementation.....	157
8.1	Introduction	157
8.2	Implementation Gaps	158
8.2.1	Objectives	158
8.2.2	Politics	165
8.2.3	Policy succession.....	170
8.2.4	Resources.....	179
8.2.5	Coordination	183
8.3	Discussion and Conclusions	194
Chapter 9	Multi-level governance and implementation at the frontier	199
9.1	Frontier Economy.....	199
9.1.1	Migration and Economic Boom	199
9.1.2	Informality and corruption	203
9.1.3	Weak Rule of Law	211
9.1.4	Unfair market conditions	215
9.1.5	Unequal distribution of benefits.....	217
9.2	Discussion and Conclusions	222
Chapter 10	Conclusion	229

Table of Contents

a.	Findings.....	230
b.	Theoretical innovation	240
c.	Reflections on methods used and data.....	245
d.	Future Research.....	246
Appendix A	Primary Sources.....	249
Appendix B	Site overview and stakeholder-organization overview Semi-structured interview protocol Target: key informants from multiple organisations.....	251
Appendix C	Focus Group Questions. Leaders and Communities	255
Appendix D	Landscape Performance Scorecard.....	257
Appendix E	Twenty Questions for Assessing the Performance of Ecoagricultural Landscapes	261
Appendix F	Site & Block Overview Form (IM Form 1).....	265
Appendix G	Stakeholder Inter-Organization Form.....	273
Appendix H	Research Framework for Institutional Mapping.....	281
Appendix I	Interview transcription format.....	283
Appendix J	N-Vivo Coding Tree	285
	Thesis Bibliography.....	289

Table of Tables

Table 1	Key institutions and their aims (national level)	15
Table 2	Key policies and their aims (national level)	17
Table 3	Key institutions and their aims (regional level)	20
Table 4	Key policies and their aims (regional level)	21
Table 5	Peruvian Forest Planning. Source: (OSINFOR 2014, p. 13)	25
Table 6	Literature Reviewed	69
Table 7	Case Study Chapters: Themes for Analysis.....	72
Table 8	Type and number of interviewees.....	81
Table 9	Policy Selection and Analysis Process.....	85
Table 10	Field Visits	87
Table 11	List of interviews.....	249

Table of Figures

Figure 1.	Annual (blue bars) and cumulative (red line) vegetation loss in pixels between 2004-2012 in the Peruvian Amazon. Source: (CIAT 2014).....	7
Figure 2.	Annual rate of vegetation loss in pixels between 2004 - 2012 in the department of Ucayali (per province). Source: (CIAT 2014).....	8
Figure 3.	Land Cover Change, Vegetation Loss Detections, ASSETS Communities, Ucayali-Peru. Jan 2004 – Dec 2013. Source: Terra i, CIAT, 2014.	9
Figure 4.	Loss of RainForest in the Amazon per Department 2001-2013. Source: (MINAGRI 2015).....	10
Figure 5.	Estimation of Direct Causes of Deforestation 2000 – 2009. Source: (FIP 2012) ..	10
Figure 6.	Annual (blue bars) and cumulative (red line) vegetation loss in ha between 2004-2012 in the Peruvian Amazon. Scale in left hand indicates annual loss and scale in right hand indicates accumulated loss. Source: (CIAT 2018).....	12
Figure 7.	Annual rate of vegetation loss in pixels between 2013-2018 in the department of Ucayali (per province). Source: (CIAT 2018)	12
Figure 8.	Map of ASSETS Communities in Ucayali (red points highlight where communities are located). Source: CIAT	79
Figure 9	Map of deforestation pressures around the Communal Reserve El Sira (2004-2019). Source: Terra i, CIAT, 2019.	102

Declaration of Authorship

I, CAROLINA NAVARRETE FRIAS declare that this thesis and the work presented in it are my own and has been generated by me as the result of my own original research.

Title of thesis: Policy Implementation in a Frontier Region: the case of deforestation in the Amazon

I confirm that:

1. This work was done wholly or mainly while in candidature for a research degree at this University;
2. Where any part of this thesis has previously been submitted for a degree or any other qualification at this University or any other institution, this has been clearly Stated;
3. Where I have consulted the published work of others, this is always clearly attributed;
4. Where I have quoted from the work of others, the source is always given. With the exception of such quotations, this thesis is entirely my own work;
5. I have acknowledged all main sources of help;
6. Where the thesis is based on work done by myself jointly with others, I have made clear exactly what was done by others and what I have contributed myself;
7. None of this work has been published before submission

Signed:

Date:

Acknowledgements

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The first time that I arrived in Pucallpa, I visited a large sawmill located by the Ucayali River banks. It was like visiting a large cemetery of trees. It was conspicuous in the air that the economy of Pucallpa revolved around timber to create jobs, industry and a wealth of resources. I was perplexed to hear comments on the scarcity of timber and although aware of the rates of deforestation and less informed at the time of the problems of forest degradation, it seemed like a paradox standing right by the largest tropical rainforest in the world.

This thesis is dedicated foremost to my mother Yolanda Frías Navarro. It is also dedicated to Fernando Navarrete, Ana María Navarrete Frías, Alberto Navarrete, Leonor Navarro, Elena Arango and Antonio Frías. To all my family for their endless love and support and for leading by example. To the Zoeller and Dueffert families for believing in the power of education. To Cristhian for his unconditional love and support. The author would like to thank Pasquale Cilibrizzi, Ruben Echeverría, Andy Jarvis, Rod Rhodes, Kate Schekenberg, Francisco Thoumi, Simon Cook, Glenn Hyman, Milena Buchs, John Boswell, Jack Corbett, Pia Riggirozzi, Craig Hutton and Guy Poppy for their unconditional support, and reviewers including Lou Verchot, Jean Francois LeCoq and Nadine Andrieu, David Kaimowitz and Cristián Samper for their constructive comments. The author is also grateful to all the stakeholders in Peru that supported the field work, especially to José Sánchez-Choy, Pepe Álvarez, Alberto Barandiarán, Pablo Peña, as well as to the support of the University of Southampton Vice Chancellor's Scholarship and foremost and always to OneCGIAR.

...To all the spirits from the forest...

List of Abbreviations

AIDER: Association for Research and Integral Development

ARAs: Regional Environmental Authorities

ARAU: The Regional Environmental Authority of Ucayali

ASSETS: The Attaining Sustainable Services from Ecosystems through Trade-off Scenarios Project

BCRP: Central Bank of Reserve of Peru

CEPLAN: National Center for Strategic Planning of Perú

CGIAR: The International Consortium for Agricultural Research

CIAM: Interregional Amazonian Council

CIAT: International Center for Tropical Agriculture

CIFOR: Center for International Forestry Research

CMLTI: Multisectoral Permanent Commission to Fight Against Illegal Logging

COLOVIPES: Local Committees for Fisheries Surveillance

CONAFOR: The National Consultive Council for Forest Policy

CONAN: National AntiCorruption Coordinator of Peru

DEVIDA: The National Commission for the Development and Life without Drugs

ECOSIRA: The Communal Reserve *El Sira*

EIA: Environmental Investigation Agency

FAO: Food and Agriculture Organization of the United Nations

FEMA: The General Attorney Specialized in Environmental Matters

FTA: Consortium Research Programme on Forests, Trees and Agroforestry

GIZ: The German Technical Cooperation Agency

GOREU: Regional Government of Ucayali

List of Abbreviations

IBC: Institute for the Common Good

ICRAF: The World Agroforestry Centre

INIA: The National Institute for Agricultural Innovation

INPE: National Institute of Spatial Research of Brazil

INRENA: The National Forest and Wild Fauna Authority

IPBES: The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services

LUP: Land Use Planning

MINAGRI: Ministry of Agriculture of Peru

MINAM: Ministry of the Environment of Peru

MLG: Multi-Level Governance

NFL: New Forest Law

NPM: The New Public Management

NYDF: The New York Declaration on Forests

OCDE: The Organisation for Economic Cooperation and Development

OEFA: The Agency for Environmental Assessment and Enforcement

OLAMSA: Oil from the Amazon

ORAU: Regional Organization of the Inter-Ethnic Association for the Development of the Amazon Rainforest Ucayali

OSINFOR: The Organisation for the Supervision of Natural Resources and Wild Fauna

PMCFIL: The Permanent Multisectoral Commission to Fight Illegal Logging

PRODUCE: Regional Authority in charge of Fisheries in Ucayali

RCA: Regional Conservation Area

REDD+: Reducing Emissions from Deforestation and Forest Degradation in Developing Countries

RSPO: Roundtable on Sustainable Palm Oil

SERFOR: National Forest Service and Wildlife

SERNANP: The National Service of Protected Areas by the State

SGP: Public Administration Secretary of the Presidency of the Council of Ministers

SICNA: Sistema de Información sobre Comunidades Nativas de la Amazonía Peruana

UN: United Nations

UNEP: United Nations Environment Programme

UNODC: United Nations Office on Drugs and Crime

USAID: United States Agency for International Development

WWF: The World Wide Fund for Nature

ZEE: Economic and Environmental Zoning

Chapter 1 Introduction

1.1 The Problem

The governance of natural resources is a pressing issue of our time. Forests around the world face multiple threats, many of anthropogenic origin, which have led to a net decrease in global forest area of 1.7 percent between 1990 and 2005 (FAO & JRC 2012). Other estimations show that between 2000 and 2010 approximately seven million ha of forest were lost per year in the tropics (FAO 2016, p. 14). Although global conservation and other efforts are in place to reduce deforestation and promote more sustainable forest management, the outlook for biodiversity is still distressing, as “species in all groups with known trends are, on average, being driven closer to extinction” (UNEP 2010, p. 26). In a recent report, Dr Anne Larigauderie, the Executive Secretary of IPBES, highlighted that “one of the most important findings across the four IPBES regional assessments is that failure to prioritize policies and actions to stop and reverse biodiversity loss, and the continued degradation of nature’s contributions to people, seriously jeopardises the chances of any region, and almost every country, meeting their global development targets” (IPBES 2019). In addition, the 2018 Progress Assessment on the New York Declaration on Forests (NYDF) highlights that much deforestation is illegal, corruption is high in and around forests. It also points to the existence of strong laws in the textbooks that are frequently poorly implemented (NYDF Global Platform 2018).

Agriculture continues to be the main driver of deforestation (FAO 2016, p. vi), and the paradox is that there is need for a 35% increase in food production by 2030 (Kray 2018). This is why preserving the planet and providing food that is sufficient, safe, affordable and nutritious are two key priorities of the 2030 Agenda for Sustainable Development (UN General Assembly 2015b), nevertheless, there is conflict between these global policy priorities (Loconto et al. 2019, p. 1) and there is recognition in that it is time to rethink how we grow, share and consume our food (UN General Assembly 2015a).

The rate of biodiversity loss has been identified as one of nine interlinked earth system processes that have been the result of the development of human civilizations (Rockström et al. 2009). The planetary boundaries framework attempts to establish the frontiers within which humanity can continue to thrive and highlights the risk of transgressing these boundaries which “will trigger non-linear, abrupt environmental change within continental- to planetary-scale systems” (Rockström et al. 2009). Some of the estimated boundaries include “land system change (<15% of the ice-free land surface under cropland); and the rate at which biological diversity is lost (annual

Chapter 1

rate of <10 extinctions per million species).” The latter boundary has already been transgressed (Rockström et al. 2009), while there is emphasis on linking the global and regional decision-making scales (Steffen et al. 2015).

An ecosystem of critical importance for several planetary systems is the Amazon RainForest, which constitutes the largest remaining forest area in the world, but has already declined by 4.7% from 2000 to 2013 (WWF 2016, p. 56). Recent scientific studies that delivered the Global Deal for Nature¹ recommend increasing the amount of areas under protection by 2030. It targets for 30% of the Earth to be formally protected and another 20% allocated as climate stabilization areas (Dinerstein et al. 2019). Yet, part of the challenge is that the majority of countries are behind on previous commitments made under the Convention on Biological Diversity to protect 17% of the land by 2020 (Dinerstein et al. 2019).

If deforestation exceeds 40% of the basin it could lead to a large-scale dieback and ‘tip’ the basin from being a major carbon sink to being a carbon source (Davidson et al. 2012).² Furthermore, there is an intricate connectivity in the Amazon ecosystem and deforestation affects other resources such as freshwater ecosystems (Castello et al. 2013). In the last few years, 48% of all tropical forest deforestation took place in Brazil and cattle ranching caused three-fourths of this (F. Walker et al. 2013). The conversion of tropical forest into pasture has been incentivised by various government policies while most rapid growth of land use change took place in small farms. There are two conundrums. First, there is a limited role for official incentives so other factors are linked to the growth of ranching in the Amazon. Second, large farms with higher income tend to have higher turnover and land abandonment leading to the expansion of the agricultural frontier (Schneider 1995, p. 1;11). Other sources indicate the role of small agriculture in driving deforestation in the Peruvian Amazon (SERFOR et al. 2015). However, caution is necessary. First, if the number of small farms doubles that does not necessarily mean that this growth will equal or exceed the deforestation impact of a smaller increase in the number of large farms. Second, there is debate around the main causes of deforestation, and agriculture is frequently used as a means to promote land speculation, therefore agriculture becomes the excuse and not the real cause. Claims of agriculture driving deforestation should be observed with caution as other drivers such as changes in commodity prices or land speculation can masquerade as agriculture.

1 A Global Deal for Nature “that safeguards the Earth, protecting 50% of our lands and oceans. Scientists say this bold target is needed to prevent the extinction crisis, halt runaway climate change, feed the world, and ensure a healthy planet for future generations.” The Rockefeller Foundation. 2019. "GLOBAL DEAL FOR NATURE." Available online at <https://www.globaldealornature.org/petition/en/>.

2 New research indicates that this tipping point could even be reached at 20-25% deforestation due to the negative interactions between deforestation, climate change, and the use of fire. See: Lovejoy, Thomas E. and Carlos Nobre. 2018. "Amazon Tipping Point." *Science Advances* 4(2):eaat2340.

Research on forest governance in the Brazilian Amazon underscores the high degree of fragmentation in the landscape while underscoring the few governance mechanisms that yielded results to deter deforestation. For example, when analysing the early, late and post frontier as well as high forest conservation regions in Brazil, Gardner (2014) finds that “the remaining areas [that] have high forest cover and low rates of deforestation are either in the very remote northwest of the Amazon or in areas that have large protected areas or indigenous reserves.”

Considering the above, the main focus of this thesis is on forest policy implementation in the Amazon in relation to anthropogenic land use change, a key driver of deforestation and habitat loss. From a policy perspective, land use change can be considered as an opportunity to break through policy paradigms. As some authors claim, “resource crises are important for the renewal of management institutions (because the crisis forces social learning by the institution), just as dynamic processes, such as disturbances, are important for the renewal of ecosystems” (Gunderson et al., 1995, as cited in Berkes 1999, p. 94).

Myriad governance approaches exist to respond to the current environmental concerns. There are top-down approaches (such as planning processes) aiming to bridge the gap with local stakeholders (local community input) (Fraser et al. 2006, p. 126). There are bottom-up approaches such as community based management to address issues of governance of natural resources and the distribution of benefits and costs within resource users (McDermott and Schreckenber 2009). There are also nested approaches which define rules at various levels to integrate processes for natural resource management (such as Reducing Emissions from Deforestation and Forest Degradation in Developing Countries - REDD+) (Chagas et al. 2011, p. v). There is the policy networks approach which includes liaison between the government and other actors who work together around shared goals related to policy design and implementation (Rhodes 2017a, p. 3). There is also the Multi-Level Governance (MLG) approach which involves transitioning to decentralised power, leading to the diffusion of decision making (Hooghe and Marks 2003, p. 233-235). MLG offers a space to “emphasise the importance of working across scales, and often across disciplines, to solve environmental problems” (Larson and Lewis-Mendoza, 2012, p. 185). This can provide the required flexibility and institutional framework to support ecosystems’ resilience. There are governance mechanisms that come from international agreements such as the New York Declaration on Forests Global Platform (NYDF Global Platform 2018) and the zero deforestation pledges in the public and private sector (FAO 2018).

Current challenges require improvements in governance, including aspects such as policy interventions, land use planning and State capacity. In this thesis, State capacity refers to the ability of the national, regional and local governments to effectively undertake policy

Chapter 1

implementation and enforce the rule of law. This requires technical capacity, administrative, human and financial resources and a clear distribution of authority and competences. Crucially, State capacity is not limited to technical matters but involves the State's ability to build political and social agreements around policy goals.

Moreover, as mentioned before, agriculture continues to be the main driver of deforestation globally (FAO 2016, p. vi), therefore, it is imperative to have interventions that prioritize the "sustainable management of both forests and agriculture, and their integration in land-use plans" (FAO 2016, p. vi). The integration of forests and agriculture is fundamental as "the main reason why environmental problems appear may relate fundamentally to the fact that present institutions separate decision making among agents using the same or interdependent environmental resources" (Hagedorn 2008 and Vatn 2008, as cited in Vatn and Vedeld 2012).

There have also been recent efforts to integrate the private sector in policies to reduce deforestation in the Amazon. This includes zero deforestation commitments from the private sector and their supply chains by 2020 (Curtis et al. 2018, p. 1108). Yet when analysing and classifying the drivers of global forest loss, Curtis et al. (2018, p. 1111) note that "policies designed to achieve zero-deforestation commitments are not being adopted or implemented at the pace needed to meet 2020 goals." Nonetheless, critics also highlight that the complex issue of deforestation cannot be solved by one single company but require the active involvement of governments as well. Therefore, any solution to deforestation will need to include institutional agreements among governments, industries and retailers that are inclusive of all suppliers, including medium-scale farmers and smallholders (paraphrased from Pacheco 2017).

1.2 Research Question

The aim of this study is to understand and explain policy implementation in a complex policy context such as the frontier and to advance knowledge on how to improve natural resource governance with a specific focus on reducing deforestation in the Amazon rainforest. It asks, What are the limitations to implementing forest policies to reduce deforestation and forest degradation?

The main focus is on policy implementation and the thesis compares policy objectives to outcomes. It does so by analysing three critical governance dimensions: i) State capacity; ii) land use planning; and iii) policy implementation.

The literature on policy implementation in political science is the result of a persisting concern to explain and decrease the gap between public policy's goals and actual results (Hill and Hupe 2014,

p. 199). This responds to the core interest in this thesis as the main research question relates to the limitations to implementing forest policies. Indeed, there is value in looking at the limits of public administration. As noted by Hood (1976, p. 206) “the perception of a problem may be all that is needed for a ‘cure.’”

This thesis presents a different picture of how forest governance works in Peru and suggests new ways of implementing the policy. In so doing, it uses a governance framework, specifically the intersection of network governance and multi-level governance (MLG). This thesis has three levels of analysis (local, regional and national). It presents a case study for each of its three core theoretical elements and focuses on the interrelation between them: i) multi-level governance; ii) network governance; and iii) policy implementation through the lens of metagovernance. The three case studies are: State Capacity (Multi-Level Governance), Land Use Planning (Network Governance) and Forest Policy (Policy Implementation).

To answer the main research question, the following key research objectives are developed in the thesis:

- i. To assess the State capacity of the Regional Government of Ucayali for forest governance using a multi-level governance perspective and focusing on three core functions of the State: i) administrative capacity; ii) resources; and iv) control of corruption.
- ii. To analyse stakeholder views on land-use planning (LUP) with a focus on network governance.
- iii. To identify the main gaps in forest policy implementation and the underlying politics that affect implementation. Further, to compare stakeholders’ views on the existing limitations for policy implementation.
- iv. To identify the strengths and weaknesses of theories of multi-level governance and implementation for analysing forest policy in a frontier region.

The task of Chapter 3 and Chapter 4 is to introduce these theories. Further, as noted above, the main focus of analysis in this thesis and the case studies is on Forest Policies. Yet, a relevant clarification is that other key policies and policy processes interact with Forest Policies. During the development of the fieldwork of this thesis three such areas were identified: agricultural policies, economic ecologic zoning and land use planning. I have selected these policies as they were the main ones pointed out by policy actors on the ground as relevant to Forest Policy. Therefore, the analysis in this thesis focuses on Forest Policies as well as their interactions with other key policies (sectors) and policy processes as mentioned beforehand. To provide context, a detailed account of the policy and institutional background in which policy implementation is taking place will be provided.

1.3 The Research Context

The Amazon region poses an interesting governance dilemma as it continues to undergo rapid change. Administratively this area of 6.7 million km² is shared by nine countries which are Peru, Colombia, Bolivia, Ecuador, Venezuela, Guyana, Brazil, Suriname and French Guyana (WWF 2016, p. 14). Within these, there are different policies and scales of management occurring as well as different priorities guiding the use of resources.

1.3.1 Case study site: economic drivers and deforestation in the Peruvian Amazon

The Amazon has been a region heavily influenced by economic booms driving land use change in its territory as well as the transformation of communities' livelihoods. In the 1970s, the exploitation of wild rubber led to the use of force and abuse against communities that lived in the territory. Although rubber is still of economic importance, especially for generating income with reduced negative impact on the forests (Alvarez Alonso 2013), attention has now shifted to other commodities: agricultural production and timber extraction as well as clearing forest for mining, oil and gas exploration. A snapshot of the economic relevance of these resources in the region, provides an indication of the ongoing interests and pressure in the Amazon. Only in 2012 the "Madre de Dios region of Peru [produced] 14% of the country's gold, a key national export worth \$9.5 billion in total" (Mardas et al. 2013, p. 6).

There are three main regions in Peru: the coast, the highlands (*la Sierra*) and the Amazon. A total of five departments are considered part of the Peruvian Amazon and one of these is Ucayali. Ucayali has the characteristics of a frontier economy, as described by Lipton (2015) which include migration, market growth and weak rule of law. Migration has contributed to the diversity of its population, including indigenous communities and colonists (Porro et al. 2015, p. 48). The timber sector is active and in 2013 it was the third and second largest producer of roundwood and of sawn timber respectively in the country (MINAGRI 2014, p. 6; 26). Furthermore, it has a dynamic forest-agriculture interface (Figure 3) with commodity crops rapidly expanding. For instance, MINAM (2015, p. 33) calculated that between 2006 and 2012 the area under oil palm cultivation tripled from 6,641 ha to 17,794 ha. The Regional Government of Ucayali reports that in 2014 a total of 23,743 ha of oil palm were planted and under production in Ucayali (Gerencia Regional de Desarrollo Económico de Ucayali 2016). More recent reports from the Ministry of Agriculture (2019) indicate that there are 91,844 ha of oil palm in Peru, of which 40,500 (44%) are in Ucayali (CIAT et al. 2019). This figure doubles the one reported by the regional government in 2016 showing the increasing trends in the growth of this crop in the region.

In the last 15 years, Ucayali displays an interesting trend of land use change and forest conversion, specifically due to an initial increase that was followed by a steady decrease. The International Center for Tropical Agriculture (CIAT) relies on Terra-i (which provides data to Global Forests Watch), that is a real time satellite monitoring system to calculate vegetation loss. Terra-i detects land-cover changes resulting from human activities in near real-time, producing updates every 16 days and for every 250m square of land. Currently it works for the global tropics (CIAT 2018). At this time, it is the official system being used by the Ministry of the Environment of Peru.

Every Amazonian department of Peru displays different trends of land use and forest conversion. As reported by the International Center for Tropical Agriculture CIAT (2014), between 2004 and 2012 the trend of annual vegetation loss in the Peruvian Amazon has been increasing from 43,750 ha to 188,656 ha (Figure 1).³ To place it in figurative terms, 43,750 ha can correspond to 70,481 international football fields (Ademiluyi 2013). Ucayali's deforestation shows an increasing rate alternated with sharp declines as well (Figure 2). The province within Ucayali reporting most deforestation is Coronel Portillo.

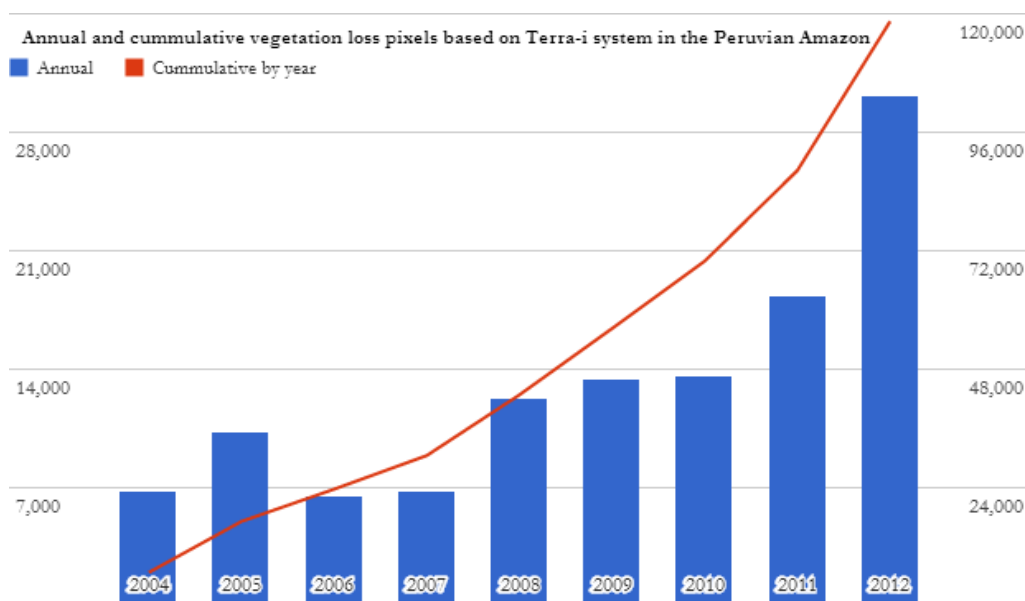


Figure 1. Annual (blue bars) and cumulative (red line) vegetation loss in pixels between 2004-2012 in the Peruvian Amazon. Source: (CIAT 2014)

³ Each pixel equals to 6.25 hectares

Chapter 1

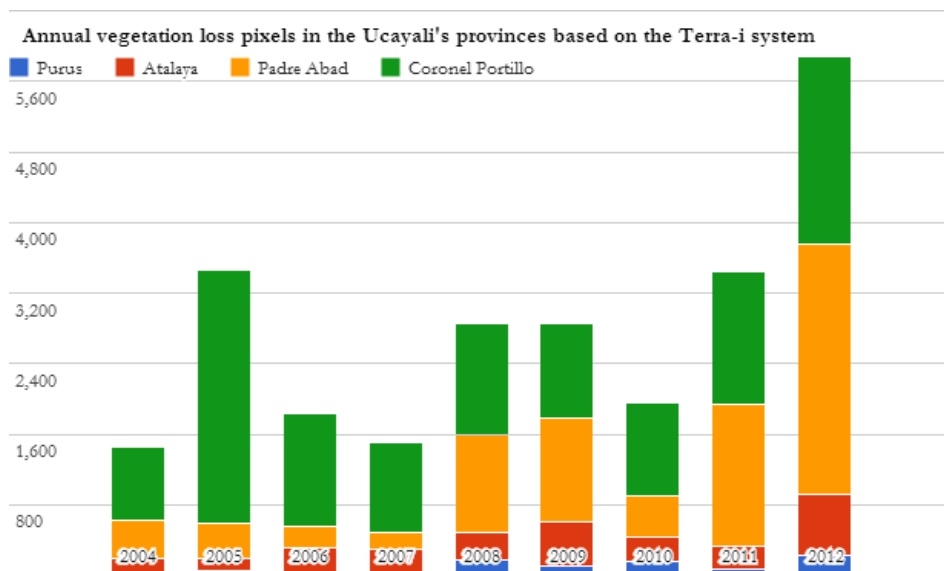


Figure 2. Annual rate of vegetation loss in pixels between 2004 - 2012 in the department of Ucayali (per province). Source: (CIAT 2014).

From 2004 to 2013, deforestation was widespread across all of the Ucayali department with a few areas of particular concentration (Figure 3). Deforestation shows two main trends: large scale deforestation (red geometrical areas) for oil palm plantations and for other purposes and shifting agriculture or selective extraction (red dots). The field observations of the Terra-i team noted that the largest farm of oil palm had 500 ha with plans to extend another 130 ha that same year (Ademiluyi 2013).

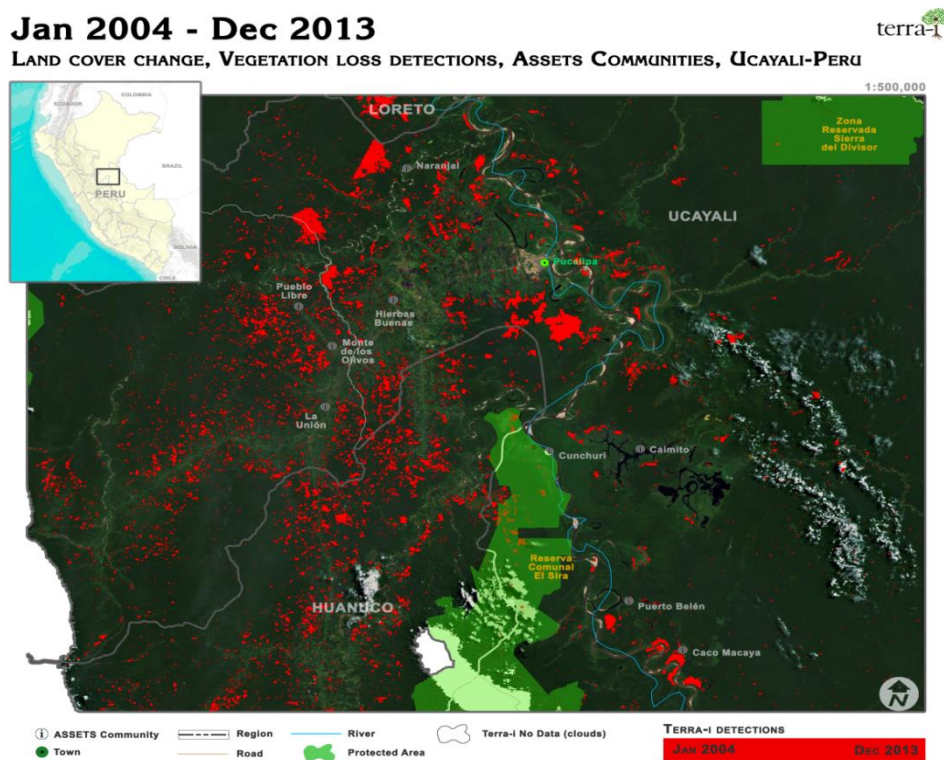


Figure 3. Land Cover Change, Vegetation Loss Detections, ASSETS Communities, Ucayali- Peru. Jan 2004 – Dec 2013. Source: Terra i, CIAT, 2014.

According to official sources Ucayali is one of the four departments in the Peruvian Amazon where deforestation has concentrated between 2000 and 2013 (Figure 4). Ucayali had a high rate of deforestation, with the highest accumulated rates of growth, which was 9.2% for the case of Ucayali (SERFOR et al. 2015, p. 9). According to official analysis, the most vulnerable areas for deforestation is the land without categorization and the permanent forests reserved for future use (SERFOR et al. 2015, p. 11).

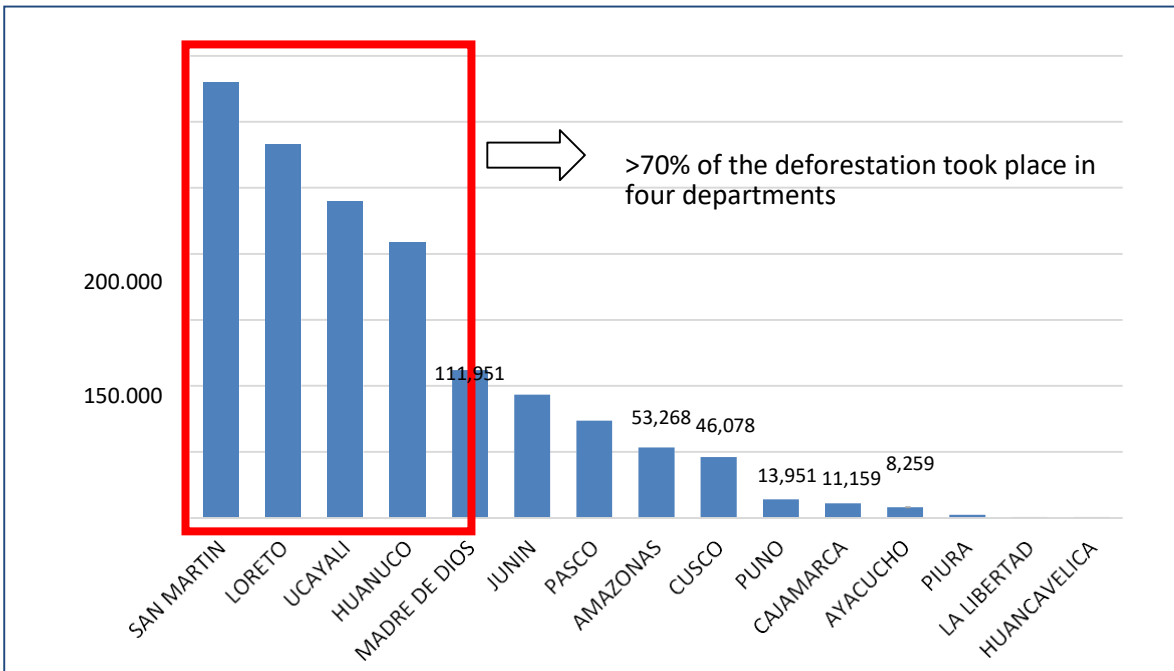


Figure 4. Loss of RainForest in the Amazon per Department 2001-2013. Source: (MINAGRI 2015)

Official sources indicate that the main direct causes of deforestation in Peru are agriculture and livestock (Figure 5). There are other causes such as mining, illegal crops, infrastructure projects and timber extraction. By analysing land use after deforestation there is evidence that agriculture causes 49-54% of the deforestation. In the case of Ucayali the main crops that have expanded at the expense of forests include oil palm, rice, cassava, and maize, with the first two being the biggest contributors. Livestock causes 32-39% of deforestation, but its incidence in Ucayali is low reaching 1.3% (SERFOR et al. 2015, p. 14-16).

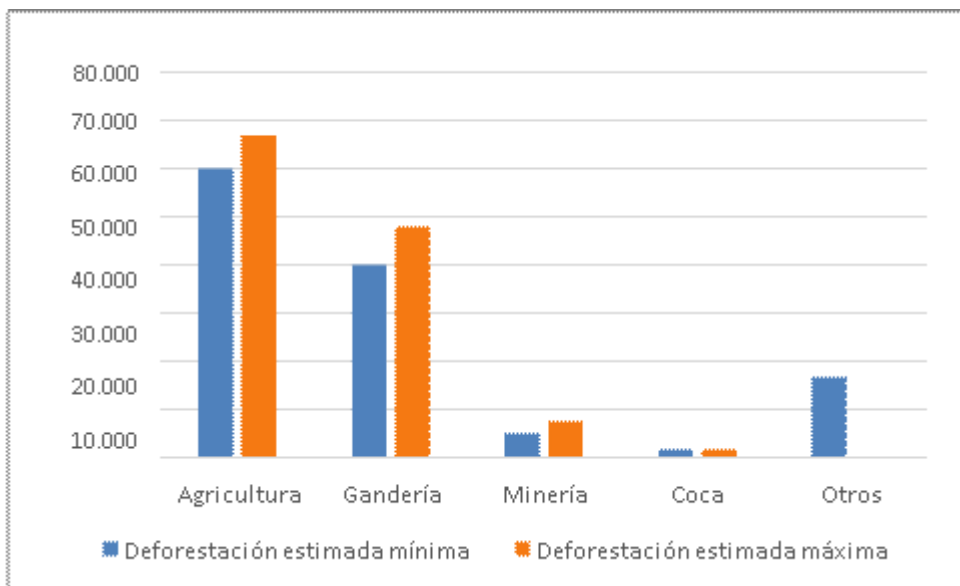


Figure 5. Estimation of Direct Causes of Deforestation 2000 – 2009. Source: (FIP 2012)

Official sources report the expansion of oil palm in Ucayali and its impact on deforestation. In a study performed between 2010 and 2014 with satellite images, they found that deforestation ranged up to 10,162 ha (MINAM 2015, p. 39). The deforestation (64%) concentrated mainly in areas that had not been categorized yet for any type of use, while 21% took place in forests for permanent production, 12% in native communities and 1.8% in natural protected areas (MINAM 2015, p. 40). The most vulnerable areas are those without categorization as between 2000 and 2014 75% of the forest loss concentrated in these (MINAM 2015, p. 41). The MAAP Project⁴ found that in the last ten years Ucayali and Huanuco concentrated most of the deforestation in Peru and the main drivers include oil palm (Finer M and Mamani N 2018).

In reference to the patterns of forest loss, MAAP claims that they remained constant in the last 17 years. Most of them (74% in average) relate to small scale agriculture (less than 5 ha), 24% relate to medium scale agriculture (5-100 ha) and 2% are large scale (more than 100 ha). Therefore, most of the deforestation driven by agriculture happens at small and medium scales. Yet, as mentioned in Section 1.1, these trends should be regarded with discretion as there are other underlying components.

The trends of forest loss between 2013 and 2018 presented puzzling changes, which include a drastic drop in 2015 to 8,381 ha, followed by a gradual increase in 2016 (22,843 ha) and 2017 (35,512 ha), to plummet again in 2018 (15,956) (Figure 6). Ucayali's deforestation shows that Coronel Portillo remains as the province with the highest rates of deforestation (Figure 7).

⁴ This is a project monitoring the Andean Amazon

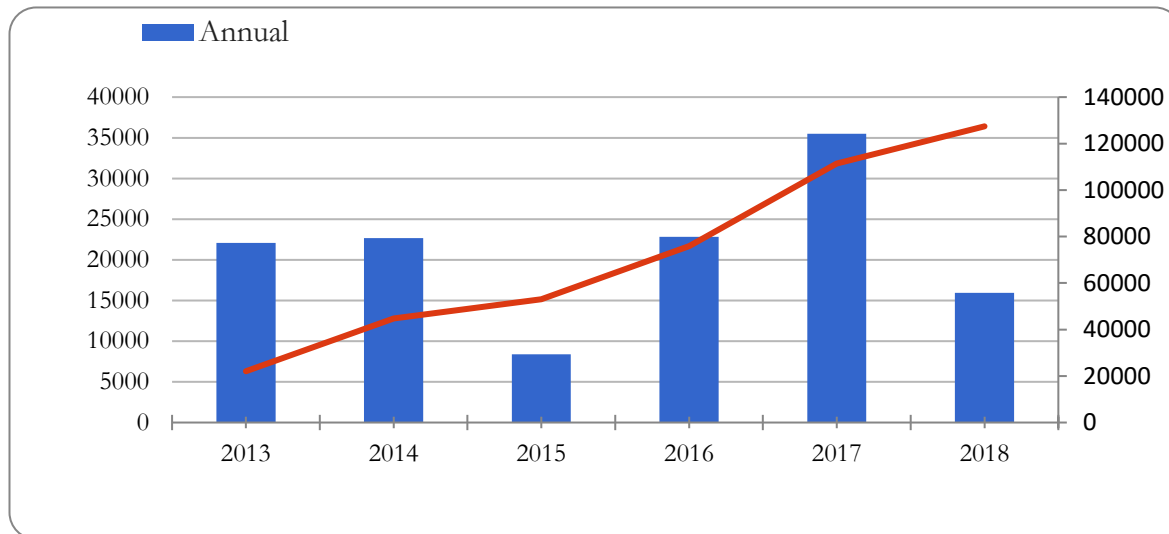


Figure 6. Annual (blue bars) and cumulative (red line) vegetation loss in ha between 2004-2012 in the Peruvian Amazon. Scale in left hand indicates annual loss and scale in right hand indicates accumulated loss. Source: (CIAT 2018)

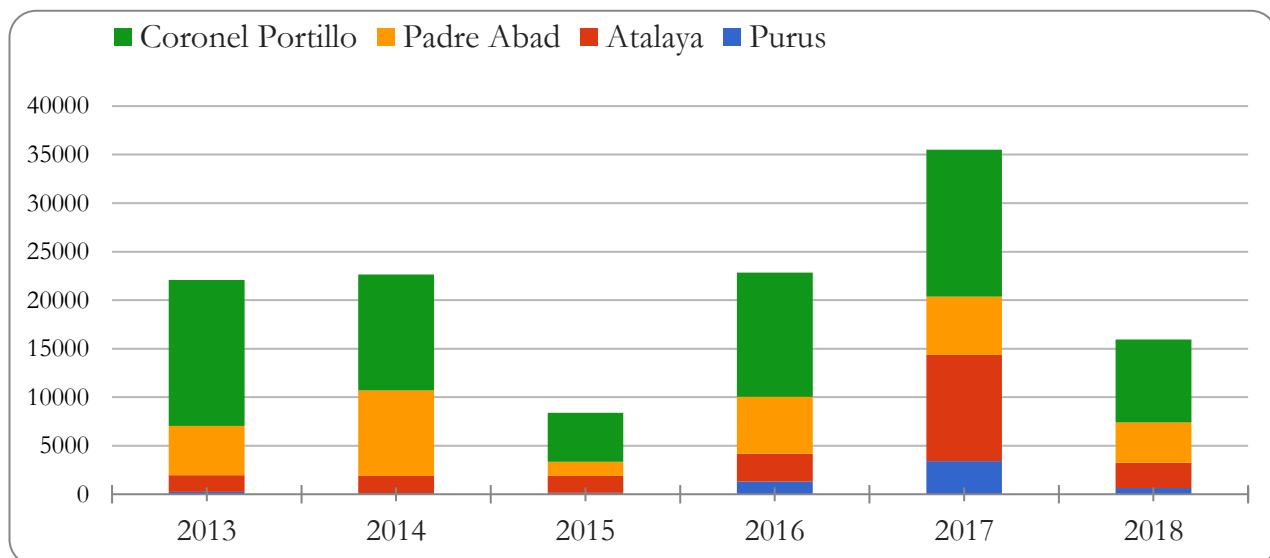


Figure 7. Annual rate of vegetation loss in pixels between 2013-2018 in the department of Ucayali (per province). Source: (CIAT 2018)

As these changes were significant and because this thesis focuses on deforestation, there were consultations with national and regional stakeholders to understand the decrease in deforestation.⁵ Experts from the national level claimed that these changes were due to six factors:

⁵ Email communications November 2018

i) there was a change in the Criminal Code in 2015 related to environmental crimes; ii) at the beginning of 2016, the General Attorney Specialized in Environmental Matters (FEMA)^{6 7} started work; iii) the operationalisation of the new Forest Law regulations which exercises a more strict protection of forests; iv) lawsuits against oil palm companies; v) the reduction of prices of cacao and vi) the *roya* disease that affected coffee crops.⁸

Meanwhile, the two experts from the region mentioned two main causes of the recent deforestation trends: i) the cutback of the prices of the oil palm fruit which also reduces the interest to expand production (oil palm fruits price per ton dropped from USD 110 to 90 and between 60-70% of revenues are invested in production costs); and ii) the reduction of prices and low productivity of other agricultural crops such as rice and cacao (according to these respondents, oil palm, rice and cacao are the main drivers of deforestation). These market trends discourage the clearing of new forest areas. In contrast with the views of national stakeholders, they considered the impact of FEMA minimal. According to them, the office only has one official that monitors the satellite images, does not have any other support personnel, and only has interns from the universities. If it detects a relevant land use change, it does not have the resources (personnel, funds, transportation means), to reach the area where deforestation is taking place. Therefore although there is a FEMA, more than 70% of their job is to prepare reports and 30% is field work with limitations.

The regional experts also warned that although the figures report a decrease in deforestation, FEMA has detected that in the borders of the oil palm plantations there are entry points to allow cutting and burning of forest. This is a strategy of oil palm companies, whereby farmers and small scale migratory agriculture are used to clear areas to be titled later on for palm.

A consultation with an expert from a regional oil palm organization⁹ corroborated the drop in oil palm prices which reached a low of USD 85 per ton in January 2019. Some of the reasons for the

⁶ In September 2015 the National Government enacted two decrees that strengthened the actions of FEMA: i) Legislative Decree 1220 – Measures to Fight Illegal Logging and ii) Legislative Decree 1237. The former expands the power of attorneys to confiscate timber products and any tool related to the crime, i.e. trucks, saw machines, as well as to destroy them in situ. The latter modifies the Penal Code to increase the penalties for crimes such as illegal logging and traffic of fauna and flora. See: Environmental Investigation Agency. 2018. "El momento de la verdad. Oportunidad o amenaza para la Amazonía Peruana en la lucha contra el comercio de la madera ilegal." EIA.

⁷ FEMA – Fiscalía Especializada de Medio Ambiente

⁸ These views from regional experts are supported by a report from the Permanent Multisectoral Commission to Fight Illegal Logging. This report indicates that in 2018 the customs office in Pucallpa undertook special actions in the sawmills located in Pucallpa, jointly with FEMA, the Direction of the Environment of the National Police of Peru in Lima and the Executive Direction of Forests and Wild Fauna in Ucayali. See: MINAGRI. 2018. "Acciones 2018. Comisión Multisectorial Permanente de Lucha contra la Tala Ilegal-CMLTI." Ministerio de Agricultura y Riego.

⁹ Email communications June 2019

Chapter 1

drop of the prices include: i) it is a commodity with variable prices influenced by the Indonesian and Malaysian markets; ii) low oil prices and countries that are not willing to pay for high prices of biodiesel leading to a sharp decrease in the prices of oil originated from oilseeds (OLAMSA 2016, p. 20). This data shows a link between deforestation and dynamics beyond the local and national spheres. World prices of oil palm are also determinants of forest use trends in the Amazon and influence the rate of deforestation (nevertheless they are not the only factors as there are other underlying conditions).

The National Government of Peru recently announced four main strategies to tackle deforestation. What is novel about this announcement is that it is a shared declaration between the Ministry of Agriculture, Ministry of the Environment and Ministry of Energy and Mines and therefore its implementation will require joint actions (Andina 2018). One of those strategies is called *institutions and governance* and its goal is to articulate the sector policies related to natural resources, to implement plans to combat deforestation and to create units for forest and wild fauna management in the Amazon (Andina 2018).

Lastly, it is worth mentioning that Ucayali has relevant conservation activities in its territory. These include the establishment of one of the largest National Parks in Peru (*Sierra Divisor*), with a total of 1.3 million ha. But also, it holds a strategic geographical position for conservation and natural resource management purposes. Ucayali hosts the Marañón and Ucayali Rivers, which together form the Amazon River (Coca and Tello 2014, p. 2). Thus, this region is strategic as it shares part of the starting point of the largest river system in the world.

1.3.2 Institutional and Policy Context

This section will first highlight some of the legislation that constitutes the backbone of Peru's environmental policies. In 2002 the National Agreement (*Acuerdo Nacional*) established "State Policies designed and approved on dialogue and consensus. Their goal is to define the route of sustainable development for the country as well as its democratic governance" (Acuerdo Nacional). The State Policy of Country Competitiveness has an objective regarding sustainable development and environmental management, which commits to "integrate the National Environmental Policy with the economic, social, cultural and planning policies (...and) also to provide the necessary institutional framework for environmental management" (Acuerdo Nacional). Peru has several commitments to reduce deforestation including international agreements for a zero net deforestation target (United Nations 2014), which the National Plan for Environmental Action 2011-2021 (*el Plan Nacional de Acción Ambiental – PLANAA Perú 2011-*

2021, Decreto Supremo no. 014-2011-MINAM) States should be achieved by 2021 (Presidencia 2016, p. 1).

Peru has a complex institutional framework for environmental management (Tables 1, 2, 3 and 4). To avoid an excessively long description of the relevant institutions and policies, this material is summarised in tabular form.

Table 1 Key institutions and their aims (national level)¹⁰

Institutions	Role/Aims	Date of Establishment
The National System for Environmental Management ¹¹	It is the compound of policies, principles, norms, procedures, techniques and tools by which the environmental functions and competences of public institutions are organised. It enables the implementation of the National Environmental Policy, the fulfillment of the environmental goals of public institutions and the strengthening of cross-sector mechanisms for environmental management	2004
The Ministry of the Environment	Has responsibilities related to guaranteeing the conservation of natural resources in the framework of green growth and environmental governance	2008
The Ministry of Agriculture	Has responsibilities related to promoting the sustainable use of natural resources and competitiveness, to contribute to rural development and improving livelihoods	1942
The National Service for Forests and Wild Fauna (OSINFOR by its acronym in Spanish) ¹²	Is one of several decentralised units linked to the Ministries that carry out activities on the ground for the supervision of the use and conservation of forest resources Under the Forest Law 27308 of 2002, it had several functions including: i) supervision and control of the forest concession agreements; ii) performing this supervision every five years in accordance with each concession agreement. In exceptional circumstances special supervision and control regulations apply	2008
The Interregional Amazon Council (CIAM by its acronym in Spanish)	Regional organization that encompasses all the Amazon Departments and works on issues related to policy coordination and development for the Amazon region	2007
The Agency for Environmental Assessment and Enforcement (OEFA by its acronym in Spanish) ¹³	OEFA works to ensure that economic activities in Peru are conducted in keeping with the right of the individual to enjoy a healthy environment. For this, it is responsible for the assessment, supervision, enforcement and sanction in environmental matters, as well as of incentive application in the mining, energy, fishery and industry sectors. It was	2008

¹⁰ For an overview of **Peru's National System of Strategic Planning** see: <https://observatorioplanificacion.cepal.org/es/sistemas-planificacion/sistema-nacional-de-planeamiento-estrategico-de-peru>

¹¹ Name in Spanish: Sistema Nacional de Gestión Ambiental

¹² Name in Spanish: Organismo de Supervisión de los Recursos Forestales y de Fauna Silvestre - OSINFOR

¹³ Name in Spanish: Organismo de Evaluación y Fiscalización Ambiental - OEFA

Institutions	Role/Aims	Date of Establishment
	created as a specialized technical agency ascribed to Ministry of Environment	
National Forest Service and Wildlife (SERFOR by its acronym in Spanish)¹⁴	The National Forestry and Wildlife Authority (SERFOR) is a specialized technical agency, responsible for liaising with other actors and institutions of the Peruvian State and civil society to meet the National Policy and Law of Forestry and Wildlife	2014
High Commissioner for Illegal Timber Extraction¹⁵	The High Commissioner resides under the Presidency of the Council of Ministers (PCM). Its responsibilities involve the coordination and liaison of the entities that work on this topic	2014
The National Forest and Wild Fauna Authority (INRENA)	Under the Forest Law 27308 of 2002, it was the authority in charge of the Registry of Forest Concessions, Registry of Forest Permits and Forest Plantations, and Registry of experts that provide forest services, among other services. It is a decentralised entity from the Ministry of Agriculture. It was absorbed by the Ministry of Agriculture in 2008 becoming the Executive directorate of Forests and Wild Fauna in Ucayali	1992
The National Consultive Council for Forest Policy (CONAFOR)	It was created by Article 5 of the Forest Law 27308 of 2002 as the consultive organization of highest ranking in matters of Forest and Wild Fauna Policy within the Ministry of Agriculture	2002
The General Attorney Specialized in Environmental Matters (FEMA)¹⁶	The General Attorney Specialized in Environmental Matters is in charge of preventing and investigating environmental crimes (as indicated in the Penal Code). It also has a role in interdiction	2002
National Center for Strategic Planning of Perú (CEPLAN by its acronym in Spanish)¹⁷	Is a technical organization in charge of managing and coordinating the National System for Strategic Planning which aims to develop strategic planning as a technical tool for the government and for development management	2008
Permanent Multisectoral Commission to Fight Illegal Logging¹⁸	This commission suggests actions to support the efforts against illegal logging. It was created as a measure to support the reform in the forest sector initiated in 2001 with the new Forest Law In 2014 the Supreme Decree N° 076-2014-PCM allowed the commission's work to be re-launched. Later, in 2016, the Supreme Decree 061-2016-PCM indicated a change of oversight from the Presidency of the Council of Ministers to the Ministry of Agriculture	2002

¹⁴ Name in Spanish: El Servicio Nacional Forestal y de Fauna Silvestre - SERFOR

¹⁵ Name in Spanish: Alto Comisionado para Asuntos de Tala Ilegal

¹⁶ Name in Spanish: Fiscalía Especializada de Medio Ambiente - FEMA

¹⁷ Name in Spanish: Centro Nacional de Planeamiento Estratégico

¹⁸ Name in Spanish: Comisión Multisectoral Permanente de Lucha contra la Tala Ilegal

Table 2 Key policies and their aims (national level)

Policies	Role/Aims	Date of Establishment
National Agricultural Law (<i>Decreto Supremo</i> No. 002-2016)	Launched by the Ministry of Agriculture also works on forest issues, with a main objective “to combat, halt and reverse processes of degradation, deforestation, hunting and other illegal activities” (MINAM 2016, p. 9)	2016
National Policy for the Modernization of Public Management to 2021	It is the main policy instrument guiding the modernisation of public administration. It establishes the vision, principles and guidelines for an effective performance of the public sector for the citizen’s wellbeing and the country’s development	2013
New Forest and Wild Fauna Law (Law no. 29763)	Under design since 2009, this Law was finally approved in 2013 by the Ministry of Agriculture and it underwent an extensive revision of its four regulations (<i>reglamentos</i>) to become fully operational. ¹⁹ Those regulations were finally approved in September 2015 and therefore the Law became effective on October 1 st , 2015. The new Forest Law “provides guidelines for forest planning and zoning and it advances the institutional framework to integrate resource management, supervision and sanction” (MINAM 2016, p. 11). Further, it provides relevant considerations for applying inter-sectoral coordination for the adjudication of rights over renewable and non-renewable resources (Agricultura 2011, p. 39).	2013
Previous Forest Law (no. 27308)	Under this Law, the National Government designated areas of forest for Permanent Production and subsequently granted concessions in these areas in 2004 and 2005.	2002
Regulation of the Forest and Wild Fauna Law	It details the guidelines for the operation of the Forest Law. It indicates two main modalities of Forest Concessions for timber purposes (for 40 years and can be renewable): <ul style="list-style-type: none"> i) Concessions from 10,000 up to 40,000 ha ii) Concessions from 5,000 up to 10,000 ha The latter is granted to medium and small size entrepreneurs either as individuals or organisations.	2001

¹⁹ A consultation process was in place (*consulta previa*) which was mandatory since 2011. The right for previous consultation (*consulta previa*) with indigenous peoples was included in the Peruvian Constitution in 1994, but only in 2011 was it approved by a Law (Ley del Derecho a la Consulta Previa a los Pueblos Indígenas u Originarios N° 29785). <https://elperuano.pe/noticia-la-consulta-previa-se-consolida-59215.aspx>

Policies	Role/Aims	Date of Establishment
The Decentralisation Law No. 27783 (<i>la Ley de Bases de la Descentralización</i>)	“Determines the competences of each of the three levels of government, the assets and resources of the regional governments and regulates the relationships between the different levels” (GOREU 2015b, p. 1). Within it, the management of forest resources and the territory is a shared responsibility between the National, Regional and Local Governments (Presidencia 2016, p. 1).	2002
National Plan of Forest Development (<i>Plan Nacional de Desarrollo Forestal</i>)	<p>The National Plan and its specific plans are elaborated by INRENA, with participation of the public and private sectors and submitted to consultation of CONAFOR.</p> <p>This national plan guides policy, programme and project design to foster sustainable forest development. This plan is valid for 20 years, and it is revisited every 5 years to make any necessary adjustments.</p>	2001
National Plan to Prevent and Control Deforestation (<i>Plan Nacional de Prevención y Control de la Deforestación</i>)	<p>This plan has as part of its strategy several aims including i) the diffusion and promotion of agroforestry systems, as well as of systems to prevent deforestation and ii) mechanisms of prevention and control of deforestation for agricultural and livestock purposes and sharing of alternative methods.</p>	2017
Peru Trade Promotion Agreement U.S. Lacey Act²⁰	<p>This agreement has a chapter on the environment and within it an annex on Forest Sector Governance that indicates the following: “the Parties recognise that trade associated with illegal logging, and illegal</p>	2009

²⁰ “The Lacey Act is a 1900 United States law that bans trafficking in illegal wildlife. In 2008, the Act was amended to include plants and plant products such as timber and paper. This landmark legislation is the world’s first ban on trade in illegally sourced wood products. The Lacey Act is a fact-based statute with strict liability, which means that only actual legality counts (no third-party certification or verification schemes can be used to “prove” legality under the Act) and that violators of the law can face criminal and civil sanctions even if they did not know that they were dealing with an illegally harvested product. Penalties for violating the Lacey Act vary in severity based on the violator’s level of knowledge about the product: penalties are higher for those who knew they were trading in illegally harvested materials. For those who did not know, penalties vary based on whether the individual or company in question did everything possible to determine that the product was legal. In the U.S. system, this is called “due care,” and is a legal

Policies	Role/Aims	Date of Establishment
	trade in wildlife, including wildlife trafficking, undermine trade in products from legally harvested sources, reduce the economic value of natural resources, and weaken efforts to promote conservation and sustainable management of resources. Accordingly, each Party commits to combat trade associated with illegal logging and illegal trade in wildlife. The Parties recognise that good forest sector governance is critical to promoting the economic value and sustainable management of forest resources. Accordingly, each Party commits to take action under this Annex to enhance forest sector governance and promote legal trade in timber products” (Office of the United States Trade Representative 2006).	
<p>The National Strategy of Climate Change (2003, 2015), the National Forests Conservation Programme for climate change mitigation (2010), the National Strategy of Biological Diversity (2014), and the Strategy for Forests and Climate Change (2016)²¹</p>	<p>These are a new wave of climate change policies in which forests play a central role. The Ministry of the Environment and the Ministry of Agriculture reached agreements on the leadership and implementation of the recently launched (2016) Forests and Climate Change Strategy (MINAM 2016, p. 9). Peru is also the pilot country for the Forest Investment Programme financed by the Climate Investment Fund (MINAM 2016, p. 11). It aims to support national efforts to reduce forest degradation and deforestation, as well as to promote sustainable forest management.</p>	<p>2003, 2015, 2010, 2014</p>
<p>National Plan against Deforestation</p>	<p>The Ministry of Agriculture, The Ministry of Mines and the Ministry of the Environment came together to reduce deforestation progressively through the</p>	<p>2018</p>

concept designed to encourage flexibility in the marketplace” World Resources Institute. 2018. "U.S. Lacey Act." Available online at <https://forestlegality.org/policy/us-lacey-act>.

²¹ Names of policies in Spanish in the same order as listed above: Estrategia Nacional ante el Cambio Climático, Decreto Supremo no. 011-2015-MINAM), Programmea Nacional de Conservación de Bosques para la Mitigación de Cambio Climático, Estrategia Nacional de Diversidad Biológica y Estrategia Nacional sobre Bosques y Cambio Climático.

Policies	Role/Aims	Date of Establishment
	multi-sector and intergovernmental integration and effective actions implemented through multi-level governance.	
The Ecological and Economic Zoning (<i>Zonificación Ecológica y Económica - ZEE</i>)	The Ecological and Economic Zoning is part of the Land Use Planning Law. Some of its aims include to reconcile the conservation of the natural base with the sustainable use of natural resources. Its ruling defined it as a process to identify the various alternatives of sustainable land use in a specific territory. Its aim is that territories use their competitive advantages. It analyses their limitations and potential looking at physical, biological, social, economic and cultural dimensions. Once approved, it becomes a technical tool to guide sustainable land use, decision making and the administration of the territory, as well as for the design of land use planning and regional development plans. The Ministry of the Environment provides technical assistance and follow up to the process, in coordination with regional and local governments.	2004

Table 3 Key institutions and their aims (regional level)

Institutions and Policies	Role/Aims	Date of Establishment
The Regional Environmental Authority of Ucayali (ARAU by its acronym in Spanish)	A recent effort to integrate environmental management at the regional level. It integrated several offices which include: the Regional Office for Natural Resources, the Territorial Planning Unit of Ucayali and the Executive Directorate of Forests and Wild Fauna in Ucayali.	2014
The Agriculture Secretariat	It was named Agriculture Secretariat when the department of Ucayali was created. With the establishment of the regions, it became the Regional Agricultural Directorate in Ucayali stopped belonging to the Ministry of Agriculture in Lima and was re-directed to the Regional Government. One of its key competences includes land titling.	1980
The Regional Conservation Areas (<i>Áreas de Conservación Regional – ACR</i>)	It is a conservation strategy of geographical areas that represent biological diversity and other associated values. They are complementary to the National System of Protected Areas by the State. The decentralised governments at the regional level can refer it to SERNANP and they are declared through a Supreme Decree.	2010

Table 4 Key policies and their aims (regional level)

Institutions and Policies	Role/Aims	Date of Establishment
Regional Joint Development Plan -RCDP (<i>Plan de Desarrollo Regional Concertado 2011-2021</i>)	The backbone of the regional policies in Ucayali which has five strategic dimensions, one of which is natural resources and the environment (Gerencia Regional de Planeamiento 2011, p. 4).	This Plan is updated regularly
<i>Institutional Development Plan (PEI)</i>	The main objective of the PEI is to provide medium-term regional guidelines to the public institutions for different strategic regional actions.	2017
<i>Regional Government Statutory Law</i>	This law establishes and regulates the structure, organisation, powers and roles of regional governments. It also defines the democratic and decentralised structure of the Regional Government in accordance with the Constitution and the Decentralisation Law.	2019
Law of Proceedings for the titling of small agricultural areas	The Regional Ordinance N ° 012-2015-GRU / CR, of the Regional Government of Ucayali, allows the sale of agricultural properties to residents at the price of one “sol” ²² per meter square.	2015

²² This is the Peruvian currency. 1 sol is equivalent to approximately 0.25 pounds (exchange rate of 2018).

1.3.3 Forest Laws

Forest Law 21147 was launched in 1975. In recent years, a relevant change for the forest sector was the transition between Forest Law 27308 (previous Law) and Forest Law 29763 (new Law). The latter under design since 2009, was finally approved in 2013 by the Ministry of Agriculture and it underwent an extensive revision of its four regulations (*reglamentos*) to become fully operational. Those regulations were finally approved in September 2015 and therefore the Law became effective on October 1st, 2015. The beginning of the implementation of the new Forest Law coincided with the period when my data collection in the field took place (between 2014 and 2016). Therefore, this section aims to cover some of the main aspects of both Laws which also are relevant to the analysis of policy implementation that follows in the next sections.

The Law No. 27308 aimed to

Dictate norms, regulate and supervise the sustainable use and conservation of the forest resources and wild fauna of the country, harmonizing its use with the progressive valuation of the environmental services of the forest, in alignment with the social, economic and environmental interests of the nation (Congreso de la Republica de Perú 2002).

The regulation of this Law adds that the focus of the use of the wild flora and fauna should not cause the depletion of resources and biological diversity in the long run, so that the needs of current and future generations can be supplied.

Within this Law, the Ministry of Agriculture approved the National Forest Development Plan that established the priorities, operational programmes and projects to be implemented. Projects and programmes to be implemented such as the National Plan of Prevention and Control of Deforestation, the National Plan of Reforestation (among others), as well as land use planning per INRENA's request with the participation of the private sector (Congreso de la Republica de Perú 2002).

The Law No. 27308 established six main categories for forest planning: i) production forests; ii) forests for future use; iii) forests in protected lands; iv) natural protected areas; v) forests in native and peasant communities; and vi) Local Forests (*bosques locales*). Of special interest for this thesis are categories i), v) and vi). Within category i), there are **permanent production forests** which are areas of primary forests which are available to third parties for the use of timber and other forest resources. Category v) refers to forests located within the territories of indigenous and peasant communities. Last, category vi) whereby INRENA grants Local Forests according to

Chapter 1

the rulings, through authorizations and permits to rural populations and towns for the sustainable use of forest resources (paraphrased from Congreso de la Republica de Perú 2002). The Local Forests were created as a mechanism to formalize the small timber extractors which certified that they belonged to a rural locality or center close to a public forest (paraphrased from OSINFOR 2017, p. 8). Their goal is to provide legal and organised access to local inhabitants that allows a sustainable use of forests goods and services for commercial purposes (paraphrased from OSINFOR 2017, p. 14). Yet, this Law indicated that in the case of Local Forests located in lands for protection, only non timber forest products could be sourced. The authority in charge of establishing the Local Forests was INRENA, which would respond to the initiative of local settlers or local governments (OSINFOR 2017).

The Law No. 27308 makes reference to the Forest Zoning which is the classification of the Forest Areas in the country made on base of the Ecologic-Economic Zoning. The use and management of forest resources in primary natural forests is done, according to the Law, with the following policy instruments: i) Forest Concessions for Timber Use and ii) Forest Concessions for non- timber use. Under the first policy instrument, there is the concession of public bidding, with allocation units ranging from 10,000 to 40,000 ha for forty years. On the other hand, there is the concession of public bidding, with allocation units ranging from 5,000 to 10,000 ha that are to be exploited for forty years and this option specifically supports medium and small scale entrepreneurs. The subunits of use should not have less than 1,000 ha with management plans that INRENA establishes for this policy instrument, according to the rulings (paraphrased from Congreso de la Republica de Perú 2002).

Forest management plans consider the minimum cutting diameter and allowed volume of harvesting per species and type of forest, guaranteeing the use of a greater number of species, the holistic use of timber (...) on the basis of criteria and indicators that guarantee sustainable management and the guidelines established by the Law (paraphrased from Congreso de la Republica de Perú 2002). The Law also establishes that the concession owners are directly responsible for the assigned area, making sure there is a sustainable use as indicated in the management plan and agreement. They must take measures to avoid the illegal extraction of natural resources within the boundaries of their concession (paraphrased from Congreso de la Republica de Perú 2002). The forest management plan includes activities such as characterization, evaluation, planning, use, regeneration, protection and control of the forest aiming to guarantee a sustainable production and conservation of the biological diversity and the environment. The management plan must indicate the location of the trees to be extracted (paraphrased from Congreso de la Republica de Perú 2002). The Law indicates that prior to the use of timber and non-timber resources for commercial and industrial purposes, peasant and indigenous

communities must have a management plan approved by INRENA (paraphrased from Congreso de la Republica de Perú 2002).

The Law indicates that the national, regional and local development programmes must consider forestation and reforestation as priority activities activities in the Amazon such as forest plantations for industrial use, which includes oil palm (paraphrased from Congreso de la Republica de Perú 2002).

One of the innovations of the Law 29763 is a new policy instrument under Article 63, which provides Agroforestry Concessions for agroforestry systems in the areas of agroforestry or pecuary production and land recovery (MINAGRI 2013, p. 41). Furthermore, Article 64 of Law 29763 indicates that in specific zones of forests such as residual or remnant forests,²³ the Regional Authority for Forest and Fauna can grant Agroforestry Concessions in favour of local inhabitants who have land titles or possession of areas adjacent to these forests, in accordance with the conditions established in the regulation of the Law. The main goal of the Agroforestry concessions is to protect the forest cover as well as to make use of its goods and services with contracts for up to 40 years in areas not larger than 100 ha (paraphrased from MINAGRI 2013, p. 41).

Due to the challenges with the coordination of activities between multiple sectors for implementing forest management plans and other related programmes, the Forest Law 29763 introduced coordination mechanisms. This is the case of Article 62 which notes the required intersectoral coordination to grant titles and rights over natural resources, listing several institutions including SERFOR, the National Authority of Water and the Ministry of Commerce, among others (MINAGRI and SERFOR 2015).

As this thesis will be looking at land use planning and especially, the different uses of land vis-à-vis forest resources, here is a snapshot of the Peruvian Forest Planning:

Table 5 Peruvian Forest Planning. Source: (OSINFOR 2014, p. 13)

Planning	Million of ha	%
Without category	22.3	30.4%

²³ The terms used in the Forest Law 29763 is *residuales* or *remanentes* which refers to natural primary forests which are isolated due to the fragmentation of habitat caused by the occupation and transformation of previous forest landscapes. These forests generally present conditions of relative isolation, limited size and anthropogenic pressure.

Planning	Million of ha	%
Forests in natural protected areas and territorial reserves ²⁴	18.8	25.7%
Native and peasant communities	14.1	19.3%
Permanent Production Forests	9.2	12.6%
Permanent Production Forests in reserve	8.8	12%
Total	73.2	100%

Last, the transition from Forest Law 27308 to Forest Law 29763 implied having a new Law that responds better to the diverse interests and needs of the forest users, especially of those that directly depend from the forest such as the indigenous communities. Although the new Law keeps some of the policy instruments of the prior Law to access forest resources, such as the forest concessions, the main difference is that the new Law aims to have more efficient implementation considering the other measures in the Law (i.e. incentives). Some of the key differences include new policy instruments in the Forest Law 29763 such as the Agroforestry Concessions and the Forest Regents. The latter establishes the solidarity between those that hold the title of the concessions and the ones that may use them, especially to protect indigenous communities in case enterprises work in their lands. Another key difference is the inclusion of more clear competences for the regional authorities (Capella and Araujo 2015). The new Forest Law improved its policy instruments with respect to community forest management and underwent a serious process of previous consultation. It also recognized better the role of regional governments (See Footnote 19).²⁵

1.4 Thesis structure

This research is presented as a PhD Thesis Format. The research aim, objectives and justification are presented in this first chapter. The thesis that follows is divided into nine sections: drivers of

²⁴ These include regional and private conservation areas and territorial reserves for indigenous groups in isolation

²⁵ Email communication June 2018

deforestation, literature review, methods, four substantive chapters (the four case studies) and a final conclusions chapter. This section provides a brief summary of each of these.

- **Drivers of deforestation:** chapter two discusses the drivers of deforestation and policy analysis related to forest loss. The main causes identified in this chapter (proximate and underlying driving forces) are central to explaining the policy implementation gap.
- **Literature review:** chapter three and four provide a broad overview of the literature within the different disciplinary areas upon which this thesis is based. They provide a series of questions for me to explore and a consolidated list of the themes applied in the analysis of the case studies.
- **Methods:** chapter five presents the research design and data collection methods, the methods for data analysis as well as the field site and community selection.
- **Substantive chapters:** chapters six, seven, eight and nine present the research results.

Chapter six sets up the broader policy and governance context in Peru to understand the dynamics within each level of government as well as between these levels. It provides an in-depth analysis of State capacity, because it is an essential prerequisite for the later analysis of implementation.

Chapter seven uses network governance as an analytical lens to look at land use planning. It focuses on the changing boundaries between public, private and voluntary sectors.

Chapter eight analyses the main forest policy implementation gaps in Ucayali and the underlying politics that affect implementation. The chapter presents the analysis relying on five main themes referred to as implementation gaps: objectives, politics, policy succession, resources and coordination. These themes summarize the most frequent challenges arising from top-down implementation.

Chapter nine focuses on governance and implementation literatures and it introduces one additional theme which is relevant to understand the limits to MLG and implementation: the covert networks of the frontier economy.

- **Conclusions:** chapter ten summarizes the conclusions of this study, discusses its novel contributions to knowledge, outlines its limitations and presents thoughts for future research.

Chapter 1

This chapter introduced the governance of natural resources as a pressing issue of our time in a global context and it presented the main aim of this study, the research question and the key research objectives. It also provided an overview of the research context, underscoring the main land use dynamics occurring in the study site, the key institutions and policies that underpin forests, agriculture and land use planning in Peru and a more in-depth overview of some core forest policies. This was important to establish the context in which the research analysis will take place. It also provided an overview of the thesis structure. The next chapter will cover literature on the drivers of deforestation and policy analysis related to forest loss, which is relevant for the analysis of the policy implementation gap.

Chapter 2 Drivers of Deforestation

This chapter provides an overview of the literature on the drivers of deforestation and policy analysis related to forest loss. It consists of one overarching section. The first part of this section focuses on key distinctions in the definition and measurement of deforestation. It then looks to the main drivers of deforestation in the Amazon with a focus on the proximate causes and underlying driving forces of deforestation, as well as policies and institutional arrangements that influence land use change. The main causes identified in this chapter (proximate and underlying driving forces) are central to explaining the policy implementation gap.

2.1 Drivers of deforestation

2.1.1 Which are the main drivers of deforestation in the Amazon?

Deforestation and forest degradation are some of the main environmental problems affecting the Amazon Basin (FAO 2016; WWF 2016). Without an active intervention plan to improve natural resource management in the Amazon and its resilience towards climate change, some scholars have predicted a “loss of 47% of original forest area by 2050” (Malhi et al. 2008, p. 171).

This section explores differing perspectives on the drivers of land use change in the Amazon as well as the limitations to implementing forest policies to reduce deforestation and forest degradation, with a specific focus in the Amazon. It will contribute to understanding the main causes driving change in the basin and whether they differ across the region and over time. This is important for providing the context and shedding light on the complexity of deforestation in the Amazon in order to guide policy implementation that will enhance natural resource governance. The section will first introduce some definitions of deforestation and land degradation and will then discuss in more detail the drivers of land use change in the Amazon and the Peruvian Amazon more specifically, looking at the proximate and the underlying driving forces of land use change.

2.1.2 Deforestation and forest degradation: definition and how it is measured

FAO is a global authority on forests and leads an annual publication on the State of the World's Forests. Therefore, the definitions that will be used in this thesis are from FAO. Deforestation is defined as “the conversion of forest to other land uses or the permanent reduction of the tree canopy cover below the minimum 10 percent threshold” (FAO 2016, p. 96). Forest degradation is

defined as “the reduction of the capacity of a forest to provide goods and services” (FAO 2016, p. 96).

2.1.3 Deforestation drivers: proximate causes and underlying driving forces

Deforestation drivers are typically classified in two main categories: **proximate causes** and **underlying driving forces**. Geist and Lambin (2002, p. 143) define the proximate causes as “human activities or mediate actions at the local level, such as agricultural expansion, that originate from intended land use and directly impact forest cover.” Further, they define the underlying driving forces as “fundamental social processes, such as human population dynamics or agricultural policies, that underpin the proximate causes and either operate at the local level or have an indirect impact from the national or global level.” Geist and Lambin (2002) provide various analytical dimensions for these two main categories. These include extractive economies and infrastructure development (for the proximate causes) and social dynamics, existing institutional arrangements and policies, markets and land issues (for the underlying driving forces).

In this chapter, when looking at the proximate and underlying forces, special attention will be given to the policies in place, which play a fundamental role in the complex dynamics of deforestation. It is worth noting that there is a close interlink between the proximate and underlying causes of deforestation, and the relative importance of each dimension as a driver of land use change can vary depending on context-based characteristics in the Amazon basin. For instance, areas closer to road infrastructure could expect this proximate cause to be a relevant condition that might lead to higher rates of deforestation.

2.1.4 Proximate Causes

2.1.4.1 Extractive Economies and Agricultural Intensification

When discussing the role of extractive economies in land use change, the analyses done by Rudel et al. (2009a), Macedo et al. (2012), Chávez et al. (2014) and Gutiérrez-Vélez et al. (2011) coincide in that they all identify global demand (which is an underlying cause) for commodities and large scale agriculture as main drivers of deforestation in the Amazon region. However, some also underscore the role of smallholders in deforestation (Rudel et al. 2009a) (Fearnside 2005, p. 685). Other authors also emphasise the fact that agricultural intensification does not reduce forest loss (Gutiérrez-Vélez et al. 2011, p. 4), unless appropriate institutions are in place (Rudel et al. 2009b). Malhi et al. (2008, p. 171) also emphasise that deforestation in the Amazon can increase as

demand for products such as tropical timber, beef and soybeans expands, especially from Asian countries.

Gutiérrez-Vélez et al. (2011) focus on the Peruvian Amazon looking at the role of agricultural production, especially palm oil. The authors claim that despite the yield increases, the raise of palm oil production globally is mostly due to agricultural expansion that is also responding to the growing demand (Gutiérrez-Vélez et al. 2011, p. 2). In this context, within the Amazon basin, Peru holds the second largest forest area suitable for growing this crop (Gutiérrez-Vélez et al. 2011, p. 2). Rudel et al. (2009a) analyse deforestation drivers from a regional and contextual perspective running a meta-analysis of global case studies. They also highlight the role of agricultural expansion leading to deforestation in the Amazon basin since the 1960s and new actors leading to deforestation (Rudel et al. 2009a, p. 1397). For example, they claim that new settlements brought cattle ranching with expanding pastures (Rudel et al. 2009a, p. 1400). After 1990, the evolution of agricultural practices and agribusiness ventures took a more prominent role as a driver of deforestation with a reduced government investment on new land settlement schemes (Rudel et al. 2009a, p. 1400). In this new context, the actors playing a key role are private enterprises supplying (among others) international markets, but also the “small farmers organised into associations and highly capitalized, well-organised soybean farmers, cattle ranchers and oil-palm planters” (Rudel et al. 2009a, p. 1400).

Gutiérrez-Vélez et al. (2011) also look at the impact of high and low yield oil palm plantations on deforestation from 2000 to 2010 through satellite imagery and field verifications in Ucayali. The former are mostly ran by private companies while the latter are led in most cases by smallholders with limited access to capital (Gutiérrez-Vélez et al. 2011, p. 2). The authors findings contradict the suggestion by Tilman et al. (2011) that increased productivity (per hectare) can contribute to meeting the global food demand with reduced forest loss. They actually found quite the opposite as 72% of the new plantations of high yield oil palm expanded into forested areas (Gutiérrez-Vélez et al. 2011, p. 3). Specifically in the Ucayali region, while 30% of the expansion of low yield oil palm crops was at the expense of forests, that of high yield plantations reached 75% (Gutiérrez-Vélez et al. 2011, p. 4). Additionally, there is an interesting finding that in part could be explained by the fragile condition of the soils in the Amazon, as “high-yield plantations would require 64% less land than low-yield plantations to achieve the same amount of production. However, high-yield plantations would require 58% more forestland to meet production levels” (Gutiérrez-Vélez et al. 2011, p. 4).

The growing industrialization of deforestation can lead to much quicker forest loss (Rudel et al. 2009a, p. 1402). However, Rudel et al. (2009a) also recognise that although enterprises have a

Chapter 2

prominent role in deforestation, in some instances smallholders also have a relevant role (Rudel et al. 2009a, p. 1401). In reference to smallholder farmers, Fearnside (2005, p. 685) mentions that they make a more intensive use of land and therefore “deforestation intensity declines with increasing property size” (Fearnside 2005, p. 685). This is contested by other scholars. When analyzing the impact of agricultural policies in deforestation in Peru, Chávez et al. (2014, p. 232) find quite the opposite as deforestation rates were higher when households had larger landholdings.

There is an ongoing debate in the literature on the impact of agricultural intensification in reducing forest loss (Garnett et al. 2013). Some scholars claim that agricultural intensification alone will not reduce the expansion of productive activities leading to land-sparing, unless other mechanisms (such as policies or conservation programmes) are in place (Rudel et al. 2009b, p. 20675). In fact, in their analysis of ten crops during a three decade period Rudel et al. (2009b, p. 20675) find that “paired increases in yields and declines in cropland occurred infrequently.” Some scholars refer to this ongoing discussion as the land-sharing and land-sparing debate and there are several critiques to their usefulness (Bennett 2017; Kremen 2015). Land sparing sets land under protection while other areas are dedicated for intensive agricultural production, while land sharing seeks to expand farmed land in a wildlife-friendly manner.

There has been a lot of academic debate on which approach is preferable. Green et al. (2005) model the trade-off between land sparing and land sharing offering a quantitative comparison of their benefits to biodiversity concluding that the best approach is land sparing, for example, through appropriately managed intensification integrating land use models such as restoration. Some critics to these findings argue that “the land sparing approach has gained dominance not because the scientists have unequivocally proven that high-input industrial monocultures are more sustainable for biodiversity conservation, but because their models require inputs and provide outputs that are translated into simple metrics that are easily integrated into tools of the dominant paradigm” (Loconto et al. 2019, p. 2).

Offering another viewpoint on the agricultural intensification debate, Macedo et al. (2012) while focusing in the Brazilian Amazon States of Mato Grosso, Rondonia and Para explain the evolution of the drivers of deforestation in the past four decades. They observe that land use patterns show it is feasible to achieve both agriculture and forest conservation simultaneously where there is sufficient cleared land available and with incentives in place to promote the use of cleared land for agricultural purposes (Macedo et al. 2012, p. 1344-1345). Nevertheless, considering the growth of world population and the changing market trends, they do not specify the amount of land available that could be considered as ‘sufficient,’ neither do they specify the types of

incentives required. They also do not provide insights to whether the land use patterns are showing a trend towards land-sparing or land-sharing.

2.1.4.2 Infrastructure Development

Several scholars highlight the role of road infrastructure as a driver of deforestation. Various authors agree that road infrastructure produces increased migration, access to the markets and promotion of economic activities such as mining and agriculture in previously remote areas.

Based on their research in the Brazilian and Peruvian Amazon, respectively, Rudel et al. (2009a), Macedo et al. (2012, p. 1341) and Chávez et al. (2014, p. 232) point to road infrastructure and road infrastructure planning as relevant causes of forest loss. Other authors such as Malhi et al. (2008, p. 171) and Reymondin et al. (2014, p. 4) also highlight the potential impact of road expansion projects on deforestation.

A meta-analysis of global case studies finds that before 1990 in the Amazon basin much of the deforestation was driven by small farmers and a wave of colonization, especially through government led infrastructure projects that granted access to previously distant areas (Rudel et al. 2009a, p. 1398). In a comparative analysis of the main proximate causes of land use change in the Brazilian and Peruvian Amazon, the development of main road infrastructure work was found to have supported increasing urbanization and the development of agriculture and livestock activities (Imbernon 1999, p. 509; 512). Studies of the situation in other countries, for instance in Guyana, confirmed that road infrastructure was “an important enabler of the deforestation since it provides access to mining in areas that were previously too remote” (Reymondin et al. 2014, p. 4).

Oliveira et al. (2007) focus specifically on the case of the Peruvian Amazon analyzing various dynamics and drivers of land use change by looking at the expansion of road network has which impacted the forest cover. Their findings underscore that between 1999 and 2011 the highest rates of forest disturbance and deforestation were only around Ucayali’s capital and the road network, totalling 64% of the total Peruvian Amazon deforestation. This is confirmed by other authors who claim that deforestation is happening near the Pucallpa-Lima road, which not only gives access to Lima but also connects to the international markets through the harbour in the Pacific (Imbernon 1999, p. 510) and has opened the door to waves of migration from the Andes (Oliveira et al. 2007, p. 1233).

2.1.5 Underlying Driving Forces

2.1.5.1 Social Dynamics

Although there has been disagreement among scholars about the influence of social factors in deforestation (Rudel et al. 2009a, p. 1397), the literature shows that social dynamics do influence land use change through two main dynamics: migration and adoption of agricultural policies.

Migrant communities and their land practices had a relevant role in shaping the Amazonian landscape. Imbernon (1999) makes a comparative analysis between the driving forces of land use change in the Peruvian (Yurimaguas and Pucallpa) and Brazilian Amazon (Acre and Rondonia) finding that after the 1950s and 1970s land colonization was a priority especially due to re-settlement. This is supported by the findings from Rudel et al. (2009a) which mentions that the two main drivers of deforestation in the literature include “shifting cultivators and small-holder colonists” and the increase of rural population especially close to unsettled areas.

Land titling is influenced by the existing agricultural policies, which is also an underlying driver of migration. For example, Chávez et al. (2014, p. 230) find that non-adopters of agricultural policies (i.e. agricultural mechanization and credits), tend to have “the least years on their current landholdings, (...) higher probability of being a migrant household, and a lower probability of having title to their landholdings.” In other words, migrants were less likely to adopt agricultural policies and to secure land titling. The next section returns to the issue of how the adoption of agricultural policies impacts land use change.

2.1.5.2 Existing Institutional Arrangements, Policies and Land Issues

Institutional arrangements and policies are also relevant to explain the dynamics of land use change in the Amazon. This sub-section explores various types of policies that have promoted land use change (directly or indirectly). This includes perverse incentives and other factors that affect environmental policy implementation. Concomitantly, it also looks at policies that have been more or less successful in curtailing deforestation.

Agricultural and forest policies and their impact on deforestation

Chávez et al. (2014) look at how the adoption of agricultural policies has impacted land use and land cover change in the Southwestern Peruvian Amazon from 1986 to 2006. They acknowledge the complexities of attributing land use and cover change to public policies as other key variables also interplay in these dynamics (Chávez et al. 2014, p. 232). Their findings confirm that those households who adopted policies (i.e. credit for crops and cattle expansion) had higher rates of deforestation vis-à-vis non-adopters, especially during the first policy period analysed (Chávez et

al. 2014, p. 230). More specifically, “for policy adopters' forest changed to agriculture by 9% between 1986 and 1991, one of the highest change rates throughout the study period” (Chávez et al. 2014, p. 230).

Macedo et al. (2012) and Rudel et al. (2009a) claim that government subsidies and other policies leading to land speculation are main causes of agricultural expansion at the expense of forests. These include perverse incentives as drivers of deforestation (Macedo et al. 2012) and economic incentives that promote agricultural expansion (Rudel et al. 2009a). A clear example is the support of the Peruvian Government for palm oil cultivation in the Amazon through a series of incentives, including tax exemptions (Gutiérrez-Vélez et al. 2011, p. 2). Rudel et al. (2009a) also refer to the industrialization of deforestation which is a relevant factor that can increase the pace of forest loss (see Section 2.1.4.1). There are also examples from other Amazon countries. The work of Fearnside (2005) in the Brazilian Amazon shows that one of the main reasons for the poor performance of land titling and distribution policies is the existence of several strong perverse incentives, which seem to be compounded by weak organisations. Especially, if the economic incentive to cut forests is not addressed properly, “one can expect landholders to clear cut forests despite prohibitions” (Fearnside 2005, p. 685-686).

The complexity of deforestation is also linked to several policies from other sectors that directly or indirectly interact with forest resources, especially when there is not a well-established inter-institutional coordination. Fearnside (2005, p. 684) looked into policy reform as a strategy to reduce deforestation in the Brazilian Amazon and found that “much of what needs to be done is outside the purview of agencies in charge of environmental issues.” Some of these include domains such as taxes, loans, development goals and road infrastructure. He highlights the role of land speculation and tax subsidies driving deforestation by promoting cattle ranching in the 70s and 80s. But also the option of investing in the Amazon without declaring taxes is another major incentive for deforestation. The same situation is promoted by the subsidies in the agricultural sector, including loans, price supports and inputs (Fearnside 2005, p. 684-685).

But even forest policies, such as forest concessions, could lead to a leakage of deforestation to other areas. Leakage refers to deforestation displacing from one region towards other regions (close or distant) resulting from reduced deforestation. Although referring to protected areas, Lambin and Meyfroidt (2011, p. 3467) define leakage as “land use zoning for nature conservation in a country may displace population and land use within that country or abroad (...) thus shifting pressure on natural ecosystems elsewhere.” In 2004, Oliveira et al. (2007, p. 1235) found an increase in forest disturbance towards the east side of Pucallpa where Forest Concessions had recently been assigned. Although the concessions aimed to regulate timber access and use, the

Chapter 2

year after (2005) both deforestation and forest disturbance outside of Forest Concessions reached almost 400% in Pucallpa. Therefore, monitoring of the areas close to the concessions is recommended to prevent deforestation leakage (Oliveira et al. 2007p. 1235).

Discussion on governance and land tenure

Weak governance is a critical factor leading to deforestation. As Barbier and Tesfaw (2015, p. 253) note, a large body of the literature finds a “positive correlation between lower governance indices and higher deforestation rates in developing countries.” Land access and tenure are also fundamental in explaining the dynamics of deforestation. Imbernon (1999, p. 512) refers to the migratory movements from the Andes to the forest where resettlement leads to slash and burn practices to cultivate cash crops, establish livestock or grow coca crops. An interesting commonality between the Peruvian and Brazilian cases that also takes place around the world and which could promote migration leading to deforestation is that “whoever has cleared land can lay claim to it” (Imbernon 1999, p. 513).

The absence of clear tenure rights could be one of the reasons driving the expansion of high yield oil palm plantations into the forests, as indicated in the case study of Gutiérrez-Vélez et al. (2011). The authors hypothesize that this expansion is due to the fact that it is relatively easier to gain tenure in land with forests in contrast to already cleared land which generally has unclear tenure arrangements (Gutiérrez-Vélez et al. 2011, p. 4). Other scholars mention that “deforestation for cattle pasture is considered an ‘improvement’ for the purpose of establishing and maintaining land titles” (Fearnside 2005, p. 685). This brings forth a relevant finding as increased agricultural productivity does not necessarily safeguard forests, unless other conditions are in place such as policies and strong governance that support clear land tenure rights in forested and unforested areas.

Efforts to promote settlements in already deforested areas have failed. Fearnside (2005, p. 685) highlights that in the case of Brazil since the 90s, the land tenure and settlement policies through the National Institute for Colonization and Agrarian Reform (INCRA) incentivized new settlements ‘only in areas already deforested’, yet new settlements in the Amazon were placed in forested areas. Various factors explain the shortcomings of settlement policies. For example, ranchers receive a compensation higher than the market price for their land when invaded by squatters. This compensation measure could create a win-win situation for both ranchers and squatters at the expense of forests. There is also an ‘industry of settlement’ with settlers taking advantage of land by selling it while pursuing new land holdings. Additionally, due to the advantages of better soil quality and timber availability, squatters tend to choose especially areas “under primary tropical forest rather than pasture, agriculture, or secondary forest” (Fearnside 2005, p. 685).

Discussion on policies' effectiveness in promoting forest transition or reducing deforestation

There are different contributions in the literature in reference to policies that have been more or less effective at containing deforestation. For instance, Oliveira et al. (2007) conclude that Forest Concessions have been effective at containing deforestation in the Peruvian Amazon. However, their claim overlooks the fact that a high percentage of Forest Concessions in Ucayali were not fully operational (OSINFOR 2014). Further, a high amount of the timber extracted was not coming from the concessions, therefore, many question their real effectiveness for regulating timber access and use. Moreover, Oliveira et al. (2007) offer no evidence or data in reference to forest degradation which is another relevant indicator (besides deforestation) of forest condition. Additionally, the levels of disturbance and deforestation outside of Forest Concessions (400%) noted in their findings underscore that forest and land use policy need a more comprehensive landscape approach to more effectively curtail deforestation at a regional scale.

Gardner (2014) claims that actor-tailored policies bring forth better results than one-size fits-all approaches. This is especially relevant for small holder farmers in the Amazon. Godar et al. (2014) underscore the role of a mix between policy interventions, private sector initiatives and market conditions to reduce deforestation in the Brazilian Amazon. They also look at command and control policies, such as the Critical Municipalities Programme²⁶ (Godar et al. 2014). Their work, in contrast with other scholars, shows that large scale properties (>500 ha) constitute most of the deforestation (up to 55.6%), while that of smallholders represented only 16.3% (Godar et al. 2014). Yet, an interesting finding for forest policy in reference to actor-specific conditions is that “smallholder-dominated areas have started to contribute less in both relative and absolute terms to the deforestation slowdown” (Godar et al. 2014). This is significant also considering that the authors find that smallholder areas have forests that are generally less fragmented, degraded and overall in better condition than those in large-scale properties (Godar et al. 2014). One of the reasons for smallholders to contribute less to curb deforestation is that larger properties have been targets of fines, embargos and private sector interventions (paraphrased from Godar et al. 2014). Considering the actor-specific conditions related to the efforts to reduce deforestation noted above, Gardner (2014) mentions that to increase their effectiveness forest policies need to be adaptive to the context and the various actors related to deforestation. He also suggests to have more policies towards incentive-based measures rather than punitive targeting smallholders (Gardner 2014).

²⁶ This programme suspended access to agricultural credit and markets for the 36 most-deforesting municipalities

Chapter 2

In reference to enforcement, policy interventions that rely on 'the stick approach' have produced mixed results in reducing deforestation. For the case of Brasil, Fearnside (2005, p. 684) argues that deforestation figures increase and decrease despite of the existing programmes such as fines, repression and inspections. Some progress has been made through the existing monitoring programme (INPE) and licensing programmes which have been effective in curtailing deforestation in Mato Grosso (Fearnside 2005). However, he claims that "repression, although undoubtedly necessary, needs to be rethought and the underlying causes addressed" (Fearnside 2005, p. 684).

Policies promoting the sustainable sourcing of commodities are also an important tool to reduce deforestation. Macedo et al. (2012) discuss the role of beef and soy moratoriums reducing the rate of land use conversion (in the State of Mato Grosso, Brazil). Although the authors provide an insightful review incorporating satellite data, market trends and policies, they recognise that leakage is possible (Macedo et al. 2012, p. 1344); however, they fail to provide more detail on this, especially as farmers could be switching to other crops as a coping mechanism.

Strong governance is an influential factor in forest transitions. For example, Barbier and Tesfaw (2015, p. 258) when conducting a global analysis found that the presence of forest policy, rule of law and regulatory quality are statistically significant in explaining the probability of a forest transition. Other authors have claimed the relevance of new policies in determining the trajectory of forest transitions in the Peruvian Amazon. Indeed, "regenerating forest areas were about equally likely to be cleared again or to be continued into forest establishment, depending on farmers' exposure to new policy adoptions" (Chávez et al. 2014, p. 232).

Other authors explore the role of protected areas and indigenous territories to reduce deforestation. This is the case of Malhi et al. (2008) whose findings support the increasing role of protected areas as critical to reducing deforestation. Currently, the amount of land that is under protected status in the Peruvian Amazon totals 21% and the amount of land declared as an indigenous territory totals 33.4% (RAISG 2019). Considering this, an interesting finding (with few exceptions) is that natural protected areas and indigenous territories from 1999 to 2005 in the Peruvian Amazon are only subject to 1% and 9% of the deforestation respectively (Oliveira et al. 2007, p. 1234). The findings of Nepstad et al. (2006, p. 65) in the Brazilian Amazon support this claim, suggesting that indigenous lands are "the most important barrier to Amazon deforestation." This could indicate that specific land use schemes provide a safeguard to deforestation. However, scholars are more cautious by claiming that "legal status may not be sufficient when the land is highly accessible to markets" (Oliveira et al. 2007, p. 1235). These concerns coincide with those of Nepstad et al. (2006, p. 65) who emphasises that one of the

greatest challenges ahead is the “successful reserve implementation in high-risk areas of frontier expansion as indigenous lands are strengthened.” Furthermore, another scholar warns that the high flux of environmental and socioeconomic change in the frontier regions can lead to policy interventions having unexpected externalities in other areas (Brondizio et al. 2009 as cited in Gardner 2014). These externalities can refer to negative impacts on forest resources. Therefore, some recommendations include having other measures in place, such as financial incentives and stronger enforcement of private land use to deter pressures for deforestation (Malhi et al. 2008, p. 171-172).

2.1.5.3 Markets

The literature observes a link between markets and the trends of land use change in the Amazon. There are three main issues: i) global demand for commodities; ii) market prices and iii) access to markets. When looking at the Brazilian case, Macedo et al. (2012) report that one of the main sources of forest conversion into agriculture are the global markets for commodities, which include the demands for products such as palm oil and soybean (as well as beef) (DeFries et al., 2010 and Rudel et al., 2009 as cited in Macedo et al. 2012, p. 1341). Especially since 2005 there is an increasing global demand for grains and oils leading to pressure for forest conversion in the Amazon (Rudel et al. 2009a, p. 1400). This is coupled by the fact that global demand is expanding, putting pressure on the land available, and that soy and cattle are highly profitable (Macedo et al. 2012, p. 1341-1343). Another scholar also makes a relevant remark on the relationship between global markets and institutional strengthening as “global markets reshape demand for local resources (e.g. forests) in ways that swamp the ability of locally evolved institutions to regulate their use” (Dietz et al. 2003, p. 1908).

Imbernon (1999, p. 510) highlights access to markets as a main cause of deforestation. Additionally, the interface between land and markets also affect deforestation. For example, “during the boom period in soy expansion (2001–2005), the incentive for cattle producers was to sell their land at a profit and clear more land elsewhere” (Nepstad et al., 2006 as cited in Macedo et al. 2012). Yet low land profitability can also promote deforestation as illustrated by Chávez et al. (2014, p. 232), forcing farmers to relocate in Madre de Dios, in the Peruvian Amazon.

2.2 Concluding Remarks

The increasing interest in identifying which policies have been more or less effective to contain deforestation is evident from the numerous publications (Barbier and Tesfaw 2015; Fearnside 2005; Gardner 2014; Godar et al. 2014; Macedo et al. 2012; Malhi et al. 2008; Nepstad et al. 2006; Oliveira et al. 2007). This chapter underscored the links between forest loss and the extractive

Chapter 2

economies, infrastructure development, social dynamics, land tenure and markets. It also looked at various institutional arrangements and policies and their role in controlling deforestation. The proximate and underlying driving forces identified in this chapter are key to understanding the factors that underpin the policy implementation gaps. This review points to the need to examine the implementation and governance arenas to overcome policy challenges. Hence, these are explored in the next chapters.

Chapter 3 Implementation in the Frontier Society

This and the next chapter provide a broad overview of the literature within the different disciplinary areas upon which this thesis is based. The review in the chapter beforehand showed that implementation and governance are only partially considered when looking at the limitations of implementing policy. This and the following chapter aim to that gap, addressing implementation in the frontier society and governance respectively. There are two main bodies of literature this thesis will rely on: the implementation and frontier society theories and governance theory. All these theories have an *a priori* relevance for the study of implementation and I will assess their usefulness in the following case studies.

These two bodies address the same question: what are the limitations to implementing forest policies to reduce deforestation and forest degradation? For each case this thesis reviews the literature to identify the concepts that will be most useful as well as the main research gaps. At the end of the Governance Chapter I summarize the main themes that will guide the analysis in this thesis and the relevance of each will be assessed in the following case study chapters (Chapter 6, Chapter 1Chapter 7, Chapter 8 and Chapter 9).

This chapter has three main sections. The first section focuses on policy implementation and two main generations of implementation research: top-down and bottom-up approaches. The second section presents the politics of implementation. The third and last section presents recent literature arguing the case for the frontier economy and situates this thesis within this paradigm.

3.1 Where were we: A Return to Implementation

Implementation is defined by implementation scholars as “the carrying out of a basic policy decision (...) ideally, that decision identifies the problem(s) to be addressed, stipulates the objective(s) to be pursued, and, in a variety of ways, ‘structures’ the implementation process” (Sabatier and Mazmanian 1980, p. 540-541). John (1998, p. 204) defines implementation as “the stage in the policy process concerned with turning policy intentions into action.” Salamon (2011) notes that one of the main conclusions of implementation studies is that “the convoluted structure of many public programmes was the source of many of the problems causing public programmes to fall short of their promise” (Salamon 2011, p. 1620).

One of the main interests of early implementation theorists was to better understand the policy process in each context and to provide advice to policy designers regarding policy prescriptions and the content or procedures that could be practically taken forward (Hill and Hupe 2014, p. 144;

Chapter 3

Hogwood and Gunn 1984, p. 52-53). This was top-down in its focus, exploring how and why central government intentions were not realised. There was also an interest in understanding the limits of public administration, especially in the context of the implementation problems faced by the poverty programmes in the United States back in the 1960s (Hood 1976, p. 4).

The resurgence of interest on implementation research in the 1970s, proved that “implementation [is not] yesterday’s issue” (Hill 1997). Scholars recognized that the complex issues faced by modern governance make implementation even more important (Hill and Hupe 2014, p. 200). Failure in policy implementation motivated scholars to seek answers to what Dunsire (1978) was to call ‘the implementation gap’ (Hogwood and Gunn 1984, p. 197). By failure, we understand “when a policy is carried out in full, and external circumstances are not unfavourable but, nonetheless, the policy fails to produce the intended results (or outcomes)” (Hogwood and Gunn 1984, p. 197). This view is still top-down and it has been increasingly challenged (see for example (Sabatier 1986). Bottom-up scholars regarded implementation as a collaborative enterprise. It was considered that “most failures in performance are failures of collaboratives” (Behn 2002, p. 72). Further, it was noted that “most public policies are no longer implemented by a single public agency with a single manager, but by a collaborative of public, non-profit, and for-profit organisations” (Behn 2002, p. 72).

There is also a recognition in that the persistence of wicked problems underscore the limitations of the application of traditional governmental bureaucracy, as these types of problems require the coordination of actors across various sectors as well as levels of Government (paraphrased from Behn 2002, p. 14). In this regard, when reflecting upon organisational solutions, Pressman and Wildavsky (1973, p. 133) mention that “no phrase expresses as frequent a complaint about the federal government as does ‘lack of coordination.’ No suggestion for reform is more common than what we need is more coordination.” They also add: “everyone wants coordination – on his own terms. Invocation of coordination does not necessarily provide either a Statement of or a solution to the problem, but it may be a way of avoiding both when accurate prescription would be too painful” (Pressman and Wildavsky 1973, p. 134).

In the implementation studies there is no unifying theoretical debate. The subject has fragmented into myriad topics. For example, some authors claim that implementation studies have developed an extensive list of factors to influence programme success; however, these have not been articulated into a generalizable body of theory (paraphrased from Salamon 2011, p. 1626). For example, Salamon (2011) refer to the work of Sabatier and Mazmanian (1980), that had the following factors: the clarity of the law, the adequacy of the causal theory embodied in the law, the multiplicity of decisions points, the characteristics of the implementing agencies, the presence

of an implementation entrepreneur, and the adequacy of external review (Salamon 2011, p. 1626). Meanwhile, other political science scholars claim the study of implementation is no longer a cutting edge topic in political science (Barrett 2004; de Leon and de Leon 2002; Hill and Hupe 2014). Nonetheless, problems with implementation lie at the core of the most pressing governance challenges of our time.

Implementation research was at its highest peak in the 1970s and 1980s. Most scholars agree that nowadays it has dispersed into several concepts which aim to provide knowledge on how to translate policy into action (O'Toole Jr 2000, p. 268). Others claim that "implementation research is long on description and short on prescription" (Elmore 1979-1980, p. 601). Yet it is still a valid entry-point to contribute to the analysis of forest policy, especially as "implementation remains a stubborn problem for governments of all persuasions. Government policies still fail, both nationally and internationally (...) Why? How do we explain these policy implementation deficits?" (Rhodes 2010, p. 19). Further, as Stated by O'Toole Jr (2000, p. 1) although implementation "no longer frames the core question of public management and public policy (...), [it] continues to bear relevance for important themes of policy and management (...) research on implementation, under whatever currently fashionable labels, is alive and lively."

There have been four generations of implementation research: top-down (Hogwood and Gunn 1984; Pressman and Wildavsky 1973); bottom-up (Elmore 1979-1980; Hupe et al. 2015; Lipsky 1980; Maynard-Moody and Musheno 2003; Vinzant and Crothers 2007), quantitative and interpretative (de Leon and de Leon 2002; O'Toole Jr 2000).

Torring et al. (2013, p. 23) reflect upon the contribution of Pressman and Wildavsky (1973) to the top-down model of implementation, and mention that "top-down implementation theorists aimed to explain the gulf between desired and actual policy outcomes by looking at the problems and barriers that emerge as policies are making their way down from the executive level to the frontline delivery systems." Hill and Hupe (2014, p. 200) consider that one relevant contribution of the top-down approach is that it underscores "purposive action and control over policy processes." Yet, the usefulness of the top-down model has been challenged by many studies of implementation within the political science literature, especially by the proponents of the bottom-up model. For instance, network ideas in relation to policy implementation underscore the sharing and adjustment of policy goals and the resolution to act in rather difficult inter-organisational contexts (Hill and Varone 2017, p. 82). Pressman and Wildavsky (1973) also contributed to demonstrate the setbacks of the top-down model, stressing that implementation was a chain linking many organisations and the more links in the chain the greater the probability of failure. Indeed, there is a relevant debate in the implementation literature between the top-

Chapter 3

down and bottom-up approaches and which are more appropriate for implementation (Hill and Hupe 2014, p. 199).

Pressman and Wildavsky (1973) share some lessons learned from the top-down model of policy implementation. One relevant lesson is that “implementation should not be divorced from policy formulation. There is no point in having good ideas if they cannot be carried out” (Pressman and Wildavsky 1973, p. 143). Furthermore, policy designers should take into consideration more direct ways to achieve their goals. This includes reducing the number of clearance points wherever possible (paraphrased from Pressman and Wildavsky 1973, p. 143).

Considering the lessons learned from the top-down model introduced above, there are two relevant contributions from the literature. One in reference to the need to link implementation and policy as there is a continuum between policy design and policy implementation and the challenges for the governance of forest resources require a great degree of adaptability. Hogwood and Gunn (1984, p. 197) claim that the chance of success can be greater if potential challenges of implementation are considered at the policy design phase. Other scholars support this view and consider that a lesson is that implementation should be embedded in the policy design process and not be regarded as a process that takes place afterwards (paraphrased from Pressman and Wildavsky 1973, p. 143). Political science scholars agree in that in a context where change is unpredictable and difficult to control, implementation should have an adaptive approach, with an iterative policy making process (Hogwood and Gunn 1984, p. 209).

The second is in reference to the lesson on being more direct in the implementation process. One of the main conclusions drawn from policy implementation is that the “experience with the innumerable steps involved in programme implementation suggests that simplicity in policies is much to be desired (...) The more directly the policy aims at its target, the fewer the decisions involved in its ultimate realization and the greater the likelihood it will be implemented” (Pressman and Wildavsky 1973, p. 147). This lesson learned underscores the need to reduce bureaucracy and have more direct and simple approaches to policy implementation. Moreover, “[the] ‘payment on performance’ is a useful premise (...) one of the advantages (...) is that money is paid out only on performance (...) if policy analysts carry bumper stickers, they should read, ‘Be simple! Be Direct’ or ‘Payment on Performance’ (Pressman and Wildavsky 1973, p. 159).

Now, after reviewing several key contributions on the top-down approach, let's explore the bottom-up approach. The literature on bottom-up implementation “questions the assumption that central government is the main influence on policy outcomes” (Cairney 2012). Sabatier (1986, p. 30-34), highlights bottom-up approaches to implementation research, including local implementation structures or policy networks in service delivery, and their ability to involve a

multitude of programmes. The starting point of analysis are the problems that actors perceive, being descriptive and not prescriptive, stressing complexity and uncertainty. Meanwhile, Torfing et al. (2013, p. 23) reflect on the theory of bottom-up implementation (Lipsky 1980) pointing that “implementation problems cannot be explained solely by distorted communication and the absence of coordination and control, and bottom-up implementation theory sets out to analyse the strategies of street-level bureaucrats who are aiming to cope with cross-pressures in the local service delivery.” In this respect, Lipsky claims that “the decisions of street-level bureaucrats, the routines they establish and the devices they invent to cope with uncertainties and work pressures, effectively *become* the public policies they carry out” (Lipsky 1980, p. xii). Furthermore, Lipsky (1980, p. 13) also notes that the roles of street-level bureaucrats in policy making depend on the “relatively high degrees of discretion and relative autonomy from organisational authority.”

There is a natural progression in the academic debates of the implementation theory. While the top-down vis-à-vis bottom-up debate is losing momentum, there is a new focus on “complexity in respect both of the process and of the related issues of control” (Hill and Hupe 2014, p. 200). Furthermore, there are other theoretical approaches to implementation (Hjern and Porter, 1981; Hjern and Hull, 1984; Elmore, 1985) related to interactive governance research that claim that there should be a focus initially in identifying a policy output followed by a retrospective mapping of the networks and processes that led to the success of that policy output (paraphrased from Torfing et al. 2013, p. 23-24).

Yet another emphasis in the policy implementation theory and practice is the shift of focus from regulation and coercion through the use of procurement and service contracts, towards more voluntary practices involving compliance and self-regulation (paraphrased from Torfing et al. 2013). There has been a transformation in the basic forms of government, which includes the tools and instruments applied to respond to public issues. A relevant characteristic of these new tools is that they are highly indirect and therefore delivered to a great extent by third parties (paraphrased from Salamon 2011, p. 1612-1613). Furthermore, there is “a dense mosaic of policy tools, many of them placing public agencies in complex, interdependent relationships with a host of third-party partners” (Salamon 2011, p. 1616).

Moving beyond the main four generations of implementation research, there are also contributions highlighting the role of contextual, historical and ethnographic approaches, to gain a more inductive understanding of the underlying relationships between policy prescriptions and a desired outcome. Mosse (2004), p. 640 highlights that “despite the enormous energy devoted to generating the right policy models, however, there is surprisingly little attention paid to the

relationship between these models and the practices and events that they are expected to generate or legitimize in particular contexts.” He concludes that policy models are weak for “understanding the practices, events and effects of development actors, which are shaped by the relationships and interests and cultures of specific organisational settings” (Mosse 2004, p. 663).

Environmental studies have also pointed to policy implementation theory, calling for multi-disciplinary approaches and greater engagement of political science in understanding problems of natural resource governance (Béné and Neiland 2006; Nunan 2016).

Finally, in the overview of policy implementation provided in this subsection, the following *implementation gaps* are drawn from the literature (Hogwood and Gunn 1984; Hood 1976) and synthesize the most common problems arising from the top-down model:

- i) Objectives – there is a gap between objectives, which are ambiguous and inconsistent. Objectives are contested by the several actors so there is no agreement or compliance.
- ii) Politics – there is a gap between implementation as a technical and as a political process.
- iii) Policy succession – there is a gap between policy design and policy implementation because problems are not solved, they evolve - problem succession.
- iv) Resources – there is a gap between intentions and the resources (human, financial, technical, tools) available.
- v) Coordination – there are gaps between actors because network governance is complex, there are many links and there are many barriers to open communication.

These *gaps* from the top-down model will be examined in one of the case studies of this thesis, in Chapter 8. These *gaps* have been selected for two main purposes. The first purpose, is to evaluate the forest policy implementation process and outcomes. The second is, to analyse whether they are supported by top-down decision makers in Peru and to compare them with the views of bottom-up decision makers and practitioners in the region. Besides the gaps drawn from the top-down model, network ideas in relation to policy implementation as part of the bottom-up model will be explored in Chapter 1. Further, the frontier economy is applied in this thesis to understand other limitations to policy implementation. In effect the gaps are one of the key steps in unpacking the research question about the limits in policy implementation in Peru.

3.2 Policy Implementation and the Politics of Implementation

Hill and Varone (2017, p. 9) claim that “the study of the policy process [is] closely related to the study of politics.” The politics of implementation are closely interlinked with the process of translating policies into action at different governance levels. This translation deals with existing power structures. Implementation is not a mechanical process. Mainly, it is a political process that

requires bargaining and negotiation. The implementation of the National Water Act of 1998 in South Africa provides a good illustration of this. Ten years after its enactment, the Implementation Assessment highlights that the main constraints came from enforcement and implementation, some of which coincide with the implementation literature. There are pitfalls due to the fact that the politics of implementation were not sufficiently considered when putting the Water Act into practice. For instance, negotiation and bargaining with the Catchment Management Agencies was required to establish differentiated tariffs, agreements for agency merging and fairer distribution of resources between them (Parliamentary Monitoring Group 2008).

Transitioning from legislation (either policy or Law) into practice is a critical step, yet it is not a simple process. As recognized by Martin Ginster, member and representative of Business Unity South Africa, observed, although, the National Water Act “was undoubtedly an exceptionally good piece of legislation and even was lauded internationally as being quite far-reaching, it still faced many challenges in implementation” (Parliamentary Monitoring Group 2008).

From the perspective of policy implementation, the definition of politics that will be used in this thesis considers that “implementation of a policy may have been carefully planned in terms of (...) procedures, management (...) but if it takes insufficient account of the realities of [politics] (e.g. the ability of groups opposed to the policy to block the efforts of its supporters), then the policy is unlikely to succeed” (Hogwood and Gunn 1984, p. 215).

Implementation takes place in a specific context. Accordingly, after introducing the theory of policy implementation, the next section looks into the various perspectives of the frontier. The link between these two areas is important for the analysis that is presented in the case studies.

3.3 Frontier Economy

In the past, scholars have studied the concept of the frontier²⁷ from several perspectives: growth and infrastructure; frontier societies; market; economic; the agricultural-forest and development;

²⁷ For an overview of American literature in the frontier societies see: “*The Significance of the Frontier in American History*” by Turner (1893) is a seminal essay which advanced the Frontier Thesis of American history. Other relevant contributions in this topic include the following: *the American Frontier* by Billington (1958); *the Frontier Thesis, Valid Interpretation of American History?* by Huntington (1966); *Turner and the Sociology of the Frontier* by Hofstadter and Seymour (1968); *Regeneration through Violence: The Mythology of the American Frontier, 1600-1860* by Slotkin (1973); *Regeneration through Violence: The Mythology of the American Frontier, 1600-1860* by Slotkin (1973); *Land of Savagery/Land of Promise: the European Image of the American Frontier in the Nineteenth Century* by Billington (1981); *American Frontier and Western Issues: An Historiographical Review* by Nichols (1986); *Frederick Jackson Turner: Strange Roads Going Down*

Chapter 3

and covert networks. Lamar and Thompson (1981) note that the conventional frontier analysis defines the frontier as “a territory or zone of interpenetration between two previously distinct societies.” According to this theoretical approach, the frontier opens with the arrival of actors belonging to an intrusive group, and it closes when a political actor has predominance in a given territory (paraphrased from Nanton 2018).

The perspective of infrastructure growth in the Amazon leads to the expansion of the frontier causing deforestation. In this context, a key aspect is the governance of the frontier expansion (Nepstad et al. 2002, p. 629), to prevent or at least reduce some of the unintended consequences of new road infrastructure. Another perspective to the concept of frontier is that of Nanton (2018), which describes Eastern Caribbean States as ‘frontier societies.’ This term refers to “societies caught in the balance between an imposed civilized order and an untamed wild that is forever encroaching. Both elements of the civilized and the wild are also in constant flux” (Nanton 2018). In the frontier, civilization is related to an organised societal order guided to some extent by ideology. Meanwhile, wilderness is considered as “raw nature, the absence of imposed order and a threat to that order” (Nanton 2018). This wilderness component is best untangled as “a region where the boundary between the authoritative appearance of order and good governance disguises dystopic elements of frontier violence and hinterland” (Nanton 2018).

There are two relevant analytical units to explain the concept of frontier, one is at the actor level while the other is at the State level. On the former, some examples of the modern frontier in the Caribbean include the “fisherman, sailor or sea port smuggler (...) the island wandering woodcutter [and] those who squat on government land” (Nanton 2018). Meanwhile, on the latter, the frontier’s building blocks in the Caribbean include “shifting State boundaries, weak State regulation, strong privatization, and social withdrawal” (Nanton 2018).

There is also the market perspective on frontier economies. Lipton (2015) describes them as places where an array of capital flows linked to markets offer the opportunity to gain sustained growth and economic prosperity. Others define frontier economies as a place with “politically manipulated markets, weak legal systems, and either low per capita income or faltering GDP [where] first movers can reap better returns on foreign investments” (Musacchio and Werker 2016, p. 42). While in colonial times “frontiers were not areas of active expansion, exploration and economic opportunity” (Spero, p. 6), in contrast, in modern times frontiers are considered as the emerging markets of the future (Lipton 2015) and as areas of expanding agricultural and

by Bogue (1988); *The New Encyclopedia of the American West* by Lamar (1998); and *Does the Frontier Experience Make America Exceptional?* by Etulain (1999).

logging activities (Nepstad et al. 2006). Additionally, other characteristics include corruption and the arbitrary enforcement of rules and regulations (paraphrased from Musacchio and Werker 2016, p. 44). Moreover, there is no real control of power of the leadership as there is an absence of checks and balances (paraphrased from Musacchio and Werker 2016, p. 44).

The economic perspective of the frontier looks at the management of the stock of natural resources, what is referred to as a frontier based on economic development (Barbier 2007). This frontier is “characterized by a pattern of capital investment, technological innovation and social and economic institutions dependent on ‘opening up’ new frontiers of natural resources once existing ones have been ‘closed’ and exhausted” (di Tella 1982; Findlay and Lundahl 1994 as cited in Barbier 2007). The frontier is also regarded as an area of great natural resource abundance that provides great opportunities for social and economic progress (paraphrased from Billington 1966, as cited in Barbier 2007).

The agricultural-forest frontiers in the Amazon generally have a diverse mix of actors and interactions, compounded by weak government presence and unclear land tenure. Gardner (2014) defines these frontiers as “relatively remote areas where large expanses of forest remain, but rates of forest clearance and social and economic fluidity are relatively high.” Another relevant characteristic of these frontier regions is their dynamism where population, infrastructure and rules are in constant change (paraphrased from Gardner 2014). In this context, “the way in which [these actors] interact and compete for land and available resources can have profound consequences for the development trajectory and environmental stewardship of frontier regions” (Gardner 2014). Gardner (2014) claim that the conditions in the frontier, including the weak capacity and resources in these regions, call for governments and other actors to prefer more simplified policy frameworks that are less costly and easier to implement and monitor. Furthermore, Gardner (2014) notes that agricultural development in the frontier happens in the midst of intense competition for land, which also causes displacement and deforestation.

The development perspective on the frontier and specifically in the Amazon mentions that:

Inexpensive, relatively uninhabited land still exists in many Latin American countries. This land continues to act as a magnet for squatters and entrepreneurs in search of new economic opportunity. The current pattern of development often results in violent conflict and wasteful environmental damage. For these reasons governments in Latin America are increasingly struggling to develop policies to rationalize the settlement and development of these areas (Schneider 1995, p. vi).

Chapter 3

The sustainability of policy implementation is influenced by both economic interests and the political environment in the frontier. Schneider (1995, p. vi) claims that “too many of the frontier policies currently promoted (...) are not politically sustainable.” He warns that the political sustainability of reforms, such as land use planning, in the absence of political coalitions is challenging (Schneider 1995, p. viii).

Another interesting perspective on frontier analysis is that of networks that are not related to solving wicked problems or supporting the coordination of public management (see Section 4.3). These type of networks are known as dark networks and defined as “the actors and organisations that cooperate in the problem space (...) their activities are covert and illegal” (Raab and Milward 2003, p. 415). Yet the authors emphasise that since the term ‘dark’ has a normative connotation, they rather use the term ‘covert networks.’ This perspective on networks is “using the analytical distinction between network as social structure and network as governance form” (Raab and Milward 2003, p. 417).

They also highlight that the connections between the covert networks can help lead to the achievement of their goals (paraphrased from Raab and Milward 2003, p. 415) (see also Section 4.3), so that there is collaboration across various types of illegal activities (paraphrased from Raab and Milward 2003, p. 429). Furthermore, they also underscore the different strategies for conflict resolution and management, contrasting overt and covert networks. While in the former the main strategies consist of persuasion, exchange and bargaining, in the latter the prevalent strategies are coercion and physical force (paraphrased from Raab and Milward 2003, p. 432).

As mentioned beforehand, implementation takes place in a specific context and this is why this section reviewed various perspectives of the frontier. From the perspectives presented above this thesis will use the one of covert networks. The link between implementation and the frontier is relevant for the analysis of the case studies.

3.4 Concluding remarks and research gaps

There is a resurgence of interest on implementation research as well as policy implementation deficits remain as a pressing problem of our time. As mentioned in this section, there is a relevant debate in the implementation literature between the top-down and bottom-up approaches and which are more appropriate for implementation. In this thesis, the gaps from the top-down model is used to explain the policy implementation deficits, while the frontier economy is applied to understand other limitations to policy implementation. This section also emphasised the importance of considering the reality of the politics when planning policy implementation.

In the case of the frontier, there is agreement in the literature regarding the frontier as a place of weak legality and State regulation as well as corruption (Musacchio and Werker 2016; Nanton 2018). In contrast, others refer to the frontier from an economic perspective as a place for exploiting natural resources and economic growth (Barbier 2007; Gardner 2014). The complexity in the Amazon (see Section 1.3.1) presents an opportunity to apply a more comprehensive approach to the frontier, to unpack the different ways in which it affects forest governance and especially to identify how it affects policy implementation. By doing so, strategies can be devised to improve policy effectiveness.

In reference to the general discussion in this thesis, the frontier economy theory contributes to consider the following questions:

How does the frontier economy constrain implementation?

Does network governance work in a frontier economy?

Chapter 4 Governance

The literature of implementation and the frontier society identified a series of questions to explore, but governance theory provides with some plausible explanations for the workings of policy implementation. This chapter will review three main governance approaches and has six sections. The first section focuses on introducing the concept of governance. The second examines multi-level governance while the third and fourth sections review network governance and metagovernance respectively. At the end of each section there is a reflection on the queries that each review poses for the research conducted. The fifth section will present the contribution to the political science field and the final section presents the concluding remarks and a consolidated list of the themes applied in the analysis of the case studies.

4.1 An introduction to governance

The more traditional government approaches are based on top-down imposition of authority. They also assumed that steering and control takes place through formal State actors and public mechanisms. In contrast interactive governance regards decision-making processes as bottom-up or by means of interactions, with wider participation taking place, and in some cases, even fostered by the government. This latter type of governance is regarded as more effective and democratic, especially since it is inclusive of stakeholders that have knowledge about policies and that can solve policy problems (paraphrased from Torfing et al. 2013, p. 3-4). Governance explains why the traditional top-down model does not work. Institutional complexity, plurality of actors and resource dependence, among other factors, restrict the operation of the top-down model. In Peru, before the decentralisation policy took place, and even after it was established, forest policy was mainly guided by a top-down model. Indeed, “the instruments of *new governance* depend more on bargaining and negotiation to achieve their policy goals than on authority so that interaction shapes these more proximate connections to the delivery of public services and may make them more effective” (Torfing et al. 2013, p. 4). In this thesis steering is understood as hands off governance which includes bargaining and negotiation.

There is a dilemma caused by the eroding trust of polities in their governments while simultaneously there is an ongoing demand for the delivery of services from the Government and its providers. This dilemma “has forced central decision makers to search for alternatives to the classical forms of governmental rule” (Torfing et al. 2013, p. 9). Furthermore, the current academic debate on governance is also emphasising and trying to respond to the problematisation of the role of the State which is founded on the critique of the traditional forms

Chapter 4

of bureaucratic rule (Torfing et al. 2013). Other authors emphasise the “serious questions [that] are being raised about the capabilities, and even the motivations, of public-sector institutions” (Salamon 2011, p. 1611). This in turn has prompted the *shift from government to governance* (Hill and Hupe 2014, p. 200), from formal Government institutions to informal governance processes (paraphrased from Torfing et al. 2013, p. 10). Yet, this shift by no means refers to the Government not having a role in governance. To the contrary, it will continue to have a central role (Torfing et al. 2013, p. 11).

Governance certainly “offers a valuable and challenging dimension to our understanding of our contemporary social, economic and political world” (Chhotray and Stoker 2008, p. 1). Several authors have approached the concept of governance trying to bring more clarity to its application. Mette Kjaer (2004, p. 10) notes that “governance analysts explore the processes by which rules about the pursuance of public goods are designed and enforced.” A common underlying feature in the existing definitions in the literature, is that governance is making reference to something broader than the government, and therefore is not only applied to State institutions or stakeholders (paraphrased from Mette Kjaer 2004, p. 3). The contrast is between old government which is more closely related to the classic top-down approach of steering and the new governance, which looks at self-steering networks (Mette Kjaer 2004, p. 11).

Here we will present four definitions discussed by scholars in the field. Chhotray and Stoker (2008, p. 3) define governance as “the rules of collective decision-making in settings where there are a plurality of actors or organisations and where no formal control system can dictate the terms of the relationship between these actors and organisations.” Torfing et al. (2013, p. 14) also acknowledge the link of collective action to governance and define governance as “the process of steering society and the economy through collective action and in accordance with some common objectives.” In contrast, other perspectives emphasise on the interaction between structures and processes. For example, governance is also defined as “the interactions among structures, processes and traditions that determine how power and responsibilities are exercised, how decisions are taken, and how citizens or other stakeholders have their say” (Graham et al. 2003, ii, as cited in Lockwood et al. 2010, p. 987). Another perspective is that of Mette Kjaer (2004, p. 3) that defines governance as “the act or manner of governing; the office or function of governing. To govern is to rule or control with authority; to be in government.”

Scholars note the deep-seated transformations that our societies are undergoing. These include more complex policy problems and a growing interdependency between policy areas, policy levels and policy actors (paraphrased from Torfing et al. 2013, p. 2). Hill and Varone (2017, p. 17) also refer to this interdependency as they note that although most policies “are changes to existing

policies (...) they will nevertheless be entering a crowded policy space, impacting upon and being influenced by other policies.” Simultaneously, there was a growth of the traditional policy problems, which included environmental protection (Torfing et al. 2013, p. 18). These were also known as the ‘wicked problems’ (Rittel and Webber 1973). Within this context and the shift from *government* to *governance*, instead of the application of unilateral action, other forms of governance are more commonly being used. Some of these are referred to as *interactive forms of governance* with the participation of various actors in steering, control and coordination (Torfing et al. 2013, p. 14). This is also a response to the limits of unicentric forms of governing (paraphrased from Torfing et al. 2013, p. 25). These interactive forms of governance refer to “the complex process through which a plurality of social and political actors with diverging interests interact in order to formulate, promote, and achieve common objectives by means of mobilizing, exchanging, and deploying a range of ideas, rules, and resources” (Torfing et al. 2013, p. 14).

Besides the interactive forms of governance, another key dimension of governance is its institutional complexity. It refers foremost to government fragmentation and therefore to numerous public bodies (Rhodes 2017b, p. 176). In response to the governability challenges in societies, the new public management (NPM) also arose as a new style of governance and as a way to engage private sector resources and commitment in public governance. Moreover, “in the countries where NPM caught on, it led to an increasing fragmentation of the public sector as services and regulation were delivered by an increasing number of special purpose agencies and private service providers [hence this] stimulated the need for institutional mechanisms that could provide horizontal coordination” (Torfing et al. 2013, p. 18).

Another relevant aspect of governance is to analyse how it actually translates into practice and especially within the context of focus of this thesis. The studies looking at specific governance mechanisms in the Amazon identify some relevant points. Anderson et al. (2019) look at sustainability commitments or fines in private concessions in the Peruvian Amazon. They find that sustainability commitments have no significant impact on deforestation rates in the Peruvian Amazon. Other research looks at the role of land tenure in deforestation in the Peruvian Amazon. Anderson et al. (2018) define overlapping land use allocations as one parcel of land which is allocated two or more times for different uses. They find that deforestation is lower in overlapping than in same-type, non-overlapping allocations. This indicates that multiple use management decreases deforestation and that overlapping allocations are a form of tenure insecurity that might not increase deforestation.

Additionally, Noltea et al. (2017) refer to several case studies of the Brazilian Amazon that show how enforcement was effective in reducing deforestation through policy instruments such as field

inspections and embargoes (Sousa 2016), blacklisting municipalities with high deforestation rates (Sills EO et al. 2015), and the restrictions of access to agricultural credit to farms with illegal deforestation (Assunção et al. 2013). Furthermore, the moratoriums set good examples of supply chain governance to reduce deforestation (Rudorff et al. 2012).

There is robust evidence for the impacts of regulatory enforcement on deforestation, although studies focus exclusively on the Brazilian Amazon. Three rigorous studies find significant reductions in forest loss as a result of field inspections and sanctions by Brazil's environmental police after 2004 (Börner et al., 2015, Hargrave and Kis-Katos, 2013, Sousa, 2016). Three studies find that the Brazilian government's decision to blacklist municipalities with high deforestation rates also reduced forest loss, an effect which authors attribute to enforcement or "naming and shaming" (Arima et al. 2014; Cisneros et al. 2015; Sills EO et al. 2015). A third enforcement instrument, the exclusion of illegally deforesting farms from public agricultural credit, has been shown to increase farm-level compliance (Assunção et al., 2013). Enforcement was particularly successful at reducing the occurrence of large-scale deforestation events (Assunção et al., 2013, Börner et al., 2015). Nevertheless, there is also evidence of other governance options that differ from command and control. These are the hybrid public-private interventions (or policy instruments) to influence land use (Lambin et al. 2014). This introduction to governance explored the limits to top-down government and identified new governance tools such as:

- Being inclusive of stakeholders
- Interactive forms of governance with the participation of various actors in steering, control, and coordination

4.2 Multi-Level Governance

Gary Marks (1993) first used multi-level governance "to capture developments in EU structural policy following its major reform in 1988" (Bache and Flinders 2004a, p. 2). According to Marks (1993, p. 392) multi-level governance refers to:

A system of continuous negotiation among nested governments at several territorial tiers—supranational, national, regional, and local—as the result of a broad process of institutional creation and decisional re-allocation that has pulled some previously centralised functions of the State up to the supranational level and some down to the local/regional level.

There are several key contributions that have advanced the study of multi-level governance (Bache 2004, 2012; Bache and Flinders 2004b). Considering the statement listed above, some authors question whether MLG is pointing to a gradual weakening of the nation State, or if in contrast, it is leading to a transformation and rearrangement of State power (paraphrased from Bache and Flinders 2004a, p. 10-11). Hooghe and Marks (2003) argue that governance in central States has transitioned from centralised authority to a multi-level approach, leading to the diffusion of decision making from central authorities, which is to provide more flexibility (Hooghe and Marks 2003, p. 233-235). This has also led to scholarly efforts to create new concepts that embrace this transition, which include "multi-level governance, polycentric governance, multi-perspectival governance, condominio, and fragmentation" (Hooghe and Marks 2003, p. 234). However, Bache (2007) cautions that this transition or what is also referred to as the emergence of multi-level governance, should be regarded as a challenge to the role and authority of the State, but not as a process of the decline of the State. Hooghe and Marks (2001) agree in that the State remains as a central actor. In this respect, Bache (2007) mentions that the context of multilevel governance can promote new State strategies as well as transform the State's preferences.

Bache and Flinders (2004a, p. 3) define multilevel governance, indicating that "*multi-level* referred to the increased interdependence of governments operating at different territorial levels, while *governance* signalled the growing interdependence between governments and nongovernmental actors at various territorial levels." Other scholars note that in multi-level governance the decision-making competences are shared with the regional and local authorities (paraphrased from Mette Kjaer 2004, p. 109). Therefore, MLG is a policy model encompassing the region, the State and the supranational level and the bargaining networks between them (paraphrased from Mette Kjaer 2004, p. 114).

Hooghe and Marks (2003, p. 234) define multi-level governance as a "system of continuous negotiation among nested governments at several territorial tiers – supranational, national, regional and local." This also suggests a blurring of the boundaries between domestic and international politics (Bache 2007). Marks (1993: 407) also claims that "we are witnessing the emergence of multi-level governance (...) characterized by co-decision-making across several nested tiers of government, ill-defined and shifting spheres of competence creating a consequential potential for conflicts about competences".

Hooghe and Marks (2003, p. 236) offer a typology of multi-level governance. The type I governance or federalism "is concerned with power sharing among a limited number of governments operating at just a few levels." The other type of governance (II) is where several

Chapter 4

independent jurisdictions carry out distinct functions and can overlap (Bache 2007; Hooghe and Marks 2003, p. 237). Within this type there is polycentricity which is described as “many centers of decision-making that are formally independent of each other” (Ostrom et al., 1961, p. x, as cited in Hooghe and Marks 2003).

Within the context of MLG, Hooghe and Marks (2001) make reference to the various political forces on the ground. Hooghe and Marks (2001, p. 70) distinguish between political institutions and political actors, with the former referring to “the structure and allocation of authority in a given territory,” while the latter refers to actors who “operate in the context of those institutions, but they may also try to change them.” Bache (2007) notes that this contribution is relevant as it challenges “the assumption that institutional interests and the interests of actors within those institutions are necessarily the same.”

According to Bache (2007) there are three main statements that define multi-level governance: i) there is no more concentration of decision-making but rather a sharing of decision-making among stakeholders at different levels; ii) there is a reduction of control of individual State executives as they transition to collective decision making between States; iii) political arenas are linked and there are transnational associations of actors at the subnational level that are also present at the national and supranational level.

Multi-level governance provides the framing to work across various scales and levels of government (Hooghe and Marks 2003). Yet, there is also the need to integrate various policy areas. When Bache and Flinders (2004a, p. 157) analysed the United Kingdom’s Environmental Policy and the adoption of a specific programme, they mentioned that “this programme called for the integration of environmental considerations into other policy areas such as transport and agriculture (the so-called Environmental Policy Integration (EPI) principle).” As Haigh (2018) noted, “concepts are important. Policy making does not just consist of scientists identifying problems and then policy makers finding solutions. Policy is mediated through existing concepts and sometimes we have to develop new ones.” MLG is one such new concept.

Within those various scales and levels, the multi-level governance concept considered both vertical and horizontal dimensions (Bache and Flinders 2004a). A few years later, Bache (2007) builds on this argument, making a contribution regarding what determines strong and weak multilevel governance. He claims that “strong multilevel governance has both high vertical and high horizontal interdependence, while weak multilevel governance may be high on one dimension, but should have at least some interdependence along both dimensions” (Bache 2007).

The literature on multi-level governance raises the coordination dilemma, whereby to “the extent that policies of one jurisdiction have spillovers (i.e., negative or positive externalities) for other jurisdictions, so coordination is necessary to avoid socially perverse outcomes” (Hooghe and Marks 2003, p. 239). The coordination dilemma is of great importance for natural resources governance. First, as mentioned in Section 1.1, an ecosystem’s functionality crosses over jurisdictions and second, negative/positive externalities of policies at local, regional or national jurisdictions can severely affect/benefit the functionality and the outcomes of other well-established institutional arrangements. This underscores that in the Amazon this dilemma refers to both horizontal and vertical coordination. Although Hooghe and Marks (2003) explore some alternatives to overcome the dilemma, more research is needed and the options available will greatly depend on the resource system and other context-related factors.

Some of the critics to multi-level governance emphasise its lack of theoretical differentiation between governance and participation. A response of this theoretical question is that “*participation* refers to engagement in decision-making processes, while *governance* implies engagement that involves influence over the outcomes of these processes” (Bache 2007). In response to this critique, Bache (2007) suggests looking at the degree of interdependence of actors, where high interdependence is related to strong governance, medium to low interdependence with weak governance and no interdependence with exclusion.

Beyond the critiques, there is agreement on the value of multi-level governance in at least four main fronts (Bache 2007) which are summarised by (Bache and Flinders 2004a): i) there is more participation of non-State actors in the decision making processes taking place at different levels; ii) “that the identification of discrete or nested territorial levels of decision making is becoming more difficult in the context of complex overlapping networks”; iii) “that in this changing context the role of the State is being transformed as State actors develop new strategies of coordination, steering, and networking to protect, and in some cases to enhance, State autonomy”; and iv) this changing context contests the core of democratic accountability (Bache and Flinders 2004a, p. 197).

For the main research question of this thesis and its focus on the environment, it is relevant to look at the perspective of some authors on using MLG to address environmental challenges. Dietz et al. (2003, p. 1907) draw attention to the fact that “in the absence of effective governance institutions at the appropriate scale, natural resources and the environment are in peril from increasing human population, consumption, and deployment of advanced technologies for resource use, all of which have reached unprecedented levels.” As environmental challenges are dynamic and mostly take place across scales, other scholars emphasise that there are

Chapter 4

“fundamental problems for division of responsibility among different levels of governance” (Pritchard and Sanderson 2002, as cited in Larson and Lewis-Mendoza, 2012, p. 185). MLG is also seen from the perspective of co-management, which is defined as “the simplest kind of cross-scale institutional linkage [as] is the one that connects local-level management with government-level management in partnerships” (Berkes 2002, p. 301).

Furthermore, the studies looking at multi level governance mechanisms and their link to deforestation bring forth relevant conclusions for the purpose of this thesis. In Argentina provinces had to define land use for their native forests. There is evidence that provincial-level land use zoning reduced deforestation, and although it did not happen in all zones and periods, the findings underscore that subnational governments can make important contributions to reducing large-scale deforestation in agricultural frontiers (Nolte et al. 2017). Other scholars have looked at the interaction between MLG, forest governance and land use change and find that without strong and effective regional regulation to promote sustainable land use alternatives and favourable international prices, illegal activities prevailed (Rodriguez-Ward et al. 2018).

Further research on environmental governance underscores decentralisation and recognises that resource management is more effective when the design of rules have been inclusive of local communities (Larson and Soto 2008, p. 214). Within this context, a central question in the decentralisation debate is to whom should be power be transferred (Larson and Soto, 2008, p. 219). Yet, when looking at decentralisation policies the authors conclude that there is not a direct correlation between decentralisation and improved forest management (Larson and Soto 2008, p.223).

Last, Kowler et al. (2016) analysed decentralisation reforms for natural resource governance in Peru and highlight some limitations. These include overlaps and grey areas between levels of government, insufficient resources allocated to subnational governments, and absence of coordination between government offices for land use planning. For Ucayali they underscore the presence of corruption, institutional fragmentation and weak State capacity affecting the forest sector.

In Peru, there are three main levels of Government: the national, regional and local levels. Decentralisation reforms changed the relationships between levels of government, especially regional-national relationships, so inevitably it is about relationships between levels of government; in other words, MLG. After the review presented in this section, this thesis identified the following domains to which MLG directs attention:

- State capacity (administrative, resources and control of corruption)

- Distribution of authority and competences between different levels of government
- Interdependence between governments and nongovernmental actors at various territorial levels (the growing role of non-State actors)
- The existing strategies and policy tools used for coordination in the frontier

4.3 Network Governance

The theory of network governance suggests seven concepts relevant for this thesis: dependence, steering, institutional complexity, policy networks, bureaucracy, markets and coordination. This section starts by giving a definition of network governance, followed by definitions for governance networks and policy networks.

As mentioned beforehand in Section 4.1, governance theory has been through a rapid change. When reflecting on this transition, it has been noted that in several Western societies “there has been a shift from government by a unitary State and federalist forms of government to governance by and through networks” (Rhodes 2017b, p. 42). This is in line with the view of theorists who emphasise the decentred nature of power and that governance relies on a network of relations and interactions (Torfing et al. 2013).

Rhodes (2014) **defines network governance** as follows:

The changing boundaries between public, private and voluntary sectors (...) these actors are interdependent, so decisions are a product of their game-like interactions, rooted in trust and regulated by rules of the game negotiated and agreed by the participants. Such networks have significant degree of autonomy from the State - they are self-organising - although the State can indirectly and imperfectly steer them.

In this thesis, the rules of the game are understood as “the general standards, guidelines, or governing principles of how something is done or how one should behave in a given situation or endeavor, especially those that are informal or unspoken” (The Free Dictionary 2015). Since the early 1990’s there has been an increasing interest from the global environmental governance arena on transnational networks and several queries remain such as “the nature of governance conducted by such networks and their impact within distinct policy arenas at different scales” (Betsill and Bulkeley 2004, p. 471-472). Furthermore, the role of networks of local governments in environmental politics and their similarity to other transnational networks has been noted (paraphrased from Betsill and Bulkeley 2004, p. 472). Networks are relevant to governance as

they are regarded as a means to address wicked problems that require coordination. Yet there are also challenges in the network management (Hill and Varone 2017, p. 85). As Torfing et al. (2013, p. 122) clearly noted:

Although public bureaucracies are still providing the lion's share of public regulation, goods, services, and transfer payments, a growing number of public goods and services are being delivered by private contractors in recently created quasi-markets, and the development of public policy is often a result of negotiated interaction in networks and partnerships.

Other sources note that there are different perspectives, both positive and negative on the role of networks. In public policy, networks are seen to increase policy making efficiency (Mette Kjaer 2004, p. 198). In line with this, they can also help or impede effective implementation (Mette Kjaer 2004, p. 198). Mette Kjaer (2004, p. 198) also underscores that there has been less attention from scholars towards the failure to reach consensus in a network and its implications.

A distinctive characteristic of governance networks is that they perform policy functions (Koliba et al. 2011, p. 116). The issues posed for policy implementation by network governance is a central theme that will be explored further in the case studies. Governance networks are responding to “complexity and fragmentation [through] crosscutting exchange and negotiation” (Torfing et al. 2013, p. 17). **Governance networks** are defined as “a horizontal articulation of interdependent but operationally autonomous actors who interact through negotiations that take place within a relatively institutionalized framework and facilitate self-regulated policy making in the shadow of hierarchy” (Sørensen and Torfing, 2007, as cited in Torfing et al. 2013, p. 16).

The **Rhodes' initial model of network governance** applies “intergovernmental theory to British central-local relations” (Rhodes 1981) . In this model there is an emphasis on outcomes, as actors from the centre and the local levels use the resources that they have under their control to influence the outcomes. Meanwhile, Hill and Varone (2017, p. 79-80) mention several advantages of the networks. These include their facilitation of consultations, the reduction of policy conflict and making the policy making process more foreseeable (paraphrased from Hill and Varone 2017, p. 80). Furthermore, from a public management perspective, networks are considered as a means to effectively deliver public goods and services, especially so in contexts where there is fragmentation or presence of multiple organisations (Agranoff, 1986, Chisholm, 1989, O'Toole, 1997 as cited in Raab and Milward 2003, p. 418). Here the overlap with the concerns of MLG is obvious in matters such as the coordination dilemma.

The most common type of network analysed in the political science arena are policy networks. Policy networks defy governance and they place limits on the centre's capacity to implement policy (Mette Kjaer 2004, p. 35-36). **Policy networks** are defined as "sets of formal institutional and informal linkages between governmental and other actors structured around shared if endlessly negotiated beliefs and interests in public policy making and implementation. These actors are interdependent and policy emerges from the interactions between them" (Rhodes 2017b, p. 37). According to Rhodes (2017b, p. 42) "the roots of policy network analysis lie, finally, in the analysis of the sharing of power between public and private actors." Rhodes (2017a) identifies bureaucracy, markets and networks as governing structures.

Interdependence is also a relevant concept in the use and application of policy networks. Policy networks have "different structures of dependencies, structures that vary along such dimensions as membership (...) interdependence (...) and resources" (Rhodes 2017b, p. 24). Within these, the main resources that actors have include financial, political, informational, constitutional-legal and organisational (paraphrased from Rhodes 2017b, p. 24). Other authors recognise the relevance of dependence as "not only nation States but also a growing number of private enterprises, NGOs, and experts communities that are often spanning different countries and scales interact on the basis of a mutual recognition of interdependency" (Torfing et al. 2013, p. 20).

The main theory underpinning policy networks is **power dependence**:

The power dependence approach treats policy networks as sets of resource-dependent organisations. Their relationships are characterised by power dependence; that is, 'any organisation is dependent on other organisations for resources', and 'to achieve their goals, the organisations have to exchange resources'. So, actors 'employ strategies within known rules of the game to regulate the process of exchange'. Relationships are a 'game' in which organisations manoeuvre for advantage. Each deploys its resources, whether constitutional-legal, organisational, financial, political or informational, to maximise influence over outcomes while trying to avoid becoming dependent on the other 'players'. So, behaviour in policy networks is game-like, rooted in trust and regulated by rules of the game negotiated and agreed by network participants. (...) Variations in the distribution of resources and in the bargaining skills of participants explain both differences in outcomes in a network and variations between networks (Rhodes 2017b, p. 44).

When reflecting on power dependence, Rhodes notes that "services are now delivered by sets of organisations that depend on each other for resources" (Rhodes 2017b, p. 177). Collaboration is essential, "all the actors in a particular policy area need one another. Each can contribute relevant

Chapter 4

knowledge or other resources. No one has all the relevant knowledge or resources to make the policy work” (Rhodes 2017b, p. 181). In fact, interdependence leads to the interaction between public and private actors to find common solutions to address emerging challenges and support the attainment of actor’s interests (Torfing et al. 2013). There is indeed a great value on dependence as “to ignore the brute fact of interdependence is to risk the withdrawal of cooperation and fuel active noncompliance” (Rhodes 2017b, p. 177). Furthermore, the resource dependencies are the key variable in shaping policy outcomes in MLG (Bache 2007).

If policy networks are at the core of governance, then the key question for all governments is **how to better manage them?** There are several contributions addressing this puzzle. Mette Kjaer (2004, p. 122) refer to governance as “the management of complex policy making structures at all levels in the EU, be they hierarchies, markets or networks (...) it focuses on the formal and informal institutions that frame decision-making”. Considering this, the management of policy networks can rely on three main strategies: hierarchy (also referred to as command and control), steering through network governance or markets. A hierarchical strategy, relies on the deference and submission to the authorities. It is based on vertical relations and relates to imparting centralised direction to the society (paraphrased from Koliba et al. 2011, p. 107).

Other scholars note the interplay between hierarchy and networks and that network governance may take place in the shadow of hierarchy (Scharpf 1997), even more so as “networks might need to be coordinated by hierarchy” (Mette Kjaer 2004, p. 44). Furthermore, they note that is important to examine “the interaction between hierarchies and networks (...) [and] the conditions under which hierarchical solutions would be preferable to networks” (Mette Kjaer 2004, p. 203).

In contrast, a network governance strategy considers that “every group or organization which attempts to exercise control must also attempt to win consent from the governed” (Selznick, 2003, p. 155, as cited in Koliba et al. 2011, p. 109). It entails setting out coordinated action and exchanging resources [operating functions] as a means to attain policy goals (paraphrased from Koliba et al. 2011, p. 116). Whereas, the contribution of the new public management (NPM) to network administration considers the role of market forces and competition within governance networks. In other words, a market-based strategy considers “the incorporation of market mechanisms in the delivery of public goods and services [which] needs to be integrated into a conceptualization of network administration” (Koliba et al. 2011, p. 185). The NPM paradigm has “a strong focus on the creation or use of markets or semimarket mechanisms, or at least on increasing competition in service provision and realizing public policy” (Koliba et al. 2011, p. 193). These three main management strategies can be translated on the ground through a myriad of policy tools, and these tools can structure action (Koliba et al. 2011, p. 132).

The proponents of the model of hierarchy, networks and market see networks from two main points of view. One point of view sees hierarchy, market and network as distinct organisational forms (Koliba et al. 2011, p. 56). The other point of view sees “markets and hierarchies [as] variations of network form” (Koliba et al. 2011, p. 56). In contrast to this latter model, there is a perspective that questions whether networks combine elements of markets and hierarchy and therefore should be placed in a continuum between both of them or if networks should be conceptualised as a unique form of governance (Powell, 1990, as cited in Raab and Milward 2003, p. 418). In this thesis, hierarchy, networks and market are seen as three separate mechanisms which can also be merged. This can be referred to as *–the mix–*. For forest policy in Peru, the regulatory policies of the national government exemplify the hierarchical approach. The use of incentives illustrates the market approach. The use of local-level consultative approaches illustrates the network approach. Forest policy employs all three and managing the interactions between the three mechanisms - *the mix* - is a major challenge.

From Rhode’s perspective, diplomacy, trust and reciprocity are at the heart of managing networks (paraphrased from Rhodes 2017b, p. 76). Kickert et al. (1997) provide three ‘approaches to network management’: instrumental, interactive and institutional. The instrumental approach looks into “how governments seek to exercise legitimate authority by altering dependency relationships” (Kickert et al. 1997). Yet, there can be limitations to this approach, including the risks of losing support from main actors, not having enough flexibility to address local issues and control deficits (paraphrased from Rhodes 2017b, p. 45). The interactive approach “stresses management by negotiation instead of hierarchy” (Rhodes 2017b, p. 45). Building and keeping trust is key for this type of approach. But there are also costs related to the interactive approach, which include the fact that it is time-consuming and that its objectives can be blurred (Rhodes 2017b). Last, the institutional approach focuses on “incremental changes in incentives, rules and culture to promote joint problem-solving” (Rhodes 2017b, p. 46). However, it is noted that the main challenge is resistance to change.

The literature offers other strategies for **network management** and distinguishes between policy decisions (**steering**) and service delivery (**rowing**) (Osborne and Gaebler 1992). Therefore, steering emphasises a shift towards more governance. In the new public management (NPM) Osborne and Gaebler (1992) refer to steering as one of the principles to support governments in becoming more efficient and effective (paraphrased from Torfing et al. 2013, p. 124). According to Torfing et al. (2013, p. 124), “steering should take the form of strategic goal setting, which should be combined with an elaborate system of performance management that enables politicians and top managers to check whether or not the predefined goals are achieved (...) In short, public organisations should be result-driven rather than rule-driven”.

Chapter 4

Other perspectives on steering refer to the fact that “policy outcomes are not the product of actions by central government (...) there is order in the policy area that is not imposed from on high but emerges from the negotiations of the several interdependent parties” (Rhodes 2017b, p. 181). There is also the concept of hands-off steering which “refers to working with and through networks or webs of organisations to achieve shared policy objectives” (Rhodes 2017b, p. 54). Further, “it involves continuously negotiating beliefs and exchanging resources within agreed rules of the game” (Rhodes 2017b, p. 54). “ For steering to take place, Rhodes mentions some specific skills which include “integrating agendas, developing clear roles, expectations, and responsibilities for all players” (Rhodes 2017b, p. 181).

In this overview of network governance, it is important to highlight the Dutch approach as they pioneered the study of network management. The Dutch approach to network management underscores two main approaches: game management and network structuring. The former involves “influencing the interaction processes between actors within the network, while [the latter] is about changing the characteristics of the network” (Mette Kjaer 2004, p. 45).

Last, there are interrelations between different concepts of governance and this leads to a continuity (rather than a separation) between network and multi-level governance. Reflecting on the work of Bache and Flinders (2004a), Rhodes suggest the two converge, with MLG increasingly recognising “the growing role of non-State actors; emerging complex networks rather than nested territorial levels of government; the changing role of the State in steering and coordinating networks” (Rhodes 2017b, p. 70). The two concepts are opposite sides of the same coin.

- i. In reference to the general discussion in this thesis, the network governance theory contributes to the consideration of the following questions: How do networks operate in a context of frontier economies?
- ii. Which are the main policy networks in the case studies and how relevant are they in the forest policy implementation process?
- iii. Which are the main policy tools used in the case studies, those that rely on bureaucracy, markets or networks?

4.4 Metagovernance

The third variety of governance is metagovernance. Metagovernance is regarded as the capacity of the State to steer a policy network and to guarantee its legitimacy in the long run (Hill and Varone 2017, p. 85). Other scholars do not regard metagovernance as restricted to network management, but rather, linked to the whole institutional framework as part of public policy making (paraphrased from Mette Kjaer 2004, p. 57).

Metagovernance is defined as:

A reflexive, higher order governance practice that involves (a) the production and dissemination of hegemonic norms and ideas about how to govern and be governed; (b) the political, normative, and context-dependent choice among different modes of governing, or among different combinations of governing modes; and (c) the strategic structuring and managing of particular institutional forms of governance in order to facilitate sustained interaction, prevent dysfunctions, and advance particular political goals (Torfing et al. 2013, p. 131).

Rhodes (2017a, p. 214) defines it as “the role of the State in securing coordination in governance and its use of negotiation, diplomacy, and more informal modes of steering.” It refers to the Government’s decision to apply markets, bureaucracy and networks and how the links and interactions between these three core metagovernance strategies are managed. Metagovernance speaks about “the return of the State by reinventing its governing role” (Rhodes 2017a, p. 215). In this respect, the decentralisation policy to be analysed in this thesis addresses the problem of coordination and it is a way for the Peruvian Government to reinvent itself.

Indeed, “State authority is constantly being remade, negotiated, and contested in widely different ways within widely varying everyday practices (Rhodes 2017b, p. 216-217).” The capacity of the State to influence various action arenas remains, and this capacity can be exercised through metagovernance (Torfing et al. 2013, p. 132-133). Furthermore, as the role of the State evolves into a more decentred approach, it is underscored that central control could affect the bottom-up construction of governance (Rhodes 2017b, p. 217). The key bottom-up actors include networks, partnerships, and quasi-markets (Torfing et al. 2013, p. 144).

Torfing et al. (2013, 122-123) reflect on the reinvention of the role of the State in a new context where networks and partnerships have a more leading role:

Governing interactive governance arenas is a crucial task for governments, and it requires the development of a new way of governing that aims to build, shape, and enhance the self-governing capacities of decentred governance arrangements, while giving direction to the policy process and holding the interactive policy arenas to account.

There are various objectives for the ‘metagovernance of interactive forms of governance,’ which include the: promotion of stability for policy interaction, supporting conflict resolution between different actors or providing focus to the interactive policy process (paraphrased from Torfing et al. 2013, p. 134). Torfing et al. (2013, 11) define the interactive forms of governance “in terms of

Chapter 4

quasi-markets, partnerships, and governance networks that seem to both challenge and transform the role of government in governing society and the economy.”

Metagovernance must step back from hierarchical steering practices, but instead, support the capacity of self-regulation and maneuvering in the policy arenas (paraphrased from Torfing et al. 2013, p. 132). Thus, metagovernance “offers a way of conceptualizing the relation between devolved quasi-autonomous actors and agencies and the reflexive and strategic attempts to govern these actors and agencies in order to achieve particular goals, without reverting to traditional forms of bureaucratic control and sanctions” (Torfing et al. 2013, p. 125)

Furthermore, in order to achieve particular goals, there are three main modes of governance used by the State-theoretical approach to metagovernance, which are hierarchy, market, or network (Torfing et al. 2013, p. 127-126), also referred to as network management in Section 4.3. Torfing et al. (2013, p. 135) also discuss four main managerial tools for metagovernance: institutional design of rules; norms and procedures; goal and framework steering; process management and direct participation. The first two are hands-off tools while the latter two are hands-on. They consider that both are necessary for the metagovernance of interactive governance arrangements (paraphrased from Torfing et al. 2013, p. 135).

The metagovernance theory poses the following questions for this thesis:

- (i) What tools is the national government using to steer the regional and local levels?
- (ii) When does it use each of hierarchy, markets and networks?
- (iii) What problems arise with each tool at national, regional and local levels?

4.5 Contribution to the political science field

This thesis makes contributions in three critical knowledge domains: application of MLG outside of the European context, politics of implementation, and policy implementation in a frontier economy context. On the first domain, in relation to multi-level governance some scholars argue that it has been studied most frequently in the homeland of the European Union structural policy (paraphrased from Bache 2007). Therefore, there is value in exploring the MLG concept outside of the European context. Regarding the second and third domains, the political science literature has analysed policy design and implementation with various theoretical and analytical approaches to understand the politics of policy implementation (Cairney 2012; Hill and Varone 2017), while several major scholars underscore some critical obstacles for policy implementation or *implementation gaps* (see Section 3.1). Nevertheless, an analysis of the various dynamics of

politics and policy implementation is not sufficiently explained, especially in a frontier economy context, which diminishes its applicability to other contexts for policy implementation.

Indeed, Forest Policy in Peru shares some common challenges with implementation in the advanced industrial societies, but crucially, it also has unique features: it takes place in a frontier economy. Therefore, the current literature does not sufficiently explain the limits of policy implementation in frontier economies. It was developed for advanced industrial democracies and assumes rule of law and therefore, the theory needs to be modified for frontier economies – for example use of military to enforce rule of law.

In the literature of the frontier, the predominance is given to the perspective of agricultural expansion and its interface with forest land (see Section 3.3). For the purpose of this thesis, the concept of frontier is broader. While it is inclusive of this interface and other economic drivers, it also refers to a territory where the rule of law and governance are nuanced and where covert networks flourish rooted in informality and illegality. The analysis of the frontier is part of the contribution to knowledge, as the implementation context is an important factor in understanding the effectiveness of policy programmes (Börner et al. 2016).

As mentioned in Chapter 1, the main question addressed in this thesis is: What are the limitations to implementing forest policies to reduce deforestation and forest degradation? In solving this question I reviewed the following literature (see below).

Table 6 Literature Reviewed

Subfield	Subject Area
Economics	The Tragedy of the Commons and Elinor Ostrom's Design Principles for large scale socio-ecological systems
Economics	Framework for socio-ecological complex systems
Environmental Sciences and Management	The landscape approach for governing the commons
Environmental Sciences and Management	The institutional dimensions of environmental change: Fit, Interplay and Scale
Geography	Land Use Planning
Geography and Social Sciences	Land use change in the Amazon

Subfield	Subject Area
Global Environmental Governance	The types of misfit between ecosystem dynamics and governance systems
Political Science	Multi-Level Governance
Political Science	Policy Implementation and the Politics of Implementation
Political Science	Network Governance

Most of these approaches had some tangential relevance but I will explore in my case study chapters the utility of those theories that most directly address my research question. The case studies cover: State Capacity (Multi-Level Governance), Land Use Planning (Network Governance) Forest Policy (Policy Implementation) and Forest Policy (Multi-Level Governance and Policy Implementation at the frontier), while also applying a lens of metagovernance. This literature is relevant for several reasons. First, from the perspective of the political science field, and as mentioned by Salamon (2011), there are clear limitations on some of the subject areas applied to respond to common dilemmas such as programmes and policy not fulfilling their aims. From a theoretical standpoint, applying these theoretical mainstreams is also a relevant quest as “the analytical potential of linking policy networks, network governance and multi-level governance remains undeveloped” (Rhodes 2017a). Bache (2007) agrees that the analytical potential of combining policy networks and multi-level governance remains untapped.

Second, when reflecting on programmes falling short to their promise, Salamon (2011, p. 1620) mentioned that “existing concepts of public administration and public policy offer little help in coming to terms with [these] dilemmas.” While traditional public administration is placing too much emphasis on the internal management of public organisations, public policy is mainly applying microeconomics to better understand public problems (Salamon 2011, p. 1620). Furthermore, traditional public administration emphasises hierarchical interaction, giving prevalence to command and control in the operation of public programmes (paraphrased from Salamon 2011, p. 1634). Therefore, the relevance of theoretical approaches such as networks and multi-level governance which offer an alternative approach to implementing public policy.

Third, when looking at the results of the implementation of public policy, the “analytical distinctions between outcomes and outputs, between content and process, are not always made” (Hill and Hupe 2014, p. 164). Other scholars support this view underscoring that an issue across the study of policy process is that the majority of the theory describes rather than explains (Hill and Varone 2017, p. 87). Therefore, qualitative research with an emphasis on these gaps brings forth relevant explanatory analysis of the policy process.

Fourth, is that, “a regular complaint across all literatures is that governance is often vaguely defined, and the scope of its application is not specified” (Chhotray and Stoker 2008, p. 3). For instance, as already discussed in this chapter, governance has been approached from many different lenses. In this context, multi-level governance builds on several concepts and ideas across the political science field (Bache 2007) and creates a broader understanding in that current challenges must be addressed with an analysis that goes beyond traditional disciplinary boundaries (paraphrased from Bache 2007). Fifth and last, network governance focuses on actors not institutions, on bottom-up not top-down, on plurality not just the State and on rules of the game and not laws (Rhodes 2017a). It is an essential supplement to the usual focus on government and its stated policies.

4.6 Concluding remarks and research themes

In the case of governance, there are gaps on the types of new State strategies that arise in the context of MLG and how the changing spheres of competence between different levels of government impacts natural resource governance. While some studies show that these competences are not well defined (Rhodes 2017b), others find that actors in different levels are sharing processes of decision making (Bache 2007).

There are critiques to MLG in that there is a theoretical gap in differentiating participation from governance (Mette Kjaer 2004), and while some regard governance as the possibility of influencing the outcomes of policy processes, others consider that burgeoning MLG is due to the level of interdependence between actors and the integration in the vertical and horizontal dimensions (Bache 2007). This sets the ground for an interesting focus of analysis to identify what factors buttress MLG in the policy context of the frontier.

In reference to forest governance *per se*, while some identify that the participation of the local tiers in land use zoning has contributed to reduce deforestation in the frontier (Nolte et al. 2017), others find that decentralisation does not have a direct correlation with improving forest management (Larson and Soto 2008). This lack of consensus could be driven by context specific relationships between decentralisation processes and forest loss. Another study on forest governance in the Peruvian Amazon coincides with the limits of MLG highlighted beforehand, for example, the coordination dilemma and the weak definition of competences between levels of government (Kowler et al. 2016).

Many scholars recognise the “central importance of governance in influencing forest outcomes, but a review also shows major gaps in existing knowledge about the history and distribution of forest governance arrangements and in the understanding of how different features of

Chapter 4

governance affect outcomes” (Agrawal et al. 2008, p. 1462). This relates to the findings of other scholars who underscored the limited information and understanding on the impact of various policies on deforestation in the Peruvian Amazon (Chávez et al. 2014, p. 224) .

In the case of network governance, there is agreement in the increasing role of networks in providing services that before were mainly the responsibility of the State (Rhodes 2017b; Torfing et al. 2013) and therefore, have a relevant role in policy implementation (Koliba et al. 2011; Mette Kjaer 2004). Networks are seen as a means to address challenges that require coordination, yet, more work is needed in reference to network management and especially on what ‘*mix*’ of policy management is more appropriate for the frontier. Is it a *mix* of hierarchy, networks and market? How do these work in practice? This is a matter that also relates to State capacity. Does the State have the capacity to manage the *mix*. If not, why? For the purpose of this thesis, there seems to be an interesting conceptual continuum between MLG and network governance in reference to interdependence.

In summary, after the review of all the theories presented in Chapter 3 and Chapter 4, the following is a consolidated list of the themes applied in the analysis of the case studies:

Table 7 Case Study Chapters: Themes for Analysis

Case Study Chapter	Themes
Multi-Level Governance and State Capacity	State capacity (administrative, resources and control of corruption)
	Steering
	Distribution of authority and competences
	Interdependence and non-State actors
	Coordination of MLG across policy sectors
Network governance using the case of land use planning	Dependence
	Steering
	Complexity
	Networks as obstacles
	Coordination
Implementation	Objectives
	Politics
	Policy succession
	Resources
	Coordination
Multi-level governance and implementation at the frontier	Migration and economic boom
	Informality and corruption
	Weak rule of law
	Unfair market conditions
	Unequal distribution of benefits

After the review of the literature within the different disciplinary areas upon which this thesis is based, the next chapter will present the research methodology of this thesis.

Chapter 5 Methods

This chapter presents the research design used to examine the limitations to implementing forest policies to reduce deforestation and forest degradation. It also presents the field site and community selection.

This chapter is organised as follows. First it opens with a brief introduction on qualitative methods. After it provides an overall background of the field site and community selection process. Then it summarises the main methods used for data collection and provides a detailed description of each method, including the key informant interviews, focus groups, interviewee selection, policy mapping and policy analysis and data collection in the field. Afterwards, it delves into the main methods for data analysis which include thematic analysis and case study research analytic techniques, as well as tools for data analysis such as N-VIVO coding and interview transcription. The appendices show the full interview questions (both key informants and focus groups) and the transcription format.

5.1 Qualitative Methods

As noted by Hill and Varone (2017, 11):

In the social and political sciences we recognise how complexity, change and the consciousness of the actors we are studying limit our scope for the establishment of generalisations (that is, propositions going beyond the investigated cases). We also recognise how, particularly in a field like the study of policy process, the use of experimental methods remains rather exceptional, and we must often use qualitative techniques in single or comparative case studies to grasp social and political phenomena.

A main reason for relying on qualitative methods in this research is the nature of the research puzzle. Qualitative methods are particularly useful for analysing policy implementation processes and understanding the underlying dynamics taking place, whereas quantitative methods can face more difficulties in such contexts (Hill and Hupe 2014, p. 145). The textual data gathered through qualitative methods can provide valuable in-depth information to elicit understanding of the dynamics behind forest governance, multi-level governance, network governance and policy implementation. Additionally, in comparison to quantitative methods, qualitative methods such as focus groups and semi-structured interviews provide more room for eliciting information relevant to the main research question of this thesis. This is especially the case, since it is relevant

to capture the perspectives of the targeted interviewees, with regards to gaining a better understanding of the dynamics of forest governance on the ground.

Qualitative methods allow for new issues to be ‘discovered’ or interpretations and therefore explanations to emerge (Mason 2002). These methods rely on analytical, explanatory and argumentative approaches that factor complexity, detail and context (paraphrased from Mason 2002, p. 24). Qualitative methods are particularly useful for exploring topics on which there is little knowledge (Stern 1980, as cited in Strauss and Corbin 1998, p. 11) as is the case in this investigation into the nature of forest governance. They are also appropriate for gaining a new understanding of issues about which information already exists (Stern 1980, as cited in Strauss and Corbin 1998, p. 11) and are used for this purpose in this thesis for exploring the limits of policy implementation in the Ucayali region.

Qualitative research is valuable approach to provide insights on how ‘things work’ in specific contexts (paraphrased from Mason 2002, p. 1). Indeed, the ability to understand context is underscored as a relevant characteristic of qualitative methods. As noted by Mason (2002, p. 3) “qualitative research aims to produce rounded and contextual understandings on the basis of rich, nuanced and detailed data.”

On the other hand, qualitative methods aid the development of interpretative analyses (Strauss and Corbin 1998, p. 11). There is a growing trend in political science to use interpretation and ethnographic methods. From an interpretative approach perspective, it relied on ethnographic tools such as “studying individual behaviour in every day contexts, gathering data from many sources and adopting an ‘unstructured’ approach” (Hammersley 1990, as cited in Rhodes 2017b, p. 51). In relation to data sources in the field, it was important to remain creative and open to the use of different datasets and media, such as posters and maps (Kapiszewski et al. 2015, p.152).

5.2 Field Site and Community Selection

5.2.1 Case selection: field site

The Peruvian Amazon region consists of five departments: San Martín, Loreto, Madre de Dios, Amazonas and Ucayali. This thesis focuses on Ucayali for several reasons. First, it is a *frontier economy*. Ucayali is an emerging market, with a weak rule of law, migration and multiple national and foreign investors linked to the forest and agricultural sectors. As noted by Lipton (2015) “in some frontier markets, capital inflows predominantly take the form of foreign direct investment, often linked to the exploitation of natural resources.” But it is more complex than that. Ucayali

also has an *agricultural frontier* which means that there is a very dynamic forest-agriculture interface. It shares a *lawless frontier* with bordering departments and within its own territory there is a sense of *lawlessness* where illicit crops and illegal extraction of natural resources are commonplace. The deforestation trends in Ucayali were presented in Section 1.3.1. Meanwhile, between 2006 and 2012, Ucayali tripled the area of oil palm cultivation (MINAM 2015, p. 33). With 31,421 ha (GOREU, 2013, pg. 59), the oil palm crops in Ucayali represent 20% of the national production (BCRP 2012, p. 80). With a total of 102,400 km² and 70% of its territory with forest cover the main economic activity is timber production. Reports show that in 2013 it was the third largest producer of roundwood and the second largest of sawn timber in the country (MINAGRI 2014, p. 6; 26). Ucayali has many industries linked to timber manufacturing. Between 2005 and 2011 the average export of timber products reached \$US 47.5 million (BCRP 2012, p. 114). Further, a total of 3.7 million ha of forests for permanent production are in Ucayali (BCRP 2012, p. 101). There is also an active commercial sector in Pucallpa, the most important city of the central Amazon (BCRP 2012, p. 69).

Second, there are conservation and economic development activities taking place. For example, 12% of its territory is under conservation status (Banco Central de Reserva del Perú, 2012, p. 77). In 2015 one of the largest National Parks was established, Sierra Divisor with 1.3 million ha. Third, it has a heterogeneous population interacting with the local resources, with the presence of indigenous communities and colonists (Porro et al. 2015, p. 48). Between 2007 and 2015, Ucayali stands as one of the departments with a population growth rate higher than the national average (OECD 2016, p. 48).

Finally, there is possibility of extrapolating the results to other areas in the Amazon and the relevance of improving intervention at this point in the Amazon for the hydrological balance of the Basin. A report by the Terra-i team validating land use change in Ucayali noted that:

“Ucayali is an ideal forest margins benchmark site for three reasons (White et al., 2005a cited by [12]). First, the bio-physical characteristics (e.g., rainfall and soils) are similar to those of many regions in the Amazon, including (...) [a] site in Acre, Brazil (IICA, 1995 cited by [12]). Thus, research outcomes can be applied more widely and compared to the larger Amazon region. Second, approximately 50 years of deforestation and a steadily growing population base has led to the relatively small area (2% of the Peruvian Amazon) containing a wide range of land uses” (Coca and Tello, 2014, p. 3). Third, although it might be a very small portion of territory in proportion with the total extension of the Amazon, actually “at the confluence of the

Ucayali and Marañón Rivers, the Amazon River is formed” (Coca and Tello, 2014, p. 2).

Therefore, along with the Andean mountain range, this region hosts part of the starting point of the largest source of freshwater on Earth.

The selection of this field site responds to the main focus of this thesis, which is forest policy implementation in Ucayali, linking the three main tiers of government: local, regional and national. The aim of this case study is to delve into the governance interactions, dynamics and specificity taking place between the tiers as well as at each specific tier. Multi-level governance will be applied to the regional and national tiers, network governance to the local and regional tiers and implementation theory to the local, regional and national tiers.

The research design and data collection process were linked to a larger project called Attaining Sustainable Services from Ecosystems through Trade-off Scenarios-ASSETS (www.espa-assets.org). This research project was led by Professor Guy Poppy of the University of Southampton in collaboration with researchers from CIAT (Colombia), University of Malawi – Chancellor College, World Fish (Malawi), Basque Centre for Climate Change Research (Spain), Conservation International (USA) and the University of Dundee. The ASSETS project aimed to quantify the linkages between the natural ecosystem services that affect – and are affected by – food security and nutritional health for the rural poor at the forest-agricultural interface, with case studies in Malawi, Peru and Colombia.

5.2.2 Case selection: communities

The **selection of the communities in the field** followed the following criteria: i) representation of the forest-agriculture interface; ii) different types of land use ranging from conservation to economic development; iii) existence of various drivers of land use change with more conserved natural resources in contrast to more degraded ones; iv) presence of *colonos* (migrants) and native communities as this influences what is noted in points ii) and iii); and iv) presence of institutions linked to the management of forests and/or agriculture.

Based on these, a total of five ASSETS communities were selected as follows: Pueblo Libre, la Unión, Yierbas Buenas, Junin Pablo and Cunchuri. From these, and considering the criteria described above, three communities are very close to the agricultural frontier and main highway with the main land use activities being agriculture (Pueblo Libre, la Unión, Yierbas Buenas). These communities are mostly populated by *colonos* and they have designed several community arrangements for resource management. Two of the five communities are closer to forests and

the rivers (Junin Pablo and Cunchuri) as the map below highlights, with more native population, small-scale production mainly for consumption purposes and nearby a forest communal reserve. The selection of these five communities is intended to represent a forest-agriculture frontier.



Figure 8. Map of ASSETS Communities in Ucayali (red points highlight where communities are located). Source: CIAT

5.3 Research design and data collection methods

The methodology for data collection in this research relied on a qualitative multi-method approach which includes key informant interviews (semi-structured), focus groups, case study research and policy mapping. It is not expected (necessarily) for all these methods to produce the same type of data and results, but that they will operate in a complimentary manner and facilitate the cross checking of the data.

Semi-structured interviews capture several aspects by allowing “the interactional exchange of dialogue” and also coverage of specific themes while still providing the flexibility “to develop unexpected themes” (Mason 2002). Qualitative interviewing can contribute to “the construction or reconstruction of knowledge” (Mason 2002, p. 63). On the other hand, and related to the research puzzle that this thesis aims to develop, when looking at issues related to governance,

which can have certain levels of political sensitivity and multiple perspectives, it is very important to use a method that allows an open dialogue and a certain degree of flexibility.²⁸ Also, as data on institutional performance are scarce, it is relevant to have stakeholder's perceptions. It should also be noted that people's views and knowledge are crucial when researching issues related to the governance of complex socio-ecological systems.

Policy mapping allows tracking down the core policies related to the themes of interest of this thesis, followed by a systematic process of analysis (which is described later on in this chapter). Additionally, for data analysis the main methodological approaches include thematic analysis of policies and (based on the theoretical framework) focusing on concepts such as Network Governance (Rhodes 2017b; Torfing et al. 2013); Multi-Level Governance (Bache 2007; Bache and Flinders 2004a; Hooghe and Marks 2001; Marks 1993); and Policy Implementation (Hogwood and Gunn, 1984).

Last, a qualitative scenarios exercise was developed as a data collection tool for this thesis. The value of this method was to reflect with stakeholders on the future potential of policy and institutional innovations. This exercise can also contribute to the awareness of potential emerging problems (Alcamo 2008) and to explore uncertainties about the implications, opportunities and risks of policy actions (Rounsevell and Metzger 2010). However, it was not implemented because the Government of Ucayali during the update of the Regional Joint Development Plan, performed a scenarios exercise that was also part of a national strategy led by CEPLAN. I participated in this regional consultation that took place in Pucallpa and some of those results are used in this thesis.

5.3.1 Semi-structured interviews and focus groups

The ASSETS project (see Section 5.2.1) had several data collection methods and one of those included Participatory Research Appraisals (PRAs). The PRA exercises do not consist of structured interviews; instead they are an open methodology that should foster a fluid conversation between both parties (paraphrased from Schreckenberg et al. 2012, p. 8). These exercises aimed to promote "a space for debate and reflection about residents' understanding of local problems, reasoning behind actions, as well as expectations" (Schreckenberg et al. 2012, p. 8). One of the PRA exercises in the ASSETS project focused on governance, yet the method failed to gather the data as expected. The conclusion from the enumerators of the ASSETS project applying the PRA exercises with the communities was that this way of talking about governance did not reveal

²⁸ As a matter of fact, the data collection experience of the ASSETS project showed that other methods used to capture data on governance in Ucayali had great limitations.

some of the real power or sensitive issues at play in the community. A member of the field team shared her perceptions on the implementation of this exercise: “if the participants were really leaders, they were not going to reveal their real governance approach and their use of natural resources, which in some cases included agreements with timber companies and the profit coming from that. If the participants were not leaders but just users, they always had an acquaintance as an authority, therefore they felt intimidated to participate and answer some of the questions. It was also challenging to formulate the questions so that they could be understood” (Gutiérrez 2016). Last, another conclusion from the ASSETS team was that in a site where corruption and illegality is rampant, a better methodological approach would involve targeted key informant interviews.

Therefore, in order to analyse the main *implementation gaps* and the politics of implementation, this thesis conducted 49 semi-structured interviews, 3 ASSETS meetings and 4 focus groups with key stakeholders in Peru for a total of 56 interviews collected, specifically in Lima, Pucallpa and five rural communities in Ucayali. On average interviews took approximately two hours and were recorded when the interviewee agreed. Informal conversations with participants also took place during field trip visits. Interviewees were selected so that they could represent the different levels of government and various sectors to better capture the cross-scale and cross-sector dynamics of policy implementation. Interviewees represented multiple sectors and specialties, including forests, water, agriculture and mining. They also represented a wide range of affiliations, mainly the public and private sector, civil society organisations, academia and community leaders (See Table 8).

Table 8 Type and number of interviewees

Level	Total
Local*	
Communities	5
Focus Groups	4
ASSETS Meetings	3
Local Total	12
Regional	
Agriculture	3
Agriculture and Forest	3
Fisheries	2
Economic Development	2
Environment	9
Environmental Law and Indigenous Rights	3
Land Use Planning	3
Regional Council	1
Mines	1
Natural Resources Enforcement	2

Chapter 5

University	1
Regional Total	30
National	
Agriculture and Forests	2
Environment	8
Development and Social Inclusion	1
Environment and Indigenous Rights	1
Interregional Amazon Council	1
University	1
National Total	14
Grand Total	56

*3 ASSETS meetings

It is worth clarifying that, due to the aim of this thesis, some of the organisations listed in the table above under the regional level of government, also have actions at the local level.

Furthermore, the *colono* and indigenous leaders interviewed from the 5 communities listed in the table above, represented 616 families, for a total of 3,570 people.

The development of the interview and focus groups questions was guided (and in some cases adapted from) two main sources. One is the work done by the Landscape Measures Resource Center of Cornell University and EcoAgriculture Partners which includes a component on institutions in a “Landscape Performance Scorecard” and “the Twenty Questions for Assessing the Performance of Eco-agricultural Landscapes” (Cornell University 2007) (See Appendix D and Appendix A). The other source is the work done by (Hayes, 2014) for the Forests, Trees and Agroforestry Consortium Research Programme of the International Consortium for Agricultural Research (CGIAR), to which CIAT belongs to. These included the Site & Block Overview Form (IM Form 1) (See Appendix F) and Hayes, Stakeholder Inter-Organisational Form (IM Form 2) (See Appendix G), and the Research Framework for Institutional Mapping (Hayes, 2014) (See Appendix H).

5.3.2 Interviewee Selection

After the literature review and the first ASSETS project field visit (See Table 10), the key research questions were determined and a systematic process for selecting the interviewees was undertaken. Considering that this research aims to look at natural resource governance at the *landscape scale* and inquire about the *cross-scale linkages of institutional arrangements*, and as mentioned beforehand, interviewees were selected considering the different tiers of government within the territory (and beyond) and the political structure. This means targeting interviewees from the national (Lima), regional (this means in Ucayali) and local scales (this means in the ASSETS communities). Additionally, as this research focuses on *natural resource governance*, it

targeted interviewees from official bureaus to give proper balance and emphasis to the role of the State. These interviewees were also targeted because official bureaus have an important role in defining and/or enforcing what is allowed or banned with regards to the access and use of natural resources. As *cross-sector integration* is a core component of this research, and to better grasp the *limitations to implementing forest policies to reduce deforestation*, it was necessary to interview actors that covered a wide spectrum of affiliations, including the public, private and the civil society sectors, particularly those which have a role in natural resource use and, therefore, have impacts on its governance. And also targeted those actors that were linked to critical processes such as land zoning and economic development. These actors are also considered as a relevant source of information in reference to land use change in the dynamic forest-agricultural frontier of Pucallpa.

The interviews included an official or technical expert from government institutions such as: the Regional Council, Regional Unit for Economic Development, Water Authority, Ministry and Deputy Ministry of the Environment, Institution for the Monitoring of Forest Resources and Wild Fauna and National Service of Protected Areas, among others. Members of NGOs active in natural resource protection and/or management were also interviewed. These stakeholders were identified mainly by consultations with a key partner of the ASSETS project in Peru, which is the Institute for the Research of the Peruvian Amazon and also by recommendations of a staff member from the Ministry of the Environment with many years of experience in issues related to the Amazon.

Interviews with government and NGO officials, among other topics, focused on i) identifying the main challenges for natural resource management; ii) mapping the geographical areas most affected by these challenges; and iii) identifying the main inter-institutional agreements and main policies for natural resource management. The interviews with the community leaders sought to gather information on i) the most important resources in their region; ii) whether they participate (or not) in the decision making process for the management of these resources; iii) perceptions on the most appropriate geographical scale to manage resources; and iv) conflict between communities for resource use and access.

The interviews took place in Lima (Peru's capital) and Pucallpa (Ucayali's capital). On average interviews took approximately two and a half hours and were recorded when the interviewee agreed. In some cases, when interviews could not be recorded because of confidentiality agreements, the main way to capture the information was by taking notes. No translator was needed for the interviews which were conducted in Spanish. The interviews were on a 'for citation but not for attribution' basis unless the interviewee gave permission to the contrary. All

Chapter 5

interviews have been anonymised below. In a few interviews, especially involving claims of corrupt behaviour, no details are provided to protect the interviewee.

A semi-structured questionnaire was used allowing the interviewee to lead the discussion. When the interviewee wanted to talk about other topics related to my questions, these would be discussed. During the analysis of the interviews there were several things I wanted to follow up at the time that warranted further clarification. Therefore, there was email correspondence between me and several stakeholders from the national and regional levels (See Primary Sources Appendix A), as well as with the field coordinator from the ASSETS project.

The full interview design (questions) used in the field can be found in Appendix B and C.

5.3.3 Policy selection

A policy selection and analysis process was conducted for specific policy themes, which mainly revolve around natural resources and their governance, as well as land use and planning. The policy selection and analysis process is divided into policy mapping, policy assessment and policy analysis (the latter is integrated in this research through the N-Vivo coding process and also see Section 5.4). The data used for this mainly come from archives of institutions of Peru (mostly available online) and from the data provided by the interviewees (for example, the regional development plans of Ucayali provided by the Territory Planning Unit) (Gerencia Regional de Planeamiento 2011).

In the policy analysis, there are the studies of the *policy process* which look at how policies are translated into action (*paraphrased from Hill and Varone 2017, p. 5*). In policy analysis the realm of interest of this thesis focused on the factors that explain policy limitations and the changes that policies require to improve their impacts (*paraphrased from Hill and Varone 2017, p. 5*). The comparison of several policy processes is a complementary way for policy analysis (*paraphrased from Hill and Varone 2017, p.11*). In this thesis, there are some comparisons with the fisheries policies, as well as to previous forest policies.

The policy mapping gives an overview of existing policies on the national and regional policy levels. It provides information on existing policies according to their specific phases and contexts and also outlines the key objectives and aims of the policies. When reports are available, the policy assessment explores the policies and their effectiveness in attaining the expected outcomes. Furthermore, the steps to be considered (see Table 9) allow for better monitoring, comparison and assessment of policies over time.

The policy analysis can build upon the policy mapping and assessment exercises as well as the key informant interviews and focus groups and consists of core thematic themes. One of the themes examines the extent to which policies are implemented across different tiers of government, from the national to the local level. Moreover, the analysis of inter-institutional articulation assesses the diversity of institutions that participate in policy design and implementation. On the other hand, governance considerations aim to explore the integration between interests, priorities and activities related to conservation and economic development. By combining data gathered through key informant interviews and policy assessment reports, the principal challenges that policies face for effective implementation can be identified and are a crucial asset to a policy analysis.

The following table shows in detail the considerations for the process of policy mapping and assessment (the ones for policy analysis are within the N-Vivo coding tree, see Appendix J):

Table 9 Policy Selection and Analysis Process

Policy Selection and Analysis Process	
Policy Selection	Policies related to the main themes prioritised, found at the stage of policy implementation and at different levels (national, regional and local).
Main Policy Themes	
Forest	Forest policies and how they relate to forest ecosystem services, forest management and/or forest protection, and overall governance of forest resources.
Environmental management plans	Environmental management plans, which then allows assessment of how, and to what extent, different (governmental) actors manage natural resources in the given region and the priorities included.
Land use	Policies of land use and management and/or land zonification. Aims to assess policies' priorities and vision for the territory in reference to conservation, resource use, etc. It will also investigate land tenure issues (e.g. priorities, tensions), as this is a key component of land use.
Agriculture	Agricultural policies and aims to analyse whether they are consistent with environmental conservation, the protection of ecosystem services and use of natural resources. Special attention is given to whether they consider (or not) strategies to sustainably integrate the forest-agriculture interface (e.g. strategies to prevent the advancement of the agricultural frontier and conservation to benefit from the provision of sustained ecosystem services such as water, soil quality and pollination).
Criteria	Key Considerations for Policy Mapping

Policy Selection and Analysis Process	
Existing policy	The name and year of the policy identified in the mapping exercise
Policy context	Key issues the policy aims to solve; the context before the design and implementation of the policy (e.g. pressing issues that motivated the formulation of the policy)
Policy phase	The current phase of the policy (implementation)
Key actors	Public, private or NGO organisations which participated in the design and implementation of the policy, as these can be an indicator which accounts for inter-institutional and cross-scale integration.
Criteria	Key Considerations for Policy Assessment
Beneficiaries of the policy	Beneficiaries of the policy, as identified by the specific policy assessment document. These include number of beneficiaries, gender, ethnicity, etc.
Effectiveness of the policy	The extent to which the policy goals assessed have been achieved (compared to the initial goals and objectives), as reflected in the respective policy assessment document.
Recommendations identified in the policy assessment document	Recommendations identified in the policy assessment document.
Policy phase when the assesment was conducted (implementation, etc)	Policy phase when the assesment was conducted (implementation, etc).
Source of policy assessment	Reference to the source/authors of the policy assessment document. Where available, online links to the document(s) should be included.

5.3.4 Data collection in the field

Data collection relied mainly on semi-structured interviews and focus groups with some short periods of observation. As the reports and assessments about policy implementation are few, it was important to capture the key stakeholder's perceptions. The semi-structured interviews and focus groups allowed an open dialogue and in most occasions flexibility to collect information that could have certain levels of political sensitivity. Data were collected during five field visits, each about two weeks long, over a three year period starting in 2014, which provided the opportunity to capture the dynamics of policy implementation over time (See Table 10 Field VisitsTable 10). I was also able to participate in six field visits to the case study communities by members of the

ASSETS project, which were useful for gaining a background understanding of the communities and sites, so that I could familiarize myself with the context in advance, in order to better frame my research.

Table 10 Field Visits

Field Visit	Month and Year	Specific data collection undertaken	Relevant national/regional policy events happening at that time
Lima and Ucayali	April 2014	Key stakeholder interviews and six visits to ASSETS communities	-The final design and start of the implementation of the Regional Environmental Authority (ARAU) of Ucayali -The transition to a New Forest Law (NFL) and the design of its regulations
Lima and Ucayali	May 2014	Key stakeholder interviews	-Implementation of ARAU -NFL regulations design
Lima and Ucayali	October 2014	Key stakeholder interviews	-Implementation of ARAU -The election and change of regional authorities - NFL regulations design
Lima and Ucayali	August 2015	Key stakeholder interviews	-The negotiation for the update of the Regional Joint Development Plan* -Implementation of ARAU - NFL regulations design - The drafting of a new strategy of climate change and forests
Lima and Ucayali	October 2016	Key stakeholder's interviews	-Implementation of ARAU - NFL regulations design - The Lima UN Climate Change Conference (COP20) of Dec 2015 that produced relevant agreements

Chapter 5

*I was able to participate in some of the consultations for the update of the Regional Joint Development Plan of Ucayali, which also included follow-up interviews with key informants that participated in the consultations.

For collecting interviews from rural leaders, five ASSETS communities were selected: Pueblo Libre, la Unión and Yervas Buenas, which are *colonos* close to the agricultural frontier and main highway mostly dependent on agriculture; and Cunchuri and Junín Pablo, which are closer to forests and the rivers, with more native population, small-scale subsistence-oriented agriculture and conservation areas nearby. Focus groups were also applied with some of the ASSETS communities, as well as with oil palm growers (for more details on the criteria of selection of communities, see Section 5.2.2). Access to the communities in the river was restricted to travel with the ASSETS project team and security conditions in the river limited the options of having more interviews with these communities.

There were a significant amount of secondary data collected during the field visits, including key policy documents and reports from interviewees (and from other sources such as public, private, civil society, international, academic, journalistic institutions) to support the process of policy mapping and analysis. These include key documents (e.g. policies, strategies, etc) related to natural resource management at the local, regional and national levels. It was also possible to observe the various sites and talk informally with several community leaders and participate in community meetings where locals discussed several topics, ranging from their food production to land use decisions and natural resource management. Another relevant resource was the International Center for Tropical Agriculture (CIAT) which provided statistical and geographical data as well as support in geographical analysis of deforestation trends and dynamics in the region.

The following list summarises the types of qualitative data collected:

- Audio recordings and transcripts from semi-structured interviews
- Audio recordings and transcripts from focus group sessions with community leaders
- Field notes
- Maps
- Documents from official and non-official sources (reports, publications, presentations, e-mails)
- Press clippings
- Follow-up information collected by email correspondence and telephone interviews

5.4 Methods for Data Analysis

The empirical core of this thesis is the thematic analysis of the fieldwork based case studies. The thematic analysis formed the basis for the subsequent use of NVivo. All of these methods were used to respond to the main research question of this thesis, as well as to respond to its four strategic objectives.

5.4.1 Thematic Analysis

Thematic analysis was used to analyse the four main theoretical mainstreams of this thesis: multi-level governance, network governance, metagovernance and implementation. Thematic analysis “is a method for identifying, analysing and reporting patterns (themes) within data” (Braun and Clarke 2006, p. 79). Furthermore, thematic analysis offers an accessible and theoretically flexible approach (Braun and Clarke 2006). The analysis focused on identifying the main themes (and topics) of agreements and disagreements across levels of government and policy sectors within and across the narratives of interviewees. Furthermore, it aimed to identify patterns, insights and concepts.

There are several advantages to thematic analysis. It provides great flexibility (Braun and Clarke, 2008, p. 78), and as it is not linked to any previous theoretical framework, it can be applied within different theoretical frameworks. Also, Braun and Clarke (2006) identify guidelines about using the method that are simple and easy to follow.

Initially the interviews were read several times so that the data became familiar, and a list of initial ideas concerning the content, interesting features, patterns and meanings contained within the data (Braun and Clarke 2006, p. 87-88). The second step was the creation of initial codes, which organised the data into interesting groups (Tuckett, 2005, as cited in Braun and Clarke 2006, p. 89). Third, the various codes into themes and any new themes that arise were defined. Observing the relationship between codes and themes can help to identify the main themes and sub-themes. The fourth step consisted of refining the themes (paraphrased from Braun and Clarke 2006, p. 89-91) by checking if the coded data came together coherently by applying consistency and plausibility. If not, data extracts can be re-located under a different theme and/or the theme can be completely removed. This formed the basis for a tentative thematic map. Afterwards, came a process of validating whether the thematic map was accurately conveying the meanings evident in the data set as a whole. The entire data set was re-visited to cross-check the validity of the themes as well as for coding any data that was omitted beforehand (paraphrased from Braun and Clarke 2006, p. 91). Fifth, in this phase the research process must have a solid thematic map and knowledge on each theme to establish what characteristics of the data each theme

represents. The sixth and last step, writing the analysis must convey “a concise, coherent, logical, non-repetitive and interesting account of the story the data tell within and across themes” (Braun and Clarke, 2008, p. 93).

In the process described above, it is important to have a clear definition of a theme. According to (Braun and Clarke 2006, p. 82) “a theme captures something important about the data in relation to the research question, and represents some level of patterned response or meaning within the data set.” However, the researcher must apply their own judgement to determine a theme (Braun and Clarke 2006, p. 82).

The process of determining the relevance of a theme includes several aspects. One aspect is its contribution to the main research question as the most prevalent themes across the data set may not be the most relevant (Braun and Clarke 2006, p. 82). Nonetheless, prevalence is an important aspect of data analysis which can be approached in different ways “it could have been counted in terms of the number of different speakers who articulated the theme across the entire data set, or each individual occurrence of the theme across the entire data set” (Braun and Clarke 2006, p. 82). What is key is that whatever the form applied to count for prevalence, it should be used in a consistent manner.

Another decision to be taken in the data analysis process is the level of analysis, which can include semantic or latent levels (Boyatzis, 1998 as cited in Braun and Clarke 2006, p. 84). This thesis will rely on a thematic analysis at the latent level which “goes beyond the semantic content of the data, and starts to identify or examine the underlying ideas, assumptions, and conceptualisations, and ideologies, that are theorised as shaping or informing the semantic content of the data” (Braun and Clarke 2006, p. 84).

The data analysis process is not a linear process, but more an iterative process in which the phases of analysis should be re-examined, going back and forth as necessary. In this thesis, the implementation of thematic analysis included both theoretical and inductive approaches. The former includes engagement with the literature before starting the process of analysis, while the latter takes the opposite approach (paraphrased from Braun and Clarke 2006, p. 86).

5.4.2 Case Study Research

Case study research is used in this thesis to look at the context of the frontier (See section Frontier Economy 3.3). Case studies can offer insight into complex social phenomena while providing more in-depth focus on a specific case. They provide thick descriptions of complex social phenomena which other methods do not provide. Case studies were chosen as suitable for this

research for a variety of reasons. One reason is that it “is essential to providing ‘decentred’ explanations of the social world” (Boswell et al. 2019). Another reason is that case studies offer advantages for understanding the ‘how’ when looking at questions regarding the effectiveness of policies (Yin 2018, p. 21). This includes examination of underlying processes and causes as well as the complex interactions between the social, ecological and institutional dimensions, which are fundamental for a better understanding of policy implementation.

There are also limits to this approach of data analysis. Case studies explore the ‘how’ in a specific context, but do not tell you whether any conclusions reached are generalisable. It is a reductionist approach that is useful, but it also has limitations. Nevertheless, there are also relevant contributions from a non-positivist perspective on case study research. When discussing comparative research it has been claimed that “conventional wisdom about when, how and why to compare severely limits how we study and understand the social world. As a result, we are missing potentially rich and illuminating insights because our analysis is either too rigid, structured and systematic or too bespoke, detailed and idiographic” (Boswell et al. 2019). The latter, which is the interpretive form of comparison, is an important contribution to comparative research in the social sciences, as it provides the required flexibility and openness to explore and reflect on the social world.

In the process of case study research one must define the case and its boundaries. For the latter, this includes, for instance, the target groups to be included in the case and this, in turn, establishes the scope of the data collection (paraphrased from Yin 2018, p. 31). Additionally, one must also define the main sources of evidence to be used. This thesis relied on five options as follows: documentation, archival records, interviews, direct observations and participant observation.

In terms of the analytical strategy for case study research, “much depends on a researcher’s own style of rigorous empirical thinking, along with the sufficient presentation of evidence and careful consideration of alternative interpretations” (paraphrased from Yin 2018, p. 165). The two main analytical strategies applied in this thesis were the following: relying on theoretical propositions and working from the ground up. On the former, the propositions shaped the data collection plan and set an analytic prioritisation; and, on the latter, the analytical strategy delved into the data to allow new concepts (inductive approach), codes or ideas to emerge (paraphrased from Yin 2018, p. 168-169). The explanation building was in a narrative form (Yin 2018, p. 179).

The following principles were considered for guaranteeing the high quality of the analysis: attend all the evidence; investigate all plausible rival interpretations; address the most significant aspect of the case study and; demonstrate familiarity with the main discourses on the case study topic

(paraphrased from Yin 2018, p. 199). As part of the corroborative strategies implemented in order to examine the validity of research findings, data triangulation was used in this thesis. Convergent evidence through data triangulation strengthens the construct validity of a case study (paraphrased from Yin 2018, p. 128). This triangulation was made with other sources that supported both the data collected and interpretations made. Other techniques used to examine the validity of research findings included respondent validation (with some of the interviewees) and constant comparison between the data (Anderson 2010).

5.4.3 N-Vivo

There are several computer assisted qualitative data analysis software and for the specific purpose of this research, N-Vivo is the one used. This software facilitates data analysis (including texts, audio files, videos and photographs) and is useful for linking information (insights), supporting the reflective purpose, giving structure to the collected data, and serving as a case study database, among other useful purposes. Indeed, some of its significant contributions include i) the instant retrieval of coded information; ii) search functions that facilitate the interrogation of data; iii) linking quantitative and qualitative data and literature reviews; and iv) visualising data.

The software for Computer Assisted Qualitative Data Analysis (CAQDAS), such as N-Vivo, has useful functions that support the process of data analysis. These include for example, the calculation of word frequencies, auto-coding and running matrix queries (Silver and Lewins 2014). However, using the available functions will not lead to other relevant analytical considerations being disregarded. For example, examining word frequency in a text might be misleading since “where uncommon words (or phrases) are used often in a text, then they express and reflect the greatest concerns of the communicator” (Pierce 2008, p. 266).

5.4.3.1 N-Vivo Categorical Labels

The analysis of the data collected (key informant interviews) is based on the thematic analysis which identified both the descriptive and theoretical codes. As a fundamental part of building the coding structure, codes were re-visited to refine the structure, as part of an iterative process. All the codes are drawn from data collected in the field, information provided in the interviews, and the theoretical framework (See Chapter 1). The coding tree is in Appendix J. The code numbers are assigned to organise the transcripts and to insert them in N-Vivo. The information of the interviews, even when in singular (only pertaining one interviewee), in most cases is presented using the word ‘they’.

5.4.4 Interview Transcription

Several methodological approaches were evaluated for the transcription of the interviews. One option, “**literal emphasis**”, aims to transcribe everything said in an interview. This approach has the advantage of being more reliable, providing a more profound understanding of the character and tone of the interviewee. It also provides a view of what the interviewee was considering when responding. However, this approach might produce a text that is not easy to read and follow through (Valles, 2002) (Onwuegbuzie, 2011). Another way to transcribe the interviews is to “**edit or paraphrase**” the transcription to avoid repetitions, grammatical mistakes and filler words. In this way, the length of paragraphs is re-structured and phrases are edited for the purpose of greater eloquence and consistency of expression. Despite any changes, the meaning and tone of the interview are maintained (Farías, 2005). Finally, another option is that of “**intelligent verbatim**” which entails eliminating filler words, redundancy and noises that according to the objective view of the transcriber, reduce the fluidity of the text. This style of transcription aims to capture the meaning of what has been said.

Literal emphasis was chosen as the approach for transcription, with a few amendments as described below. Therefore, the parameters used for the transcription include:

- Inclusion of emotions and implicit references using [parenthesis]
- If necessary, make modest grammatical corrections to facilitate the reading of the transcripts
- Interruptions in the audio or inaudible sections will be noted by using [parenthesis]

A professional did the transcription of all the interviews while I translated all the interviews from Spanish to English (fifty five stakeholder interviews).

Chapter 6 Multi-Level Governance: Whistling in the wind?

6.1 Introduction

Multi-level governance (MLG) is a useful analytical lens to look at policy processes across different levels of government. For the specific case of Forest Policies, Fairbrass and Jordan (2004, p. 148) note that “environmental policy is a case *par excellence* [italics as in original text]” of “the dispersion of authoritative decision-making across multiple territorial levels” (Hooghe and Marks 2001, p. xi). For Bache and Flinders (2004a, p. 10) the focus on land use planning in MLG is considered as key. They noted that “land use planning policy (...) are seen as ‘critical tests’ for multi-level governance” (Bache and Flinders 2004a, p. 10).

This case study on MLG establishes the broader policy and governance context in Peru to understand the dynamics within each level of government as well as between these levels. It provides an in-depth analysis of State capacity, as this is an essential prerequisite for the later analysis of implementation. The understanding of how MLG takes place in Peru will provide the framing to look at the limits of policy implementation. This chapter will analyse the accounts from the fieldwork and look for evidence for five main issues raised by multi-level governance, which are the following: i) State capacity (administrative, resources and control of corruption); ii) Steering; iii) Distribution of authority and competences; iv) Interdependence and non-State actors; v) and coordination of MLG across policy sectors (see Table 7). These themes have been identified through a deductive approach (see Chapter 4).

As mentioned in Chapter 1, in this thesis State capacity refers to the ability of the national, regional and local governments to effectively undertake policy implementation and enforce the rule of law. This requires technical capacity, administrative, human and financial resources and a clear distribution of authority and competences. Crucially, State capacity is not limited to technical matters but involves the State’s ability to build political and social agreements around policy goals.

The main focus of analysis in this section is going to be guided by the work of Bache and Flinders (2004a) who raise a question of relevance for this case study:

Does multi-level governance indicate an erosion of the nation State, as is often assumed, or does it lead to a transformation or reorganisation of State power? In particular, what evidence is there of national

governments attempting to increase their steering capacity in the context of multi-level governance? (Bache and Flinders 2004a, p. 10-11).

Much of the literature has emphasised that multi-level governance erodes the capacity of the State (see Section 4.2). Others however argue that it has transformed the way in which the State runs a country. And the question arises within this particular policy area, which is it? Erosion or transformation?

6.2 State Capacity

6.2.1 Administrative

Regional experts stressed the weakness of State capacity, especially at the local level, to respond to the environmental agenda and therefore, to lead and support an effective forest policy implementation. An expert from the German Technical Cooperation Agency said:

At the local level there is limited attention, knowledge or understanding with respect to the national environmental policies, so there are many flaws (045-GIZ-09 2015-Regional).²⁹

The local authorities (the municipalities) have the role of implementing the Local Forests in the new Forest Law (see Section 1.3.3). However, according to an engineer from the Executive Directorate of Forests and Wild Fauna in Ucayali (DEFFS)³⁰, so far they did not perceive their role clearly:

Actually a proposal from the small timber extractors was to have the regional (not the local) authorities be in charge, especially because there is no clarity on the budget and the structure within the municipalities to respond to this new function. But as the Law has been passed this change is not possible. The Regional Authority will have the responsibility of approving their management plan, but the responsibility of implementing the Local Forests will be entirely of the local governments (020-DEFFS-09 2014-Regional).

²⁹ The Regional Government of Ucayali, in the process of updating the Regional Development Plan made consultations with a total of 2,666 stakeholders. In terms of the main bottlenecks of natural resources and the environment, a main finding was the limited availability of environmental experts. See: GOREU. 2011. "Plan de Desarrollo Regional Concertado 2011 – 2021, del Departamento de Ucayali,," ed. Sub Gerencia de Planificación y Estadística. Pucallpa: Gobierno Regional de Ucayali.

³⁰ Regional Directorate of Forestry and Wildlife of Ucayali (Dirección Regional Forestal y de Fauna Silvestre – DEFFS by its acronym in Spanish).

A Unit Director at the Regional Environmental Authority of Ucayali (ARAU) agreed mentioning that:

With the ruling of the new Forest Law local governments will have a responsibility with the new policy instrument of Local Forests. This news caught them very unprepared, more the local than the regional governments (...) they are not implementing these themes (044-ARAU-10 2015-Regional).

Some national stakeholders also perceived an administrative weakness at the regional level. A senior university professor and environmental policy expert based in Lima noted that:

It is worse if you go to the regional government. At that level sometimes there are politicians appointed to be the Natural Resources Manager. They have no idea of natural resources, they have no skills on cost-benefit analysis and much less on tools for environmental management. I have been to the Regional Government of Loreto taking a map to title native communities, and they told me: 'that white spot is free, let's put oil palm there' (032-PUCP-08 2015-National).

This comment also underscores that decentralisation is a gradual process and that new functions should not be transferred to the lower tiers of government in the absence of State capacity. Then the interviewee added:

The technical officers need to be trained in the technical matters. It cannot be as it has always been, that the Head of the Protected Areas Service is a veterinarian. That cannot be. It needs to be a biologist that can handle ecosystems or it has to be a forest expert (032-PUCP-08 2015-National).

Local Forests aimed to transfer more responsibilities to other levels of Government. Although the policy instrument of Local Forests was conceived as a way to strengthen forest governance through MLG, *in praxis* the opposite happened. Reports show that Local Forests became a machine for illegal timber laundering, especially as they have been subject to less supervision in comparison to other modalities of forest use (Environmental Investigation Agency 2018, p. 24). The data shows trends of a *balloon effect*³¹ where illegal extraction that used to take place in Forest Concessions has now moved to Local Forests and other areas. For example, in a large police

³¹ The balloon effect refers to "the shifting pressures when policies and market forces combine with uneven governance frameworks to produce a range of unintended and often destabilizing consequences" See: United Nations University. 2015. "Balloon Effects: Expect the Unexpected When Managing the Global Commons." Available online at <https://unu.edu/publications/articles/balloon-effects-managing-global-commons.html>.

Chapter 6

operation called Amazon 2015, 42% of the timber inspected came from Local Forests, which was almost equivalent to that coming from Forest Concessions (43.8%). Over 90% of the timber inspected by the Organisation for the Supervision of Natural Resources and Wild Fauna (OSINFOR) from the Local Forests was illegal (Environmental Investigation Agency 2018, p. 24) (for more information on Forest Concessions see Section 1.3.3).

A report from the Permanent Multisectoral Commission to Fight Illegal Logging (PMCFIL) shows that from the illegal timber confiscated between 2016 and 2018 only 4.84% came from Forest Concessions (MINAGRI 2018, p. 14), while in 2018 84% of the illegal timber was from administration of contracts from Local Forests and permits in lands of native communities (MINAGRI 2018, p. 26). Meanwhile, OSINFOR reports that from the supervision of a total of 155 operational plans of Local Forests, 88.4% had fake information and had timber that could not be sourced (OSINFOR 2017, p. 61). Furthermore, in Ucayali 38% of the timber commercialised using documents of Local Forests came from an illegal source (OSINFOR 2017, p. 70).³² Something to highlight is that OSINFOR found that regional officials from the Executive Directorate of Forests and Wild Fauna allocated contracts of Local Forests to those that did not comply with the minimum requirements. Further, they did not conduct verification *in situ* prior to the approval of the management plans. This systematic action allowed the commercialisation of timber from non-authorized areas with official documents (OSINFOR 2017, p. 106-107).

What these reports show is that the same issues recur in Forest Concessions and Local Forests which have national level and/or regional and local level management. It also highlights that MLG approaches and forest governance models are important yet not sufficient to improve forest governance. What is missing is more effectiveness in tackling corruption. This is the underlying problem, the rampant corruption. In order to achieve this State capacity is needed on the ground and not only at the central State level.

There has been a lot of discussion in the literature regarding the best models for forest governance. What these examples show is not necessarily that local level governance does not work, but that other conditions such as traceability coupled with deterring illegality and informality are also required. Several respondents interviewed in this thesis complained about the nonexistence of forest use instruments for small timber users. Furthermore, these examples also underscores that different models of forest governance (Forest Concessions or Local Forests) are

³² This report corresponds to supervision efforts in three departments of the Peruvian Amazon: Ucayali, San Martín and Loreto. Most of the Local Forests were in the latter and the sample from Ucayali was quite small. Nevertheless this trend was common in the other departments as well, and for example in Loreto 86% of timber commercialized came from an illegal source. OSINFOR. 2017. "Supervisión y Fiscalización en Bosques Locales." Organismo de Supervisión de los Recursos Forestales y de Fauna Silvestre.

not necessarily the way to deter forest loss in the context of the frontier. Therefore, although policy design matters, implementation in the design phase must explore what is feasible. Some of the critical policy loopholes need to be identified and targeted, such as illegal paperwork, lack of verification, corruption, weak monitoring and fiscalisation.

A relevant clarification is that the policy instrument of Local Forests existed in the Forest Law 27308. What is 'new' or different between the past and the new Forest Law (see Section 1.3.3), is that in the former municipal governments or autonomous committees could provide titles to individuals, while in the latter these types of title are assigned to the municipal authority. The positive side of this change is that it should enable better control and verification from OSINFOR and regional authorities (Environmental Investigation Agency 2018, p. 25). OSINFOR highlights that there are changes in terms of the conformation and implementation of Local Forests in both Laws (OSINFOR 2017). There are two key weaknesses identified that need to be addressed to strengthen monitoring: i) enabling titles must be assigned to allow supervision by OSINFOR and ii) information concerning Local Forests registered by regional or local authorities must be reported to SERFOR³³ or OSINFOR (Environmental Investigation Agency 2018, p. 25). This also highlights that the transfer of functions to other levels of government needs to go hand in hand with strong channels of communication with the Central Government.

In the new Forest Law there are also forest use modalities that grant more rights of use to local inhabitants. This is the case of the policy instrument of the Agroforestry concessions (*Cesión en Uso*). A regional and national expert commented on this instrument:

The Law 29763 also speaks about Agroforestry concessions. If there is a plot and there is forest, they can provide that policy instrument to the forest so that they can make use of it (020-DEFFS-09 2014-Regional).

According to a national level expert, agroforestry concessions are key to solve the deforestation problems: they should be prioritised in areas of deforestation. Yet SERFOR requested a soils analysis. The cessions help to regulate certain land uses already in place also providing a technology package (039-EI- 06 2019-National).

Experts from the World Agroforestry Centre (ICRAF) based in Peru conducted relevant research to evaluate the necessary conditions for this mechanism to succeed (Robiglio and Reyes 2016). One of the experts shared that:

³³ National Service for Forests and Wild Fauna (Servicio Nacional Forestal y de Fauna Silvestre - SERFOR by its acronym in Spanish).

All the producers are interested in becoming formalized, in being visible to the State. That allows them access to credit. But when you tell them that they will not be able to cut down forest anymore because this mechanism forbids that practice, then they say, 'oh, this is not for me,' because this is how they have traditionally carried out the management of their farms. There need to be strategies and incentives, as well as training, for example, on which agricultural practices can improve their productivity without affecting the forest and linking them to value chains. Also, on informing them that by making use of sustainable practices there is a compensation in terms that their tax obligations can be completely forgiven (053, ICRAF – 06 2019-National).

The account above is an interesting example of how policy succession (see Section 8.2.3) can affect policy adoption and therefore formalization. The experts from ICRAF also point to having the necessary conditions, which refer to the capacity *in situ* for making this policy instrument fully operational:

It is very important to consider the 'entire package', not only granting the contracts and formalizing beneficiaries, but also considering all the other 'ingredients' that will make this mechanism work. This mechanism has a lot of potential in terms of the surface of forest that it can protect, but it needs to consider 'the ingredients'. Furthermore, Agroforestry Concessions should be allocated with a mosaic landscape approach, not only thinking about 'isolated' plots. To date only 14 Agroforestry Concessions have been allocated, only in the department of San Martín (053, ICRAF – 06 2019-National).

Agroforestry Concessions are a policy instrument with the potential to reduce informality through the granting of clearer land rights and can have an interesting role in disincentivizing deforestation. Some ingredients fundamental for the successful implementation of this policy instrument are quite simple such as training and information sharing.

Despite the examples noted beforehand, there are also other examples that show a growing administrative capacity in the region. This is the case of the Communal Reserve *El Sira*. When discussing with a regional officer of SERNANP and the Communal Reserve *El Sira* on the update of their management plan, the following observation was made:

The management plan was designed by SERNANP in consensus with the environmental authorities and the local communities and authorities. There was support from the management committee and this is decentralised. For the validation [of the plan], there has been participation from actors from all sectors and native

communities. This management plan is under the National Master Plan which integrates several components (023-SERNANP-09 2014-Regional).

There are external assessments of the Communal Reserve *El Sira* that looked at its management capacity. In 2006 WWF and INRENA conducted an evaluation on the relationship between the effectiveness of the management vis-à-vis the accumulated degree of threat for every protected area in all the national protected areas evaluated; with a possible total of 300 points, *El Sira* ranked with 140 points (INRENA and WWF 2006, p. 52). In this analysis *El Sira* lowered its ranking in management effectiveness, even though the level of pressures and threats was of 30 points approximately (from a range of 0 to 300 points) (INRENA and WWF 2006, p. 54). In general, the assessment showed that *El Sira* has less risk compared to other reserves while the effectiveness of the management is average with respect to other reserves that were part of this assessment. The report also analysed the protected areas with more pressure and threats with regard to their management effectiveness. Certainly, a more in-depth analysis is required, considering, for instance, the fulfilment and impact of the objectives laid out in the management plans (INRENA and WWF 2006, p. 56).³⁴

The criteria of success from those leading the *El Sira* reserve include: i) that contributes to solving a need of the population and ii) that contributes to achieving the main aim of the reserve (023-SERNANP-09 2014-Regional). In this respect, the Master Plan of *El Sira* 2015-2019, with a vision towards 2034, includes three main objectives: i) maintain the conservation of some prioritised ecosystems; ii) promote the use of non-timber forest products such as the latex of *Shiringa* and the oil of *Copaiba*, which do not require the extraction of trees; and iii) strengthen the co-management between the chief of the Reserve (*Jefatura de la Reserva*) and the organisation implementing the contract of administration (ECOSIRA) who represents the indigenous communities (Servicio Nacional de Areas Naturales Protegidas por el Estado -SERNANP- 2015, p. 4).

³⁴ It is important to note that this assessment took place 8 years before the field visit when I conducted the interview mentioned beforehand.

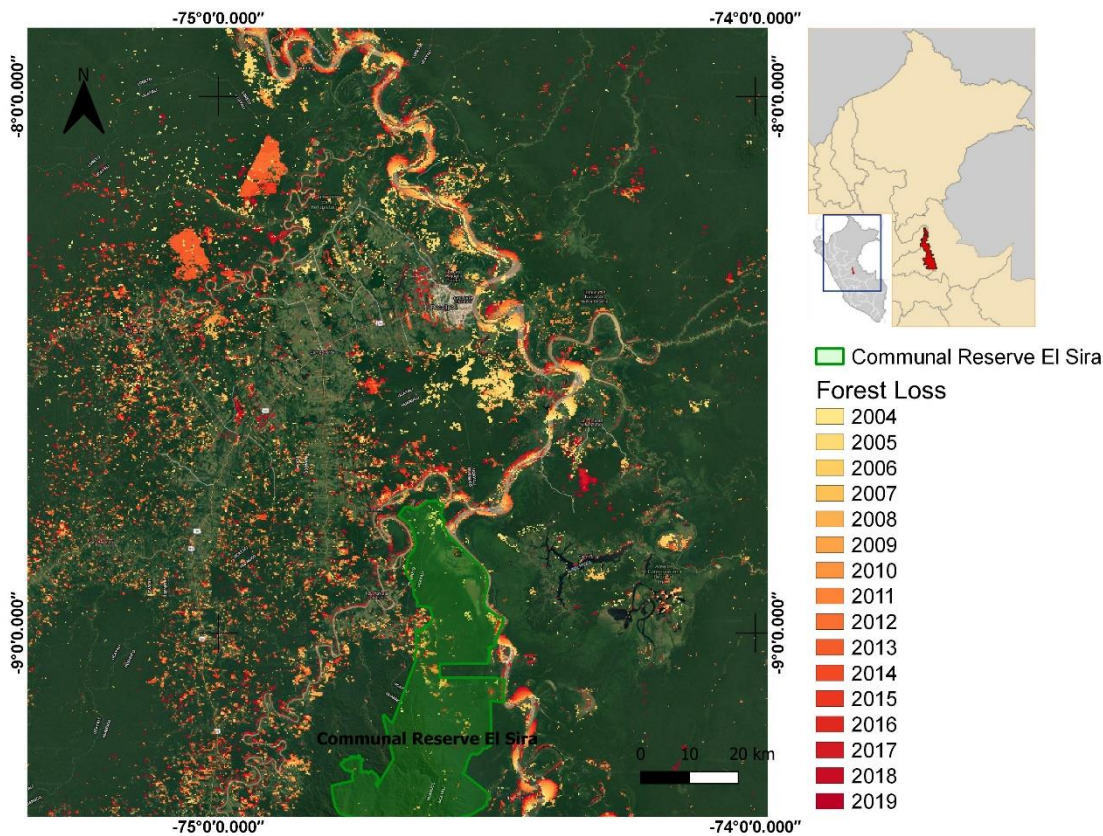


Figure 9 Map of deforestation pressures around the Communal Reserve El Sira (2004-2019).
Source: Terra i, CIAT, 2019.

The deforestation pressures around the reserve show that despite the existence of protected areas, some with better results than others, there is a progression towards more fragmentation of forest resources in the landscape. The trends of low deforestation within the Reserve are consistent with the views from David Kaimowitz, who is one of the most recognised forest governance experts in Latin America. He underscores the role of local actors and communal reserves to deter deforestation: “the evidence in other countries shows that the protected areas from the State only work in places where the State is able to keep a permanent and real presence. In other areas, one must depend on the efforts of other local actors, especially indigenous and afrodescendants” (Pardo 2019). This highlights the importance of supporting communal lands in Peru to promote forest conservation.

Last, a national expert from the Peruvian Society of Environmental Law points to the institutional weakness present in the Amazon region which in turn hampers the capacity of the decentralisation reforms to facilitate MLG:

At times we observe that the State frequently does not have strong institutions for forest governance. What happens is that we have to go a bit back in time. The State has never had much presence in the Amazon. It is such a vast place where managing

forest resources is complicated, because if you have a Law that establishes guidelines, you need to monitor those, and monitoring is expensive. Therefore, the State has never really allocated much time nor funding to have strong institutions to perform these functions. Actions such as supervision, extension, training, promotion, have always been the missing pieces. Besides this you have to add that the creation of the regional governments is quite recent [...] and to whom forest competences have been transferred to. These are somehow weak governments, receive these very relevant competences but do not have much capacity yet to perform them. From my perspective forest governance has that main challenge, the one of institutions, that the State provides resources to do it properly, sufficient autonomy, strength and support to help them become solid institutions (018-SPDA-05 2014-National).

This quote demonstrates clearly that institutional weakness underpins the State's problems in managing a frontier economy, which coincides with the views of other regional and national stakeholders (020-DEFFS, 044-ARAU, 032-PUCP) (also see Section 3.3). The attempts to reorganise (or transform) State power is seriously limited by the weaknesses of local governments. This can lead to an erosion of State power that ultimately affects natural resources governance. That is part of the dilemma: in such a vast area such as the Amazon, it is logically assumed that the best way to handle resources is through a more active participation of the local tier.

6.2.2 Resources

In Peru, there are contending views on forest policy outcomes. For instance, several actors from the regional government agreed on the restrictions for implementing Forest Concessions. The implementation of Forest Concessions in Law no. 27308 was undermined because actors lacked the experience and budget to build and implement management plans. Small foresters and communities did not have the capacity to manage a Forest Concession, according to an engineer from the Executive Directorate of Forests and Wild Fauna in Ucayali:

I met a lady that started to work with a community (...) she came to inquire if we knew any technical experts. I knew of one that had done a management plan (...) after a while, I ran into the technical expert [he said] when they went to the field, the members of the communities did not know how to write, read [...] the most they could do was to clear a path (...) they did not even have the most basic [things] (020-DEFFS-09 2014-Regional).

The limited resources also affect the monitoring and enforcement of illegal extraction. During a visit to a saw mill in Pucallpa, I discussed with a regional forest expert who was a member of a

Chapter 6

regional research institute. The expert shared an anecdote regarding the controls in place for illegal timber:

The control mechanisms are weak, because in the river only one person is controlling in a small boat (FWNB No. 1 2014-2016).

When asked what was required to make policies more effective to reverse the trend of illegal timber extraction, an expert from the German Technical Cooperation Agency in Ucayali said:

If you look at this from an institutional level, a simple example, you have (...) a handful of institutions, but, how many of them have you seen on the ground? In the territory where you need to act, not at the office. Then, the regional budgets do not allocate the necessary components (...) have you been to the office of the Executive Directorate of Forests and Wild Fauna in Ucayali? (...) how can they be the ones conducting the enforcement³⁵... (045-GIZ-09 2015-Regional).

Then he also added:

We need to distribute [resources] so that the other [offices] are catered for too, but is not only about the office [infrastructure], but also that the people have more capacity, we want the people to have better and more equipment [mostly referring to computers]. Do you know that all the information of forests in the region is saved in just one computer? And if that information is lost? (045-GIZ-09 2015-Regional).

These comments underscore that resources encompass several aspects including funds, infrastructure, equipment and human capital and that they are critical for building State capacity to underpin forest governance. Limited resources restrict the alignment of policies across levels of Government, according to a Unit Director at the Regional Environmental Authority (ARAU) of Ucayali:

If at least the provincial governments had more budget but also capacities, we would work better, because in the end, the regional policies that we implement come from the national environmental policy. Our agendas, our plans come from the national guidelines, and the local (provincial) plans should come from the regional guidelines (044-ARAU-10 2015-Regional).

³⁵ The offices of the Executive Directorate of Forests and Wild Fauna in Ucayali, which I visited during my field work, were quite precarious.

The transfer of functions to the lower tiers of government was not necessarily coupled with the necessary resources to deliver. The Director of Evaluation, Valuation and Financing of the Natural Capital in the Ministry of the Environment in Lima supported the views of previous respondents claiming that:

Now the regional governments have received some functions that the Ministry of Agriculture had before. Although they have received these functions, they have not received everything to fulfil them. They need two fundamental things: budget and personnel.³⁶ But they have not received that, or at least in the degree that they need it. The conditions of the national government are not the same that regional governments have, different budgets, and capacities. It is quite a complex process (016-MINAM).

Budget and personnel are two key missing pieces repeatedly noted by respondents and relevant for making MLG via decentralisation fully operational in the regions. An officer from the Regional Agricultural Directorate also shared his insights on how to make policy more effective. In terms of monitoring deforestation, he mentioned available options to enhance enforcement which are not yet in use:

We have some cooperation agreements [with Brazil] (...) to use this [satellite] technology, but the problem is that we say, we are so poor that we cannot establish here in Ucayali a base that will allow us to use the satellite images (...) to monitor all the area (...) we need to install a station here, train a team of people to manage it, download the information and monitor (005-DRAagri-05 2014-Regional).

There are also efforts for policy innovation that are limited by the existing State capacity. An expert from the Ministry of the Environment in Lima, in reference to the national public investment system and the green investment projects, mentioned:

That policy tool has been launched, but it is still quite sophisticated. It is like when you say: 'I cannot give a tractor to a farmer, but I will give him a single-axle tractor but no gasoline.' We are attempting to make it much more sensible (...) although the door is open to have environmental projects, but it is so complicated to do it, that they did not do it, because they did it with many deficiencies. The Regional Governments have

³⁶ The Regional Government of Ucayali, in the process of updating the Regional Development Plan made consultations with a total of 2,666 stakeholders. In terms of the main bottlenecks in the institutions, a main finding was the limited capacity of public officers. See: GOREU. 2011. "Plan de Desarrollo Regional Concertado 2011 – 2021, del Departamento de Ucayali,." ed. Sub Gerencia de Planificación y Estadística. Pucallpa: Gobierno Regional de Ucayali.

capacities to do public investment projects in infrastructure, health, education, because they have engineers, there are experts. But not in the environmental theme (014-MINAM-05 2014-National).

6.2.3 Control of corruption

In the land of illegal timber, corruption is rampant. There is a covert network (see Section 3.3). It permeates every level of Government as well as various other power structures such as the police, the judiciary and others. Several actors in the region agree on the prevalence of corruption in Ucayali. A regional level expert on forestry and agriculture linked to a regional research institute shared a remarkable example:

The case of the Yarina Lagoon³⁷ is a scandal, because everyone knows, but no one says a word. The police are there waiting to charge a quota, there is the truck, and that is timber that comes from nearby rivers. They arrive there, it is a whole system, always at night there are 3 to 4 small trucks getting loaded. They work all night; they leave for a sawmill. There is an entire chain of payments made to the police, to the National Institute of Natural Resources (INRENA), and its has been like that for 15, 20 years and no one says a word (013-IIAP-05 2014-Regional).

The interviewee also added that:

Before the INRENA was under the authority of Lima [the center], which is now the Executive Directorate of Forests and Wild Fauna in Ucayali and is under the authority of the regional government. This Executive Directorate is in charge of the enforcement, to verify if the timber is coming from concessions, if all the paperwork is in order. This is a gold mine, because constantly they are finding illegal timber and they charge a quota and sometimes overlook what they find. Occasionally they run an operation to be on the news, just to justify they are fulfilling their duties and report as a scandal how much timber was confiscated (013-IIAP-05 2014-Regional).

This example highlights the deep-seated practices of corruption and foremost that the existing capacities of the regional government are not being used to improve forest governance, but rather, to respond to personal interests. Corruption also affects the establishment of the necessary linkages across organisations for multi-level governance to operate. For instance, when

³⁷ The Yarina Lagoon is located in Pucallpa, capital of Ucayali.

inquiring about processes of inter-institutional coordination, the cases where this articulation was working and where it was not, a Regional Councillor from the Regional Council of Ucayali claimed:

I do not think so. Here there is still a lot of disorganisation in all that. Illegal money is working here and the Regional Government cannot fight them, neither can the National [Government]. Illegal mining is a complicated problem. The Local Government does not get involved, the Regional Government wants to do something, but it is a national problem (002-CR-05 2014-Regional).

Other examples from actors in the region continued emphasising the corruption in the regional government and the backdoor deals that undermine State capacity and forest governance:

But the Regional Government, there is where the most corrupt are, yes, that is where the timber extractors are (...) It is like they do not practice what they preach and that abates their credibility. This is what happens, they invite you to a meeting and you think 'I wont go, because I know what he does in private, he has a forest concession over there, buys timber over here and comes to talk to me about conservation (013-IIAP).

The views from national stakeholders about corruption also coincide with the views of regional actors. Some consider that the priority of some regional officers is to capture votes no matter the cost:

You select a politician (a Natural Resources Manager) that wants to capture votes and that is willing to receive them from any businessman that offers them money (032-PUCP-08 2015-National).

Further, the perspective of actors at the national government is that the Regional Government's performance is mixed and that oil palm plays a relevant role in deforestation:

Some regional institutions have shown efficiency and responsibility in administering their territory, while there are others that are promoting, for instance in Ucayali, oil palm in an irresponsible and even criminal way (...) to deforest hundreds of thousands of ha for monocrops, it is a crime against humanity. Of course what you cannot avoid is that farmers cut the forest for their subsistence. It is obvious that they have a right

*to do so, but what is required are State policies to mitigate this deforestation with more sustainable management practices (017-MINAM-05 2014-National).*³⁸

Yet, this respondent also emphasised that the regions are not working alone with regards to their corruption plots. There is involvement of the national sphere as well which also underscores the extent of the covert network:

(...) That is what the regions are doing, but there is still complicity [from the National Government] from the Directorate of Environmental Sustainability of the Ministry of Culture. They have overlooked and approved some environmental impact studies. But mostly it is very local interests which are very influential.

The role of corruption in the oil palm expansion is also recognised by regional actors. A regional level expert on forestry and agriculture linked to a regional research institute asserted that:

*The other conflict that is evident is oil palm which has been promoted by the Government to promote a rural economy. The initial idea was to replace degraded or unproductive pastures for palm. However, in practice, farmers continue with cattle ranching and they are expanding oil palm plantations at the expense of forests (013-IIAP-05 2014-Regional-05 2014-Regional).*³⁹

This example shows the complexity of interventions that seek to provide sustainable options for conservation and agricultural activities such as restoration which most likely does not have the conditions and mechanisms needed to protect expansion in forests. It also shows the weak capacity of the State to make policies effective and to counteract corruption.

There continues to be controversy regarding the expansion of oil palm into forested areas. In this regard, the interviewee said:

If we argue that 'you are promoting oil palm and it is deforesting,' their reply will be 'oil palm is not deforesting, because those areas were already deforested.' It's that simple. Yet, satellite images show otherwise. But the Regional Government tries not to see it this way.

³⁸ An environmental science and conservation news and information site reports on palm oil companies' clearance of primary forests and seizure of indigenous lands in the Peruvian Amazon. See: Mongabay. 2016. "Facing controversy, Peruvian palm oil firm seeks sale of its Amazon rainforest holdings." In *Mongabay Series: Global Palm Oil*.

³⁹ At a global level, from 2001 to 2015 between 22% and 32% of all forest disturbance was related to commodity-driven deforestation. See: Curtis, Philip G., Christy M. Slay, Nancy L. Harris, Alexandra Tyukavina and Matthew C. Hansen. 2018. "Classifying drivers of global forest loss." *Science* 361(6407):1108-1111.

It sees it as an opportunity for rural people, to have licit income, but there is a high price paid for forest loss (013- IIAP).⁴⁰

The examples shared beforehand portray the vision of national and regional actors. But what is the perspective of local actors and especially of the oil palm producers? Is their view of oil palm production in some way radicalised? Is it more about the use given to this crop than the crop *per se*? During a local committee of oil palm producers it was clear that there is a strong social dimension to oil palm production in Ucayali. Many of the small producers used to grow coca before and agriculture is seen as the only viable alternative. Despite the option of using forests in a sustainable manner, it is not perceived by locals as something profitable or possible. There was agreement by several small oil palm producers on the comments mentioned by their peers, such as: “they are not going to give me a concession,” or “it is only the rich who have the required machinery” (FWNB No. 1 2014-2016). A leader in the group emphasised that:

This was our alternative to eradicate coca. We are not entering the forest to extract timber, much less to the primary forest. A new plan of oil palm for 2016 will require to only grow the crop in areas already degraded or deforested (FWNB No. 1 2014-2016)

In conditions where corruption and illegality seem to be so rooted, what are the options then from the perspective of actors at various levels of Government? When discussing how to eliminate illegality, an expert from the German Technical Cooperation Agency in Ucayali said:

I do not think it is impossible, difficult yes, but I do not think that it is impossible. Today we are doing worse than 12 years ago and it should be the other way around, or at least a bit better, and there are more institutions now, there is the High Commissioner for Illegal Timber Extraction (045-GIZ-09 2015-Regional).

Despite the critiques about the operation of Forest Concessions (see Section 6.2.2), there seemed to have been an attempt to respond to previous corrupt practices linked to forest management and extraction as notes the quote below. Therefore, in spite of the setbacks in its implementation, the policy can be said to have made progress with respect to indicating forest management. This is what a regional level expert on forestry and agriculture from a regional research institute said:

Before, the Forest Concessions were...well, there were no concessions, they were simply licenses, a license for 1,000 ha. All the entrepreneurs here, all the timber

⁴⁰ An environmental science and conservation news and information site underscores that “the main causes of deforestation in [Ucayali] are small- and medium-scale ranching, large-scale oil palm cultivation and gold mining.” See: Sierra Praeli, Yvette. 16 February 2018. “Deforestation in the Peruvian Amazon dropped 13 percent in 2017.”

extractors processed licenses for 1,000 ha, using different names, the cousin, the friend, the uncle [then] they could have about 10,000, 20,000 ha but under that policy instrument, given under different names. That was the mechanism, then they will enter the forest with an extraction license for 1,000 ha, but in reality they were around 10,000 [ha] (013-IIAP-05 2014-Regional-05 2014-Regional).

The implementation also shows the challenges in transitioning timber users and extractors from informal to formal use of natural resources. As noted by a national officer:

As there were too many people in the forest, Forest Concessions for small producers was prioritised. Many of them were informal, and what the mechanism aimed for was to help them become formal. But of course, that formality does not happen from one day to the other, when we are used to doing things differently. This is why many of them have lost their concessions (017-MINAM-05 2014-National).

The experience with Forest Concessions notes that building a strong State capacity on the ground is a relevant prerequisite to make progress in the processes of formalisation and overall policy implementation.

6.3 Steering

There are several steering strategies (see Chapter 1) that have been applied in Peru in the context of decentralisation to support State capacity development (among other aims). These strategies underpinned the creation (and in some cases the operation as well) of policies such as Decentralisation, the Ecological Economic Zoning, and the Regional Development Plan, as well as the creation of institutions such as the Interregional Amazonian Council (CIAM). The process of creating and deploying these strategies is presented in this subsection.

The Central Government's steering strategy has been to incorporate participatory processes in national regulation. A relevant example is the National Regulation for Ecological Economic Zoning, key for the Forest Law, and which involved a process of consultation and participation. An officer of the Territorial Planning Unit of Ucayali explained that:

In 2004, the National Government declared a regulation for the Ecological Economic Zoning. Although there were some previous national and regional studies, we did not have a framework, a regulation which [could] make a participatory linkage. The National Government (...) foresees the need to implement zoning studies in the region to have a more specific diagnosis of the territory and be able to plan development policies. Because before planning happened without really knowing

the characteristics, strengths and limitations of the territory. This is why now you can see that the usage of the territory is not the right one (...) now the normative framework makes mandatory that it is participatory. It is not that the Regional Government designs a study and enacts policies [saying] 'here, this is banned, this has to be done.' No there has to be participation, from the population and the public and private organisations. Therefore it is a collaborative process (001-OT-05 2014-Regional).

A steering strategy mentioned by the Regional Government is the Regional Joint Development Plan. When discussing regional policies, the same officer shared that:

The policies are being developed through the offices of all the areas that have the competence. Of course, as I said, we try to articulate all the functions with a development plan (...) there is no other document that is the base. But if your activities are not framed within that Regional Joint Development Plan, then they are not well sustained (...) [the aim of framing is] that the offices do not plan activities taking their own way. That development plan frames you, obviously in a general way (...) because the Institutional Development Plan (see Section 1.3.2) is more specific (001-OT-05 2014-Regional).

The Decentralisation Law (see Section 1.3.2), establishes that Regional and Local Governments are required to design their development plans in a concerted way (GOREU 2011). As reported by the Regional Government, the participatory process included 52 workshops involving a total of 2,666 stakeholders (GOREU 2011). Within the Regional Joint Development Plan of Ucayali there are several pillars, which are relevant for the implementation of Forest Policies, these are economy and competitiveness; territorial development and infrastructure and; natural resources and the environment (GOREU 2011). Although the Laws contain guidelines, it is another matter whether there is the capacity within the Regional Governments to mainstream sound environmental recommendations into their plans (design) and actions in the territory (implementation) (FWNB No. 1 2014-2016).

Despite decentralisation, funding allocation remains a national government strategy which has a strong hierarchical approach. As mentioned in Section 6.2.2, this has limited the State capacity and operations on the ground. Providing an insiders view, a Regional Councillor from the Regional Council of Ucayali shared that:

The National Government has a way, an economic power. The fiscal decentralization has not taken place yet. All the regional and local governments depend on the

Chapter 6

Ministry of Economy and Finances and try to keep good relationships (002-CR-05 2014-Regional).

As mentioned by the Director of Evaluation, Valuation and Financing of the Natural Capital:

Even though we are an Amazon country, I believe it [represents] 75% of the territory, the truth is that all decisions are made on the Coast [which is where Lima, the capital, is located]. The jungle [the Amazon] for us is too far (016-MINAM).

Steering is recognised by regional actors as fundamental for making norms more effective. There are other examples of steering strategies at the regional level such as consultation and socialisation, as shared by a Regional Councillor from the Regional Council of Ucayali:

When we will enact a norm, it is commonplace to ask for people's opinions to socialise the topic, to see if they agree with the norm, because a norm that is not socialised stays there and nothing happens (002-CR-05 2014-Regional).

In reference to the role of steering in setting up new institutions, as mentioned in the beginning of this section, there were two Laws that served as a steering mechanism to set the ground for the creation of the Interregional Amazonian Council (CIAM). These Laws promoted high level consultation mechanisms for regional decision makers. According to an officer of the Territorial Planning Unit of Ucayali:

The legal basis of CIAM is the Organic Law of the Regional Governments and the Law of Incentives for the Establishment of Regions. Annually the [regional] presidents meet to establish general policies and a common vision (...) for the Amazon (001-OT-05 2014-Regional).

Some national officers acknowledge cases where a command and control (hierarchical) approach prevailed over steering. The following is part of the views of an advisor to the deputy Minister of Strategic Development of Natural Resources:

The Amazon requires a degree of infrastructure to develop, but it cannot be that everyone decides whenever they want, without even discussing with the locals and plan things beforehand (017 MINAM).

This command and control approach is confirmed by a regional actor who provides an example of hierarchical rather than steering approaches, when discussing approaches for natural resources management. An expert from the German Technical Cooperation Agency in Ucayali said:

The national level considers that they 'own the truth' and then you have a difficulty for the regional and the national levels to be able to converge. We have shared several times valuable experiences from the territory to the national level, that could be considered as an input for policy making or for lessons learned to be scaled up. They finally tell you 'yes' but later on they do otherwise, I do not know why (...) we need to see that the strength of the decisions is not so dependent from the desk in the national level. Because if you hold a meeting between the national and regional levels, the regional level is very involved, in the practice, the experience, in applying knowledge to reality, in giving its opinions, but the desk [referring to the national level] says no according to the theory (...) then people distance themselves from the national level and continue implementing in the regions with their flawed experiences (045-GIZ-09 2015-Regional).

When command and control practices prevail over steering, these could limit the operationalisation of multi-level governance as well as building State capacity. They prevent the dispersion of authoritative decision making across multiple territorial levels which is the aim of decentralisation. This subsequently impedes the reorganisation of State power for forest governance.⁴¹ A good example of this comes from the views shared by local indigenous leaders from a focus group exercise:

Interviewer: Do you consider it appropriate that decisions are taken in Lima?

Respondents: No, they should not be made that way. When there is centralism it sometimes causes harm. If we can decide on what we can do in our land it would be preferable, but when things are imposed it reduces those possibilities of being more productive.

For example, with the authorities, we are going to do this. Then [we are told], no, that cannot be done. And perhaps within the capacities we have here, we could improve agriculture, but if they are going to impose from above, with centralism, very little support will come to us, it will never get here appropriately. This is why centralism is not good. Perhaps the regional level, but not even the region remembers us (...) so what can we do.

Respondents: we do not want it to come from Lima, we would like it to come from the region, but the region is not interested in the rural area either. It is not interested, therefore, we do not know what to prefer. If we take decisions on our own, it won't work either, because we cannot make a complaint. Once someone told me: 'my idea is that there is work

⁴¹ The Regional Government of Ucayali, in the process of updating the Regional Development Plan made consultations with a total of 2,666 stakeholders. In terms of the main bottlenecks in the institutions, a main finding was the weak participation of the population and public officers in the decentralization process. See: GOREU. 2011. "Plan de Desarrollo Regional Concertado 2011 – 2021, del Departamento de Ucayali,," ed. Sub Gerencia de Planificación y Estadística. Pucallpa: Gobierno Regional de Ucayali.

and people in all this land (...) but it is not possible (...),’ then our decisions are always to receive from the central State, even if we dislike it (038-Focus Group Cunchuri -10 2015).

These command and control practices also impede the process of linking national policies with the lower tiers of government. It is interesting to contrast the previous view of a regional officer, with that of a national officer who claims quite the opposite:

As a Ministry, we have overarching policies, we have the Biological Diversity Strategy and Climate Change, which are the ones that guide the national priorities, and the idea is that the Regional Governments can look to those policies, which are not restrictive, they are quite open. But I consider we are still failing to make that link...there are too many regions...and the Regional Governments are also a bit complicated (...) the dilemma is how to make that link (016-MINAM).

These linkages are pathways to make multi-level governance concrete, but it requires more awareness and inclusion by the national governments of the regional and local governments, and more openness from the latter to the national level.

There are other policy fronts on which the Government did not consider utilising steering mechanisms. For example, in Peru, a novel policy approach was budgeting by results⁴² which aimed to promote a more efficient use of public funding as part of the budgetary programmes.⁴³ Yet this strategy or policy innovation, coming from the Centre (Lima), encountered resistance in the region that affected its implementation. An expert from the German Technical Cooperation Agency in Ucayali said:

CEPLAN⁴⁴ and the Ministries are looking to its implementation in the regions and we are ready to start creating and/or strengthening the technical capacities, but we also require the engagement of the political leadership. If there is political will it needs to be supported with budget and the fulfilment of what is planned, so that the complementarity between institutional goals can help achieve a common goal (045-GIZ-09 2015-Regional).

⁴² In Peru this is known as *presupuesto por resultados (PpR)*, which is a public administration strategy that links the allocation of budget to goods and services and to results. See: (<https://www.mef.gob.pe/es/presupuesto-por-resultados/ique-es-ppr>)

⁴³ The Regional Government of Ucayali, in the process of updating the Regional Development Plan found in terms of the main bottlenecks in the institutions, the weak modernization of public institutions without management towards budget by results. See: GOREU. 2011. "Plan de Desarrollo Regional Concertado 2011 – 2021, del Departamento de Ucayali,." ed. Sub Gerencia de Planificación y Estadística. Pucallpa: Gobierno Regional de Ucayali.

⁴⁴ National Center for Strategic Planning of Peru (Centro Nacional de Planeamiento Estratégico – CEPLAN)

The comment above notes that the establishment of State capacity is not only a technical matter or one that depends on resources, but it is also a process that requires political will and involvement from the leadership.

The failure to win over the politicians was a barrier to the implementation of the Forest Policy using MLG (see Section 7.6). When enquiries were made concerning whether the policy of budgeting by results could serve as a steering mechanism to address the schisms between institutions, who claimed:

I do not think that a budget by results (per se) is the solution. You need to have some leadership, someone or various [actors] need to be the leader or leaders of the processes. If you do not have that you are lost, even if you have money, even if you have the budget by results, because of this reason: if you have the funding, perhaps you will distribute it in a range of things, perhaps half for some, and half for others. Then there is a dispersion of the efforts and a reduction of the effects. What is required is an elaborated programme with the possibility of co-funding to promote complementarity. Then the budget by results is part of the solution, but the attitudes in the institutions need to be improved and in the people, the values, collaboration, trust, transparency, complementarity, leadership and the search of support for the common good (045-GIZ-09 2015-Regional).

This response notes the relevance of building local and regional leadership networks as a way of steering to facilitate policy implementation. Furthermore, when considering the link between the policy of budgeting by results and the implementation of the forest policy, the former president of the Inter Regional Amazon Council considered that the former has been poorly implemented and hence has not achieved much:

From the forests side (...) it had important projects to fight deforestation (...) [yet] what the national institutions did was to plan only up to 'their level', and downwards [to the other tiers of Government] there was no planning or resources (...) they [the regional and local governments] were left lame and without a hand (029-CIAM-08 2015-National).

Other evidence such as public policy analysis, points to the fact that budgeting by results requires other enabling conditions to promote steering and enhance coordination. Researchers from the InterAmerican Development Bank looked at this public management tool, and although incipient at the time of their evaluation in Peru, one general conclusion for Latin America was that:

the reforms implemented did not consider the ensemble of institutions and processes involved (...) and therefore, they do not foresee the necessary linkages between the pillars of the management cycle. This has led to the creation of isolated mechanisms and tools that compete between each other and lack cohesion (García Lopez and García Moreno 2010, p. 85-86).

6.4 Distribution of authority and competences

The Decentralisation Law (see Section 1.3.2) aimed to transfer more power and autonomy to the regions. However, in forest governance, regional authorities report that they are not participating in a critical step which is intervention planning. For instance, an officer from the Regional Office for Natural Resources mentioned that:

We do [the enforcement of forest resources]. But when there is already a problem, as we have now with oil palm, that some areas were sold and planted with oil palm, only then, they [National Government] think about our office and request a report. Even now, there are projects under evaluation and they [National Government] have told us that we should not do the environmental impact evaluation. We consider this a bit mad and we submitted again a request to the Presidency of the Council of Ministers about the transfer of functions on evaluation and enforcement. However, the Agency for Environmental Assessment and Enforcement, which is in the central level, is requesting us to do enforcement of actions related to oil palm (003-GRN-05 2014-Regional).

This report from the ground underscores the existing uneven power relations across levels of governance and how they affect enforcement activities. It portrays that in the case of Peru, MLG represents a system of continuous negotiation among nested governments at several territorial tiers (see Section 4.2) with uneven power relations.

This contrasts with the views of experts from the national level who claim there is a role for regional governments in approving management plans. A national expert from the Peruvian Society of Environmental Law said that:

In Peru, who makes the norms is the National [Government], there is no doubt. Who grants the rights and approves management plans is the Regional Government, who supervises and enforces, is national, those are the rules, or in other words, that is the decision of the State. The Local Government has very few or almost no competences

on forests, except if they manage a local forest. For that they need to process a permission with the Regional [Government] (018-SPDA-05 2014-National).

And this underscores an existing weakness, as if enforcement and supervision are to be strengthened involvement from the local tiers of Government will be required, as will necessary State capacity to perform those roles.

In the region, there is also a perception that command and control (hierarchical) relations could obstruct current efforts for institutional innovation through the Regional Environmental Authority of Ucayali (ARAU) to enhance coordination. ARAU aims to integrate environmental management at the regional level (see Section 1.3.2). A regional level expert on forestry and agriculture from a regional research institute shared their point of view:

What happens is that since [ARAU] originates from the Regional Government, the National Government cares a lot about prestige (013-IIAP-05 2014-Regional).

In respect to ARAU a national level expert mentioned:

ARAU aimed to have the forest sector to make forest management stronger. To address the challenges of representativity and participation it had a public-private directory. However, there are setbacks, as forests were removed from ARAU (039-EI-06 2019-National).

When an anonymous regional expert spoke regarding these changes in the ARAU he explained that:

They removed the forest topic from ARAU and created a Regional Forest Directorate with the Regional Decree No. 003-2019-GRU-CR. This happened in part because SERFOR with support from the United States Government wants to give more weight to the forests. I personally disagree with this change but many times these are political decisions. With this change they receive more budget and transfers from the Central Government (008-ARA-08 2014-Regional).

The quotes above highlight some of the obstacles that ARAU faced to integrate environmental management in the region. MLG requires not only the distribution of authority and competences across levels of Government, but also the articulation between levels and actors within those levels. When discussing key sectors with which coordination should happen for forest governance, a national expert from the Peruvian Society of Environmental Law shared their views:

Within the environmental sector, first the highest risk of deforestation is migratory agriculture,⁴⁵ but that has a lot to do with....rural property, in other words with people that go to make their chacras and then stay to live there. Therefore, there has to be strong integration within housingor the same regional government that now is in charge of formalising rural property so that they do not ... build rural property where there is a forest zoning. They have to discuss that first and then in reference to forestry they need to speak between various levels. The regional level is the one that has the competence, but the national level dictates the rules and OSINFOR supervises. That triangulation is not flowing well yet, it is redundant. And after, there are other sectors you need to look at, mining not as much, there is no mining in the jungle, there is not, there is small mining of which the Regional Government is in charge, they have it and they do not do it well. Anyway, they have to talk, even within the Regional Government, but especially with the oil [sector], which is of the National Government (018-SPDA-05 2014-National).

The quote above illustrates the need for cross-level as well as cross-sector dialogue and integration to address the main causes of deforestation. Now, on the progress made in the distribution of authority and competences and the agreements between sectors, these are also constrained by two main aspects: decision making and the resources transferred to the regions, which in the end comes down to State capacity. In some ways, Lima remains in control of critical steps of procedures related to policy planning and implementation in the regions. This is the case for regional development projects. As noted by an officer from the Regional Agricultural Directorate:

All the projects that we develop must have an environmental impact study (...) then the studies or the proposals we do need to be sent to Lima for approval (005-DRAagri-05 2014-Regional).

Forest Concessions also offer a relevant example of this dynamic of Lima retaining control of key decisions:

The granting of Forest Concessions was a national matter, it was transferred to the regions after they were assigned. Therefore, it [the process of defining who to

⁴⁵ The High Commissioner for Illegal Timber Extraction noted that the main causes of deforestation are land use change, migrant agriculture, mining, illicit crops and the extraction and use of timber. He underscored the most common cause was migrant agriculture. See: El Comercio. 2015. "La agricultura migratoria es la mayor causa de deforestación. Entrevista a César Fourment, alto comisionado para asuntos de lucha contra la tala ilegal, sobre la defensa de los bosques." In *El Comercio*.

allocate them to] was not something executed in the regions (029-CIAM-08 2015-National).

Further, from the regions, there is a perception that although decentralisation is taking place, there is interest from the Central Government retaining power (see also Section 6.3). An officer of the Territorial Planning Unit of Ucayali shared:

The topic of the decentralisation of the functions from the State is another inconvenience, to a certain degree. The State is transferring us functions, more responsibilities. But those functions need to come with resources, I mean human, resource strengthening, infrastructure, so that you can carry out those functions. The Central Government wants us to always depend in a certain way, there is not an effective transfer (001-OT-05 2014-Regional).

This notes that the distribution of authority and competences must go hand in hand with key elements such as funding, human resources and infrastructure that are part of the backbone of State capacity. Another key aspect to consider in the distribution and transfer of authority to the regions, is how to allocate competences to improve forest governance. When discussing buffer zones⁴⁶ with a regional officer in charge of the Communal Reserve *El Sira*, they described those as areas to mitigate the impacts towards the reserve. Yet, this management requires a good articulation across scales as:

There in the buffer zones, the competent authorities, are national (023-SERNANP-09 2014-Regional).

The quote above notes the challenges faced by MLG to distribute competences across tiers of government, in a way that allows the proper coordination between authorities.

6.5 Interdependence and non-State actors

There is a growing role for non-State actors in Ucayali, who participate and support forest governance in different ways. These could be referred to as the ‘sprouts of the new governance’. When asked about the main existing agreements or collaborations with other organisations for natural resource management, an officer of the Territorial Planning Unit of Ucayali said:

⁴⁶ Buffer zones are located next to the frontier of protected areas.

At this moment there is a lot of cooperation with (...) USAID's Programme of Forestry Initiative,⁴⁷ which is the programme of forest investment of the U.S. Government (...) they are working at the moment in a monitoring system, a forest inventory system and they are supporting not only the [regional] government of Ucayali, but also other [regional] governments in the Amazon (001-OT-05 2014-Regional).

One of the main questions that arises with the involvement of such actors in the region is how aligned are their actions with the national policies that frame forest governance such as the Forest Law? Are they supporting State transformation or erosion? Are they filling a gap that neither the National nor Regional Governments are properly fulfilling? Can they lead to a coordination dilemma caused by the involvement of too many actors? Some other arguments included in this section provide various perspectives to these queries.

The same regional officer as above also mentioned that:

The Ministry of the Environment is linked to [the topic of] resources and zoning. The last organisation that has come to the region is GIZ, the German Technical Cooperation. They are working with the Regional Government on the contribution to the environmental goals of Peru (...) they are also collaborating with an NGO called Forests of Peru⁴⁸ (...) we are in the process of creating a Regional Environmental Authority of Ucayali, so these organisations are contributing with trainings and suggesting organisational structures (...) there is an NGO called Pronaturaleza that is also collaborating with the Regional Government (...) in forestry (...) running workshops to identify the problems of illegal logging (...) and to promote that this reserve called Sierra Divisor changes its status and becomes a National Park (001-OT-05 2014-Regional).

This comment notes that the involvement of these actors has been relevant to respond to several goals from an MLG perspective, ranging from the contribution to national environmental goals, to the design and establishment of regional environmental organisations. When asked again to highlight organisations with which they had agreements and collaborations they mentioned:

We have with the National Commission for the Development and Life without Drugs (DEVIDA) for titling (...) and we have agreements with private institutions, for example, the Association for the Development of the Peruvian Amazon⁴⁹ that is working with native communities (...) we have agreements with private companies, oil companies that

⁴⁷ In Spanish it is the "Programma de Iniciativa Forestal (PI-FIP)".

⁴⁸ In Spanish it is known as "Peru Bosques".

⁴⁹ In Spanish it is known as "La Asociación de Desarrollo de la Amazonía Peruana".

support the development of their sector. [Then he emphasised] the presence of international organisations creates this synergy because it brings together different sectors with respect to a specific topic (001-OT-05 2014-Regional).

As the quotes below will demonstrate, there is agreement on the ground that the presence of several non-State actors builds synergies that support coordination between various sectors. There is also further evidence of the growing role of non-State actors in the region leading initiatives for forest governance or, in other words, promoting the transformation of State capacity. As indicated by a member of a national NGO that works in Ucayali:

The Committee for Forest Management⁵⁰ has been an initiative of [the NGO] Pronaturaleza, the Executive Directorate of Forests and Wild Fauna in Ucayali is also part of it, they participate in the interventions (...) conflict resolution between communities, all these types of actions they do as a committee (024-PRONAT-09 2014-Regional).

Besides the Committee for Forest Management, other regional instances of forest planning and management include the Concertation Roundtable for the Regional Forest Development:⁵¹

These influence the decisions of the Regional Governments. NGOs provide support to the Regional Government on the surveillance of illegal timber and work in buffer zones of protected areas (024-PRONAT-09 2014-Regional).

Furthermore, these quotes show non-State actors engaging directly with State actors in forest monitoring and surveillance:

As a Directorate [Executive Directorate of Forests and Wild Fauna in Ucayali], if they go to make inspections or if they know of a report of illegal timber extraction or invasions, or a problem with forest fires, deforestation, the Directorate participates with the Committee for Forest Management (...) as a committee it could also establish agreements for territorial reserves with a regional indigenous organisation [called ORAU], which could also support in some of the functions that they have (...) for example the control posts within the reserves. They are not called park or forest rangers, but rather, they are called agents of protection (...) We support the activities of the National Service of Protected Areas by the State (SERNANP) (...) if they are within our own

⁵⁰ Comité de Gestión de Bosques

⁵¹ Mesa de Concertación para el Desarrollo Forestal Regional

objectives [of the NGO Pronaturaleza], which they generally are, as they work on conservation [as well] (024-PRONAT-09 2014-Regional).

This is an interesting example of MLG between the regional and local level joining forces between different State and non-State actors to strengthen one of the most critical and weakest dimensions in forest governance: forest monitoring. The management of regional communal reserves is another good example of the positive and growing collaborations between State and non-State actors. For this purpose, some of the main collaboration of SERNANP includes:

There is the project Peru Bosques of USAID, there is GIZ and most recently there is the Institute for the Common Good,⁵² with whom we will do conservation work, especially in the buffer zones and with the INIA⁵³ as well (023-SERNANP-09 2014-Regional).

6.6 Coordination of MLG across policy sectors

As mentioned in Section (4.2), both from a theoretical and empirical perspective, coordination is a critical component of MLG given the decentralisation reforms. For decentralisation in Peru, coordination is described as “scarce, difficult, expensive and ineffective” (SGP 2012, p. 16). It is perhaps one of the most noted bottlenecks, as for example, institutions have limited coordination of their actions responding to the Regional Joint Development Plans (paraphrased from GOREU 2012).

When asked about coordination between institutions to manage natural resources in the territory, an officer from the Regional Agricultural Directorate mentioned:

We do agree with various institutions on different topics, either private or public [institutions], (...) but many of these relationships are more because of the people (...) sometimes the institutional [dimension] is limiting, it is about the degree of relationships that you have, what has more relevance (...) many relationships are not institutional because institutions are a problem (...) [they are a problem because] there is no permanence of the Directors (...) decisions are more of a personal than of an institutional nature (...) in reality integration is operating is because of the people (005-DRAagri-05 2014-Regional).

⁵² Instituto del Bien Común (IBC – by its acronym in Spanish) is a Peruvian civil association working with rural communities based in Lima.

⁵³ National Institute for Agricultural Innovation (INIA – by its acronym in Spanish), headquartered in Lima.

This comment notes the weak institutional capacity in the region and the role that inter-organisational and personal networks play in the frontier (see Section 3.3) where institutional fragmentation is present. From the view of a national actor who was at the time an advisor to the deputy Minister of Strategic Development of Natural Resources:

The idea is that in a territory such as a region or department, they can articulate the agendas, then everyone needs to have dialogue, but that is not happening... [they will say], 'oh no, that is a topic of the environmental agenda [so] that has nothing to do with me' (017 MINAM).

This quote also notes the weak coordination across sectors in the various tiers of Government which can actually accentuate the coordination dilemma (see Section 4.2), as sectors are unaware of the spill overs that their policies create in other sectors. For the Regional Environmental Authority of Ucayali (ARAU), and their role in serving as an institutional mechanism for enhancing coordination (see Section 1.3.2), the Director of Evaluation, Valuation and Financing of the Natural Capital in the Ministry of the Environment in Lima said:

I think that the ARAs⁵⁴ are an interesting proposal [for integrating sector and natural resources management], because it shows, for one thing, how the National Government sees things, and for another, how regional governments see things. I think that the regions see the interaction between resources as very important for them, and at the national level, we do not follow that logic, we do not see that relationship in that way. We have dreamed that the logic of the ARAs would reach the National Government and that would definitively strengthen the Ministry of the Environment (016-MINAM).

This quote also notes that the national and regional governments have divergent approaches on how to articulate the work on natural resources. Therefore, the integration across scales is not necessarily harmonised under the same vision.

Yet, some in the region saw that the national government did want to integrate various sectors. For instance, when asked about the policies or mechanisms supporting the synergy or integration between various themes and sectors, an officer of the Territorial Planning Unit of Ucayali mentioned:

⁵⁴ There are Environmental Regional Authorities (ARA by its acronym in Spanish) in each department in the Amazon.

At the regional level, I think there is not. The Ministry of the Environment is attempting to integrate that, but it is a process, it is not immediate, because sometimes a Ministry, a division, have a function, and suddenly trying to organise that from one day to the next is not possible. This is what seems to be missing and is what the ARAU aims to (001-OT-05 2014-Regional).

This quote also refers to the required State capacity to respond to certain functions that underpin coordination, which require time and due process to be properly established. Furthermore, the reference to the need for strong integration across levels and between actors also draws attention to strategies to address the coordination dilemma in MLG (see Section 4.2 and 6.4). A national expert, reflected on how the new Forest Law will be operationalised:

In theory, if I were the Regional Government, what I would say is: 'ok, let's divide the work a bit, no? I have all these competences but you will need to send me deconcentrated units depending on in which cities and areas there is more management to be done.' But for example, the municipalities do not have many competences on natural resources (018-SPDA-05 2014-National).

There has been an evolution of public administration in Peru from a focus on competences to processes. The National Policy for the Modernisation of Public Policy until 2021 notes this change as the State and government policies focus on processes for producing goods and services (SGP 2012). According to the views from an expert from the Ministry of the Environment in Lima:

Public Administration is now guided by processes. Before it used to be by functions and competences. 'Now we are coordinating with other sectors such as Production, Forest and Policy Directorate. We are constantly working with them, because we share competences. Before it was more about 'what will you take away from me, what will I take from you, I do this, I do more than you do'. Now everything is coordinated, we coordinate the workshops, we confirm the documents...' (014-MINAM-05 2014-National).

Speaking in a rather low voice they also shared a recent experience of creating a coordination mechanism for marine resources with a focus on processes. There was resistance between sectors on implementing this approach:

From the Ministry of the Environment, we promoted the creation of a Multisectoral Commission of Environmental Management. It was by mandate, a supreme decree (...) some were opposing its ecosystemic emphasis, as well as the cooperation between sectors and the [public administration] leadership based on processes (014-MINAM-05 2014-National).

There is also an acknowledgement from those in the region of the need to collaborate with other sectors underscoring the increased interdependence leading to stronger governance (see Section 4.2). As noted by an officer from the Regional Agricultural Directorate:

There is some work that we do under agreements with the Ministry of Agriculture (...) any task that requires coordination we do it through [interinstitutional] agreements (...) we have an agreement with the Ministry of Commerce. We attempt to articulate with all of them. We do not work independently because we would not have the resources (005-DRAagri-05 2014-Regional).

This highlights the role of cooperation as a compensation mechanism (for example of the absence of resources), in order to strengthen State capacity.

6.7 Discussion and Conclusions

This chapter suggests that interdependence is at the core of multi-level governance. Interdependence seen from two main angles: sharing of resources and collaboration. Regarding the key question posed at the beginning of this chapter about State capacity, are we witnessing erosion or transformation of State Capacity? The interdependence dynamics taking place are leading to an erosion of State Capacity in Ucayali. Decentralisation aimed to transfer more power and autonomy to the regions. Despite the attempts to ‘transform’ the State capacity at the regional and local levels, the process is left midway through, with severe administrative and resource limitations compounded by corruption and the unclear distribution of authority and competences. There is low interdependence leading to weaker forest governance (Bache 2007). There was also a partial transfer of functions from the centre to the regions, which limits enforcement of forest policy in the region. It seems as if the National Government is ‘keeping the brakes on’, limiting the extent of any transformation. The potential for using the processes of multi-level governance to promote and establish real transformation and increase capacity is not being realised. The underlying conundrum remains, how much redistribution of authority, resources and competences has a real “impact on the redistribution of power” (Bache 2007). And further, how this redistribution of power impacts on deforestation trends.

Although there is evidence of significant change in Forest Policy (for example a progression from licenses to Forest Concessions and from large Forest Concessions to Local Forests, see Sections 1.3.3, 6.2.1 and 6.2.3), weak State capacity and corruption limit progress at the regional and local levels towards achieving better forest management and fair distribution of benefits. This happens because resources and some critical decisions lie with the national government while local actors depend on their cooperation and resources from the centre to act.

Chapter 6

As Bache (2007) noted, resource dependencies are the key variable in shaping policy outcomes in MLG. The reports from the ground mention that the transfer of financial resources to the region is limited. The most frequent aspects mentioned as missing in the effective transfer of authority and competences to the region are budget and personnel. Further, there are other basic and critical factors undermining the implementation of the Forest Law; for example, the verification process prior to the approval of forest management plans does not weed out those that did not comply with the minimum requirements. Therefore, budget allocation is the main hierarchical strategy used by the national government to restrict regional and local governments' capacity in Ucayali. This contrasts with other case studies where the multi-level governance budget is integral to the strategies for strengthening regions. For example, as it was indicated by Bache (2007) when reflecting on the relevance of multi-level governance in Britain, "English regions have undoubtedly been strengthened in the past two decades and there is evidence that the structural funds have played an important role in this." Furthermore, taking Bache (2007) as an analytical reference point for this case study, when linking decentralisation and forest policies to MLG, the key issue is whether the decentralisation approach to building State capacity and promoting MLG across policy sectors is "redistributing resources in their [the regions] favour." On this criterion, MLG in Peru is precarious. Funding allocations remain a strong management strategy from the national government. But, as Fairbrass and Jordan (2004, p. 151-152) note, the common practice is:

States intervene to tighten or regain their grip on subnational actors. By way of an example, in the sphere of regional policy and structural funding, the UK central administration can maintain control over the impact on public expenditure because it holds the purse strings of subnational government.

In other words, the State acts as an 'extended gatekeeper' at the policy implementation stage, thereby undermining any shift to MLG and to having real State capacity.

Yet the evidence in this case study also showed change bringing forth new balance. The implementation of policies in a context of multi-level governance relies on a complex network of actors at the different tiers of government and on the interdependence between State actors and non-State actors. While State actors are still involved in forest management in the regions, there are increasingly more non-State actors involved in forest governance (Bache and Flinders 2004a). If non-State actors are properly articulated they can be key allies to improve cross-sector and cross-level coordination. It can also help to reduce the caveats of limited coordination on the ground due to decentralisation with a focus on a sectoral approach. A growing interdependence between governments and nongovernmental actors at the regional and local levels is an indicator

of a burgeoning MLG. This most likely will lead to a “changing role of the State in steering and coordinating networks” (Rhodes 2017b). Even more, it can also be conducive to different approaches used by the State to implement policies, where the involvement of non-State actors can become more relevant to fulfil policy goals. Therefore, interdependence complements State capacity. Yet, it will require more coordination to prevent the duplication of actions of various actors working towards similar objectives. This growing interdependence also underscores the ways in which multi-level governance is interrelated with network governance, a topic returned to (see Chapter 1 and Chapter 9) when discussing both network governance and the frontier economy.

Within the multi-level governance processes taking place in Peru, there is evidence of a changing role of the State in its application of metagovernance strategies (hierarchical, markets, networks) in the context of MLG. Various strategies were used by Central Government as well as by the Regional Government, such as norm consultation, participation and concertation processes. Norm consultation and participation consist of informing the constituency of upcoming changes to national laws and policies and collecting feedback for review of said laws. The concertation processes consist of several rounds of consultations, roundtables and workshops to build a concerted policy, which was the case of the Regional Joint Development Plan and the National Regulation for Ecological Economic Zoning. For the latter, concertation was a critical step, as one of the main outcomes of the zoning is to determine land use and this requires a social agreement (see Chapter 1). Yet, the results of this chapter also show that there are gaps in State capacity both in the design and implementation of these processes.

Furthermore, findings also show that steering should move beyond policy consultation and sharing to more tangible opportunities of collaboration and participation. An example of a move in this direction is the adoption of recommendations from the lower tiers that can become policy actions or strategies. Despite the efforts described in the paragraph above, there is still a gap to fill for decentralisation to become a means to empower (or transform) regional and local governments. There is a need to address challenges related to allocation of authority, resources and competences, distribution of power and coordination to be conducive of State transformation. Some command and control practices remain which limit linking national policies with the lower tiers of government. A two-way engagement is required, meaning not only from the national level to the regions, but also from the regions to the national level (openness).

In this respect, regional stakeholders referred to *participation* rather than *governance* (Bache 2007) in decision making processes. In their own words: “we need to see that the strength of the decisions is not so dependent on the desk at the national level (045-GIZ-09 2015-Regional).” Lima

Chapter 6

remains in control of key steps for procedures related to policy planning and implementation in the regions. These dynamics echo the insight of Fairbrass and Jordan (2004, p. 148) on the complexity of environmental governance: “this complicated, contested, and evolving distribution of authority and competences is one of the most intriguing features of EU environmental governance” (Bache and Flinders 2004a, p. 148). Nevertheless, MLG requires engagement with greater influence in the outcomes (transition from *participation* to *governance*) to promote ownership as an important element of effective implementation.

Part of the dilemma is that in such a vast area as the Amazon it is logically assumed that the best way to handle resources is through the more active participation of the local tier. Yet the implementation issues in Local Forests show that MLG and new models of forest governance although an improvement are not sufficient to reduce deforestation. These measures must be coupled with effective mechanisms to halt corruption at all levels of government as corruption is not only a regional or local problem. In this context, stronger State capacity is a core prerequisite. Transformation cannot take place in the face of rampant corruption. It corrodes the sprouts of institutional strengthening at the lower tiers of government. The evidence also showed that this transformation is not necessarily achieved with the creation of new institutions, such as the ARAU, unless other conditions are not in place (for example, resources).

The findings in this chapter show that the policy recommendation of ‘keep it simple’ (this concept is explained in further detail in Section 7.4) not only refers to the simplification of procedures (reducing bureaucracies and requirements). It also refers to the launch of very sophisticated programmes such as those of green growth that require a progressive process of socialisation, adaptation and follow-up. Further, it also implies considering quite simple ‘policy ingredients’ such as training and information sharing fundamental for transforming State capacity and for successful policy implementation.

In the next chapter, I switch the viewpoint from the national and regional governments to regional and local government and I explore the role of network governance in land use planning, which is a critical policy in the struggle to prevent deforestation. I address the following research questions:

- If network governance operates rooted in trust and with rules of the game bargained and negotiated by participants, how do these operate in a context of frontier economies?
- Which are the main policy networks in my case studies and how relevant are they in the forest policy implementation process?

- Which are the main policy tools used in the case studies, those that rely on hierarchy, markets or networks?

Chapter 7 Network governance and land use planning

7.1 Introduction

The focus of this thesis is on Forest Policy and therefore forest governance. The concept of governance and the way we understand it has been shifting (see Chapter 1). This case study uses network governance (see Section 4.3) as an analytical lens to look at land use planning because it focuses on:

The changing boundaries between public, private and voluntary sectors (...) these actors are interdependent, so decisions are a product of their game-like interactions, rooted in trust and regulated by rules of the game negotiated and agreed by the participants. Such networks have significant degree of autonomy from the State - they are self-organising - although the State can indirectly and imperfectly steer them (Rhodes 2014).

An analysis of the three dimensions of governance presented in this thesis (previously MLG and now network governance and metagovernance) provides an important analytical grounding for policy implementation research. It enables contrast between the various types of networks that co-exist in a frontier context, either serving as a means for improved governance or resisting change and becoming obstacles to the policy agenda in the region. Further, as land use and land use planning are core aspects in forest governance, this chapter introduces these topics as a necessary background before discussing on policy implementation.

The nature of the transition from government to governance through networks is reflected on the ground as forest policy implementation relies on a network of relations and interactions. A key concept in network governance is rules of the game. Networks work when everybody agrees on the 'rules of the game.' Land use planning (LUP) is supposed to set the rules of the game, but in fact when there are agreed 'rules of the game' they are not necessarily followed because it is at the frontier. In the frontier the role of 'covert networks' undermines LUP. This prompts the following questions: **Does network governance improve coordination for policy implementation? How do the 'rules of the game' work in a frontier context? Which metagovernance strategies (hierarchical, markets, networks) work best in a frontier context to enhance State capacity to steer networks?**

This chapter looks into the themes analysed in Chapter 1 and the research questions identified. There are five themes of network governance that are relevant for this case study: dependence, steering, complexity, networks as obstacles and coordination.

7.2 Dependence

Power dependence, or in other words, the collaboration between organisations (i.e. exchange of resources) to achieve policy goals, is essential for effective forest resources governance.

Collaboration is essential to attain the goals of land use planning, for example, the integration of different resources in the landscape, from an ecological, social, economic and institutional perspective. In Ucayali, local community dynamics provide a good grounding for network governance. At the community level there are cases where there is strong power dependence (see Section 4.3) for forest management. The municipal agent of the Junin Pablo community highlighted this:

Interviewer: to have the conservation area and preserve your resources, what type of decisions can you make as an authority?

Respondent: authorities are in charge of everything. For example, for timber, sometimes timber extractors come, they want to take out a lot of timber, but here we have the rulings of taking out 5,000 units per 10 people each year

Interviewer: is the management of resources done in coordination with the representatives of the Regional Conservation Areas (RCA)?

Respondent: Yes of course, the representative of the RCA as well as the authorities

Interviewer: And who are the representatives of the RCA?

Respondent: it is a community member, a biologist that is always with us and the head of the German Cooperation. With them we coordinate our workplan and together with them we work with the community

Interviewer: let's make a list of the institutions with which you are handling natural resources. We have RCA, the Association for Research and Integral Development (AIDER) and the German Cooperation

Respondent: not only those three institutions are running the management, but it is them connected with us. Besides these, there are no others (028 - Junin Leader).

It is precisely at this local level where network governance takes a predominant role as there is less State presence at this level. It compensates for the weaknesses of the State and allows the establishment of a new route for governance all together.

In contrast, some interventions do not rely on the existing networks and relations. As noted by the technical secretariat of the head of a regional NGO that focused on environmental and cultural issues:

In reference to the integration between forest resources and other resources, it is quite difficult. Let's say there is a territory where there are several actors undertaking various activities (fishing, forestry, agriculture). But let's say a government comes and grants a concession to a third party in a territory (not being inclusive [of the other actors], but rather excluding)... all the local organisation in place for the use and management of these various resources will be lost (034-NCI).

This example of promoting *exclusion* rather than *inclusion* shows that the concept of resource dependence and therefore, power dependence, was not being considered as a central element in the land use planning interventions at the regional level. Steering strategies are not used to take advantage of the relevant knowledge of all actors nor to build a set of agreed rules of the game. Further, this example underscores the absence of collaboration and resource sharing (local and traditional knowledge), to achieve common goals (Rhodes 2017b) in the use and governance of natural resources.

The management of existing policy networks to deliver better outcomes in land use planning is affected by the lack of collaboration and agreed rules of the game. For example, actions of key stakeholders and government agencies on the ground in relation to the use of the territory, reveal the absence of shared policy objectives. In this respect, a national level policy expert mentioned that:

The regional government (The Secretary of Agriculture) is selling land at the price of 1 sol⁵⁵ per square metre to the ones who possess the land to pursue productive development projects. The inconvenience has been that this is prompting social conflicts for selling land that has multiple people linked to them.

Despite the challenges, in Ucayali there are examples of network governance integrating a vast array of elements under a set of agreed rules of the game as is the case of the Communal Reserve *El Sira*. According to a regional officer, it is a successful example of natural resource management in the territory, which integrates bargaining, different communities, ecologies, levels and policies:

It encompasses four ethnic communities, three departments, the lower and upper Amazon. There are cultural differences between the communities and the reserve

⁵⁵ 1 sol is equivalent to approximately 0.25 pounds (exchange rate of 2018).

aims that all work for the same target. Further, each department has different policies and culture. Not only is each department different, but the way the lower Amazon behaves is different to the upper side. There are various ecosystems represented here. We need as forest rangers to find a way to come to agreements (023-SERNANP-09 2014-Regional).

This reserve also provides an example of the type of rules that are in accordance with reconciling economic development and environmental conservation, which is a priority for the Amazon. Therefore, the rules integrate not only the economic interests, but also the technical and political considerations (023-SERNANP-09 2014-Regional). The approach of this Communal Reserve is also noted in a report from the UN Economic Commission for Latin America and the Caribbean. The report claims that in Mexico and Brasil the sustainable conservation areas that allow production are more effective to prevent deforestation vis-à-vis those of strict protection (Comisión Económica para América Latina CEPAL 2019, p. 164).

Furthermore, the *Acuerdo Nacional* (see Section 8.2.1) is an example that acknowledges the interdependence between network actors. When asked about examples of policies integrating various sectors, an advisor to the deputy Minister of Strategic Development of Natural Resources said:

Yes, of course (...) one of the themes to rebuild the country was the creation of the Acuerdo Nacional. It is a venue where all political forces of the country belong to, the entrepreneur organisations, the workers, the universities, the regional governments, the locals, in other words, the key actors of the national society. In this venue they have discussed and approved 34 State Policies, which are the general guidelines beyond the Government in office (017-MINAM-05 2014-National).

In Ucayali the interdependence between actors from different sectors affects forest policy implementation. Therefore, the nature of the transition from government to governance through networks is reflected on the ground as forest policy implementation relies on a network of relations and interactions (Torfing et al. 2013) well beyond the forest sector. For example, the lack of proper regulation in other sectors directly affects land use planning and the fulfilment of forest policy aims:

There are many topics to consider. For now we [referring to the Government] are saying: get your identity document and I will give you a mining right. Is that fair? Without an environmental analysis, now it is like that. If you are a small miner, they will give it to you as artisanal miner. That is outrageous, they can decide to destroy the upstream area of the

watershed, the river where you are, only with the identity number and without any technical criteria. That is wrong, that must change (032-PUCP-08 2015-National).

Furthermore, the network interactions show the unequal power relations which are conveyed by the testimony of a local leader:

Interviewer: What is more effective, and works better, a Law coming from the State, the region or a decision taken at the district or community level? Which one has more weight, influence, which one is the strongest decision?

Respondent: the strongest decision comes from the State, in other words from the Government. That is what has more weight (...) we also have other, as I had mentioned, from the indigenous too. But that is not the same as those from the State. The State is the strongest that will always be seen (028-Leader Junin).

Regional actors emphasise the relevance of negotiating the Economic and Environmental Zoning (ZEE) through the existing networks to be able to promote collaboration and development. When inquired what strategies should be implemented besides the existing ones, a Regional Councillor from the Regional Council of Ucayali mentioned that:

One strategy should be to promote consensus with those interested and define the potential of the economic and environmental zoning. Once that potential is defined, the Government must support people to take advantage of that potential and be competitive (002-CR-05 2014-Regional).

Further, actors also emphasised the interdependence between sectors for sustainable development to take place. This was the perspective shared by an advisor to the deputy Minister of Strategic Development of Natural Resources:

In a situation like now, when all the economists say we are the second country in the planet with the highest growth indexes, then we start to think: 'well now, how can we balance a bit the social and environmental dimensions to promote sustainable development?' That is the discussion we are having right now (017-MINAM-05 2014-National).

These sustainable development challenges require linking networks where collaboration can help sustain interventions of land use planning that promote this balance.

7.3 Steering

In the frontier, network governance is influenced by the type of land tenure. Network governance operates differently in areas where there are communal lands (indigenous territories) and in areas where there are private lands. This in turn also impacts the various degrees of steering that local leaders can have for forest governance. In contrast with the example noted above from communal lands, a local level leader of a farmer's community mentioned:

It will be difficult for me to make decisions on how to handle these plots and resources, because everyone handles its own assets [land] (...) I cannot [influence as much people's decisions], as sometimes, as a community, we are rebellious (027-Leader Yerbás).

This notes how the private ownership of land in the absence of strong steering mechanisms can limit the operation of network governance. Yet it is precisely the interaction between these various forms of land tenure in the Amazon that requires more attention from a network governance perspective. There is a need to identify the best metagovernance strategies to steer the interactions between networks in the frontier.

On another front, institutional innovations and their implementation could be enhanced through network governance linking networks across sectors. In this respect, ARAU is an institutional innovation to integrate environmental management at the regional level (See Section 1.3.2). The institutional architecture of the new ARAU could be considered as a step forward to respond to the challenges of weak coordination and for integrating conservation and productive activities in the territory. Yet, according to the former president of the Inter Regional Amazon Council, this approach still needed to be applied horizontally to other sectors:

I think there are changes. ARA is a change. The manager can change but you have dismantled a bit the structure (...) that beforehand used to be separated. Still the challenge is to take that approach to (...) other areas of the productive side, energy, mines, agriculture (029-CIAM-08 2015-National).

Therefore, metagovernance strategies must address horizontal integration across sectors as a key determinant for forest governance. This insight also notes that the delivery of cohesive public policy encompassing various sectors requires negotiated interaction in networks and partnerships (Torfing et al. 2013). Steering becomes a fundamental means to link across sectors if this cohesiveness is to be achieved.

ARAU's institutional architecture also needs steering mechanisms in place at the local levels to become more effective. When questioned whether there was an attempt to include agriculture in the ARAs and, whether there was any type of negotiation concerning this, the former president of the Inter Regional Amazon Council said:

What is being discussed is how the ARA could provide support, for example, to the Regional Directorate for Economic Development (...) one relationship was towards the top with the sectors at the national level, Ministry of the Environment, Agriculture (...) horizontally with the sectors in the region and downwards with the units of administration of the territory. There was progress building the relationship towards the top, some horizontally but nothing towards the bottom [local level] (029-CIAM-08 2015-National).

This comment notes the vertical and horizontal interactions which are core to MLG. It also emphasises the need for institutions and policies to apply steering mechanisms that are multi-level in order to articulate land use planning across scales and with existing networks. Finally it demonstrates the way that MLG and network governance are interconnected.

There was also concern from some regional authorities about the degree of authority that the ARAU was to have in the region in relation to some key functions for forest governance:

For the ARAU, a bottleneck could be that, from the Central Government, it is not authorised to run the enforcement at the regional level...which will leave them 'without teeth' (FWNB No. 1 2014-2016).

Therefore, the ability of network governance to gain traction in the local level, also depends on the transfer of competences and functions to the territory (MLG) that allows a real empowerment and autonomy of the actors through steering. Or in other words this process relies on 'more governance' or more steering (Rhodes 2017a). This is another key front in which MLG and network governance interact and which is needed to enhance forest governance.

Yet, steering is far from being the norm in the current interactions between actors. As was the case for the ARAU, the absence of steering affects cross-sector integration. The former president of the Inter Regional Amazon Council mentioned that:

I went to Colombia to see experiences of coordination (...) because it was interesting to see how the Ministry of the Environment tried to be articulated through agreements with other sectors (...) but it was not to substitute people. Here [in Peru] we have a discussion, because the Ministry of the Environment is attempting to

perform productive activities directly, especially business. Instead of promoting that the Ministry of Agriculture adopts the perspective of agri-businesses with an environmental perspective (029-CIAM-08 2015-National).

This also underscores that sectors tend to compete to perform certain functions, rather than collaborate and share responsibilities. This is an example of the limitations within a network to reach consensus, which can lead to decreased coordination between sectors (Mette Kjaer 2004).

7.4 Complexity

As one of the main motivations of this research was to find ways in which both productive and environmental activities could be integrated in a landscape, supporting each other's goals as well as a sustainable development agenda. I became interested in observing actors' views on the linkages between several institutions and policies because one institution or policy could not give an accurate picture of how things worked.

The dynamics in the territory portray the reality to which institutions need to respond to, and the real challenge is to have an implementation approach that adequately integrates all the relevant factors for environmental governance and existing networks, as well as reducing the complexity, so that key roles are identified and well integrated on the ground. One of the biggest obstacles for LUP is the layers of complexity. Local level complexity is compounded by an already complex regional context. This complexity is institutional, environmental, social and economic. From the institutional standpoint complexity translates to a myriad of bodies in charge of forest-related activities (see Section 1.3.2 and Footnote 10). This is a respondent's view when reflecting on this complexity within the Regional Government:

Which is your institutional arrangement to comply with the forest duties? In respect to natural resources, you have some with SERFOR, others with OSINFOR and others with the forest concession owner. Have you done that design? No, it has not been done (senior university professor and environmental policy expert based in Lima, 032-PUCP-08 2015-National).

A national level expert also shared his views on how this complexity has evolved:

The specialisation led to a fragmentation of the public administration. There are more institutions, but it is not necessarily more efficient (039-EI- 06 2019-National).

In this context, LUP tools such as the ZEE face the challenge of coordinating between networks and across levels of governance (rules from networks with rules from public policies), or in other

words, the juncture between MLG and network governance. Public administration fragmentation is a limiting factor for implementation, yet networks could play a role in compensating for this at the local level. The communal reserves provide a good example of a situation whereby they established their own rules of the game at the local level with greater autonomy:

The management plan of the Communal Reserve El Sira [ECOSIRA] is designed according to the zoning which indicates what is allowed in a specific area and to what degree. This is an independent local zoning from the land use planning unit [of the Regional Government of Ucayali]. It is done by SERNANP and the association ECOSIRA which executes the administration of the reserve. They even have their own sanctions [independent from OSINFOR] in case of transgressions (as shared by a regional officer from the reserve, 023-SERNANP-09 2014-Regional).

However, a setback is that from the environmental and economic perspective there is no agreement on forest management and LUP to guide institutional interventions. A member of a national NGO that works locally in Ucayali mentioned that:

What the landscape aims for, let's say to understand resource management, is to comprehend that the hydrological dimension of the watershed management cannot be understood by focusing on a small district. Rather it needs to be understood in the territory. Obviously the watershed has its boundaries within the territory where all the ecosystem processes of the watershed coincide to keep its functionality (...) but also within that territory (...) there are economic and conservation activities taking place. With the watershed you can say these are the headwaters or the main tributaries. With the forest, I have inquired with several people and it is not as simple to say...'here should be the limits for conservation, or this should be included in the management plan, because this area is key to ecosystem integrity'...(024-PRONAT-09 2014-Regional).

The comment above notes a relevant knowledge gap that can impact forest governance within land use planning and underscores the absence of agreed 'rules of the game' for forests and LUP in the landscape. When discussing options for land use management at the landscape scale, a national expert from the Peruvian Society of Environmental Law mentioned that:

There was a process in Peru to establish macro-regions, but the process did not succeed. Regional elections took place to inquire whether certain regions wanted to come together with others, but nothing came out of that, it was not possible. No one was in agreement (...) I am not sure why, there must be economic and political issues. But no one is interested. I

don't think people even ask these questions because they are so forward looking. Now, if we had a macroregion, probably we could talk about a consistent forest management for all of them. This process stopped and I think it won't move forward for many more years to come (018-SPDA-05 2014-National).

This initiative of macro-regions could have been an interesting attempt to integrate natural resource management at larger scales, overcoming the boundaries of the current political-administrative divisions within the Peruvian departments that encompass the Amazon. It also points to the complexity of building consensus (agreed rules of the game) between actors and networks across several political-administrative boundaries.

Conflicting power interests hindered the macro-regions proposal for alternative LUP. Other experts also commented on this initiative, highlighting the underpinning power and economic tensions. An advisor to the deputy Minister of Strategic Development of Natural Resources mentioned that:

The idea was to constitute regions, go beyond the departments and build regions that integrate these departments (or part of them). There was a first attempt at launching a referendum to consolidate some regions. It failed because there was a massive no vote. There was fear that integration could lead to losing resources of productive activities or from the royalties. As the positions of regional presidents were created first, [they wondered], what happens if I join with the department next door and with the other regional president? Who will be the regional president, them or me? As I am not willing to give up power, I am an obstacle to the regionalisation process (017-MINAM-05 2014-National-05 2014-National).

In short, there were several 'ingredients' missing from the process of establishing the macro-regions to consolidate it as a policy network. For example, a key ingredient is the collaborative leadership between actors across regions and achieving agreed rules which are the glue that holds the network together (Rhodes 2017a).

The above is an interesting example as land use planning for improved forest management needs to solve not only the remaining ecological connectivity questions related to forest management and consider the proper integration of different land uses in the territory, but also the underlying political interests of existing actors and networks that creates yet more complexity. This also underscores that institutional complexity in the frontier is not referring only to government fragmentation through a myriad of public bodies (Rhodes 2017b, p. 176), but that it encompasses other factors as well such as the existing political interests. This will be perhaps the main challenge for forest governance. Expanding the understanding of the ecological complexities of

the Amazon is a necessary step to improve governance, but this will be insufficient if the underlying political complexities are not considered as well.

Indeed, the policy process is closely related to the politics of implementation (Hill and Varone 2017). Further, understanding the politics of the implementation process involves taking into consideration the power of the opposition to restrict the efforts of the advocates (Hogwood and Gunn 1984). Any planning and management approach should consider the ecological and political complexities jointly and deploy appropriate steering mechanisms across levels that open the path for an implementation that is more in accordance with the ecological dynamics.

The experience during the implementation of Forest Law 27308 (see Section 1.3.3) teaches us that the rigid bureaucracy, coupled with institutional complexity, can deter the transition from informal to formal timber extraction by locals, or in other words, from illegality to legality. This is the experience shared by an expert from the Ministry of the Environment in Lima:

We need to bring down the costs of formalisation, bring them to the minimum. People had to harvest the forest without cutting down trees; a community said, 'I will try a management plan.' It took two years and a half to be approved by the Central Government as it was under the Directorate of Parks for the National Service of Protected Areas. It was inside a natural reserve. They had to do inventories, like this, the bureaucracy, unfortunately the bureaucracy is not helping and it hinders (014-MINAM-05 2014-National).

They also shared another anecdote that speaks to the many required procedures and requirements to put in place a natural resources management plan:

The management plan of paiche [which is a fish of the Amazon], in only one lake (...) it goes out to breathe every 20 minutes, they knew how many paiches there were, when they made love, when they crapped, everything. How long did it take for the approval of this management plan? Eight years and a half (014-MINAM-05 2014-National).

From the concept of policies, transitioning to formality should translate into a better forest management, as it means that forest users are abiding by the rules. But these examples also call for a reflection on 'the rules.' From the perspective of the policy maker a bundle of rules can be seen as the way to go. Nevertheless, are such rules enablers of change? Or do they become obstacles? It looks like the more complex the ecological, social and political dynamics, the simpler the policy responses should be. 'Keep it simple' should be a mantra at the core of policy design to really create a useful policy tool for implementation. This approach was also recommended in the early stages of the implementation literature as 'Be simple! Be Direct' or 'Payment on

Chapter 7

Performance' (Pressman and Wildavsky 1973, p. 159) (see Section 3.1) and by other authors such as Gardner (2014) (See Section 3.3).

Yet, when reflecting on this mantra contrasting with the experiences on the ground in the frontier, one wonders, what does it mean to 'keep it simple'? It seems an answer could be to have policies that include the right balance of prescriptions to guide the sustainable use and conservation of forests. Further, that are operational on the ground (*in praxis*) through the various institutional arrangements operating at various levels, with different capacities and *modus operandi*. Simplicity should also involve the coordination of local and regional networks through principles such as steering and collaboration around agreed 'rules of the game', to facilitate policy implementation and reduce the interference of 'covert networks' (see Section 3.3). When implementation takes place in a frontier, a question any decision maker should raise is: How to operate in a region where covert networks are prevalent?

Experiences from other sectors managing natural resources in the Amazon can illustrate what it is to 'keep it simple' and to define 'the rules of the game' by the application of network governance. In this respect, local level management of fisheries provide valuable insights on. The fisheries sector in the Amazon faces similar challenges as the timber sector, such as the use of non-sustainable practices for fishing as well as illegal sourcing of fish. The regional authority of fisheries in Ucayali (PRODUCE) is in charge of surveillance and controls and organises institutionalised local mestizo⁵⁶ and indigenous communities into Local Committees for Fisheries Surveillance (Colovipes). Colovipes was a simpler way to have presence in the areas where the State has no presence articulating with the communities. According to the Director of PRODUCE, the ingredients for their success are quite simple: training and follow-up. The involvement of communities in the Colovipes motivated many to implement management plans. Fishing communities did not know how to control fisheries in a sustainable way. Capacity building has allowed them to understand this better by (being familiarised with norms and regulations). Furthermore, Colovipes serve as an interesting example of network governance as they bring together local communities, the regional government and NGOs. As NGOs have a more flexible structure than the Government, they support Colovipes by providing human capital training and giving inputs in a timely manner, for example equipment so that they can operate.

Informality is also a challenge in fisheries. Therefore, PRODUCE is initiating a campaign for formalisation where Colovipes and permanent personnel play a key role. Formalisation does not depend on one sector only. This is why PRODUCE wants to articulate the maritime office, the

⁵⁶ This refers to a person of mixed white and Indian ancestry.

region and the Ministry in Lima to install a one-stop window to allow a more expedient process of formalisation. This is an interesting approach, for handling situations where formalisation depends on several steps linked to different institutions. The experience of Colovipes provide some approaches that could be applicable for the case of forests. This is the case of establishing local committees for monitoring and surveillance that can strengthen multi-level governance and policy implementation. Also, the one-stop window to make formalization processes more expedient.

Now, returning to the concept of to 'keep it simple' should also involve having policy prescriptions that provide a balanced degree of steering and flexibility between the regional and local levels to consider communities' needs. Several community leaders refer to the RCA as a mechanism for establishing rules for natural resources management, although with constraints for the community members' plots that fell within its jurisdiction:

Interviewer: How is it being decided how to use the forest and the management of the area of conservation?

Respondent: [the one deciding is] the Regional Conservation Area

Interviewer: Which are the rules for land use in this area?

Respondent: we knew which trees we could take out (...) the rules are that the trees that are over fifty years old are not as good anymore for keeping the ecological balance. The rules are that we cannot cut the younger trees; they have to be there because they purify the environment, but we do not know this. They [referring to the ACR] should explain it to us.

Interviewer: Which are the rules that the communities have to follow to use the RCA?

Respondent: they have been told that they can be there, but they cannot have chacras⁵⁷, then how is that person going to live? They can continue working, but not in the primary forest. If there is timber there, it is not theirs, it is for the State. It is the same for us here in Cunchuri, we have land here, and nevertheless we cannot use the timber because the title is for agricultural use and not for forest. Therefore, if I want to use the timber in my territory I need to request permission and receive approval from the Ministry of Agriculture.

⁵⁷ Referring to an agricultural field

Interviewer: When these rules were established to manage the forest in the reserve, were you or the community consulted? Or asked about how you wanted to manage this reserve?

Respondent: they were not consulted.

Interviewer: If there had been a consultation process, what would have been the opinion from the community?

Respondent: this reserve has been done because the forest was being devastated. It was the large timber enterprises, not us but the bilinguals,⁵⁸ and this is not a recent problem. They have been fighting with this since 1970, until they finally made it happen (the reserve) in 2011 (038-Leader Cunchuri).

This quote notes an interesting cross-point between network governance and MLG where the absence of steering between the regional and local tiers of government limits the potential of network governance to support forest management. It also leads to the establishment of ‘rules of the game’ that are not necessarily agreed upon by the actors on the ground.

7.5 Networks as obstacles

All too often policy networks are seen as facilitating joint actions. They are often said to make public governance more effective (Torfing et al. 2013, p. 167) and to foster cooperation. However, sometimes policy networks resist policy change and foster inertia. As noted by Rhodes (2017b, p. 51), “not only do networks affect policy outcomes but policy outcomes feedback and affect networks.” The process to set up a rigorous land use planning process in Ucayali has encountered obstacles linked to regional policy networks with actors who lack expertise and resist change. An advisor to the deputy Minister of Strategic Development of Natural Resources provided an example that illustrates this:

There are no specialised people in this country on land use planning (...) consultants resist change because they do not want to update [their curriculums] and these are the ones supported by the regional governments (...). They are dispersed among the regional governments, like piranhas (017 MINAM 05 2014 National).

At the community level there were also cases of resistance to change for natural resources management. As noted by a local community leader:

⁵⁸ This term is basically referring to the white people.

Together everything can be worked out (...) but always someone is against [natural resource management options], there are oppositions, but at the end they join (O11-Leader Union).

The covert networks in the Amazon include those in the political and commercial sector who peddle influence to design rules for natural resources use to benefit a few or influence the appointments in the Regional Governments:

It is even worse if you go to the Regional Governments. On some occasions they have politicians that are appointed as Natural Resources Manager; however, they have no clue regarding natural resources, they have no idea of cost-benefit analysis, much less of environmental management tools. You appoint a politician that wants to capture votes and that is willing to receive these from any entrepreneur that offers cash. That is the Natural Resources Manager (as shared by a senior university professor and environmental policy expert based in Lima 032-PUCP-08 2015-National).

Reports underscore the complicity of a large network of officials and merchants across all the process of timber trafficking from illegal origin. As claimed by a merchant “almost everything is illegal and everyone knows, even the authorities know, that there is a corruption chain on a large scale” (Environmental Investigation Agency 2018, p. 27). Furthermore, in 2016 the national police of Peru conducted an operation against the mafia of illegal timber called ‘The Patrons of Ucayali’ and in 2017 a joint governmental operation broke up the mafia called ‘The Beavers of the Central Jungle’ (Environmental Investigation Agency 2018, p. 30). While the main destinations for exporting illegal timber were China, Mexico and the United States, three local police officers and four officers from the Regional Forestry Office were involved in the patrons’ network (Environmental Investigation Agency 2018, p. 40). This case set a landmark, as it was the first time that the Peruvian Government applied Law 3007, for combating organised crime, to tackle illegal timber extraction (Environmental Investigation Agency 2018, p. 40). Other sources show that this organisation had all the necessary infrastructure to operate in a clandestine manner, including mobile sawmills, camps and the ability to launder documents with the approval of forestry officials (El Comercio 2016). Regarding the ‘The Beavers of the Central Jungle’, one of the members of this covert network was the General Administrator for the Central Jungle of SERFOR who was providing all the illegal documents for timber laundering. Other forest officials from the Regional Government of Ucayali were also part of this network (Environmental Investigation

Agency 2018, p. 40).⁵⁹ This portrays MLG as a system in which covert networks can thrive disguised by institutional complicity and confused accountabilities.

Social control, especially coming from indigenous communities, strove to fight against violent covert networks. The murder of the indigenous leader Edwin Chota and three other indigenous people after they had presented allegations to the authorities against illegal timber extractors is an example (Environmental Investigation Agency 2018, p. 28).⁶⁰ Besides the acts of violence to silence those from the community who denounced illegal timber extraction, there were also direct attacks on the institutions in charge of the enforcement, such as OSINFOR. In 2015 the office of OSINFOR in Pucallpa was attacked with a bomb after a confiscation of timber in 2015, rocks were launched at the OSINFOR office and coffins with the names of the president of OSINFOR and the Director of SERFOR in Iquitos were burned in front of the offices (Environmental Investigation Agency 2018, p. 29).

Additionally, some forest conservation schemes are not successfully stemming deforestation. The National Park of *Cordillera Azul* is one of the largest national parks in Peru encompassing four departments, including Ucayali. In 2015, a monitoring of the park from OSINFOR found the construction of three illegal highways with machinery and trucks logged with timber. As there were not contracts for timber extraction at the time in that area, that extraction was considered illegal (Environmental Investigation Agency 2018, p. 33).

Indeed, in several reports and testimonies, one of the main causes of illegal timber extraction was that extractors provided a fake location of timber. It is not only about the covert networks linked to timber and forests *per se*, but the interactions of other covert networks that could also have an impact in forest governance and land use planning:

The State does not want to administer with the people. It has resisted creating indigenous institutions. There is an officer now in the Ministry of Culture in charge of indigenous matters, but the native people demand that this person should be an expert of indigenous origin. This makes a lot of sense, to have policy spaces to discuss indigenous policies with representatives elected by them. [Yet] that has not been done, they have delayed the process of consulta previa [see Footnote 19] and much is

59 Other sources also highlight the existence of the Beavers of the Central Jungle. See: López Tarabochia, Milton. 2017. "Detienen a clan familiar dedicado a la tala y comercio ilegal de madera en la selva central de Perú." In Mongabay Latam.

60 Other reports highlight the murder of forest defenders. This includes Congresswoman Verónica Mendoza in defence of indigenous communities, who demanded land titling to prevent more deaths caused by illegal extraction. Congresswoman Mendoza, Verónica 2014. "Justice for Edwin Chiota and the ashanikas assassinated by illegal timber extractors." In *Plenary Session*.

related to the [interests of] the mining sector that postpones this progress as shared by a senior university professor and environmental policy expert based in Lima (032-PUCP-08 2015-National).

The quote above contrasts with the view of other national experts that do not consider mining as an issue in the Amazon (see Section 6.4). Further, the example noted above speaks of how covert networks linked to the mining sector influence decisions made in Lima to keep the *status quo*. To protect covert networks the national government discourages local networks. In some way it disempowers indigenous people as they could block the exploitation of new mining reserves. It is also relevant to underscore how covert networks operate on the ground:

Then I can take over the river shores, because it is within my [mining] concession. Then I can destroy the river. Also, is there someone from the Ministry on the ground? No. Therefore, myself in the river, a miner, with my canoe and gun visible in my waist, I decide that today my area of exploitation is here and tomorrow is even closer (...)
Are you going to discuss with a man with a gun? In a place where there is no one to denounce him? This is part of the problem (...) the large mining companies are interested in keeping the conditions of this mining system (032-PUCP-08 2015-National).

Land use planning requires going beyond the technical process and requires political bargaining with powerful networks with vested interests not necessarily aligned with forest policy and land use planning goals. The conditions of the Frontier such as weak rule of law accentuate the uneven conditions between actors as well as the rise and prevalence of covert networks.

7.6 Coordination

Although networks are regarded as a way to address the holy grail of coordination, the reality on the ground in Ucayali shows the limitations of network management (Hill and Varone 2017) and how unequal power relations obstruct land use planning in the region. This is clear from an anecdote from the Director of the Regional Economic Development Authority in Ucayali:

In this same area, this is a community, but as I have shown you, probably there will be an oil exploration that is covering a concession, then you have a forest concession that overlaps the oil and the native area, then when you have those types of conflicts it is difficult to

continue to grow, because there is not land use planning to prevent those types of issues (...) and generally the most powerful actor is the one that at the end wins (007-DGE).⁶¹

The statement shared above underscores a common problem in the region which is the overlap of activities in the territory, which causes social conflicts and an unclear planning of the territory. Furthermore, the quotation supports the idea that networks have unequal power relations because resources are unequally distributed and not all resources are relevant to every issue. It also contrasts with Rhodes (2017b, p. 44) power dependence approach in policy networks, where behaviour is regulated by rules of the game and agreed by network participants (see Section 4.3), as this example shows a contravention to the recommendations established in the ZEE.

A relevant consideration when analysing governance networks is whether they are facilitating policy implementation by promoting continual coordination and a high degree of legitimacy and programme responsibility between all the interested parties (paraphrased from Torfing et al. 2013, p. 172). Land use planning in Ucayali faces restrictions due to the poor coordination between sectors on the ground and the fact that each one handles information independently. An officer from the Regional Agricultural Directorate mentioned:

This is why we are talking of only one territory, then if agriculture wants to do an agricultural or agro-industrial development plan, then it won't have the complete information, because perhaps here mining has an authorisation (...) this is a weakness, the information is disseminated and it makes it difficult to administer the territory properly (005-DRAagri-05 2014-Regional).

Land use planning requires the harmonised action of the main sectors operating in the region. This example, not only highlights the obstacles for operating and the possible overlaps, but also the absence of an agreed vision (rules of the game) between sectors on how to work together (cooperate). Cooperation between sectors could be a means to build a stronger sense of legitimacy and responsibility between actors.

⁶¹ A Peruvian Civil Association that works with rural communities researching and reporting on the overlaps of various economic activities in the Peruvian Amazon. According to their findings, 17 million ha are allocated as permanent production forests (corresponding to 18% of the Peruvian Amazon); 10 million ha allocated to mining activities (corresponding to 11% of the Peruvian Amazon); 16 million ha allocated to oil exploration activities (corresponding to 17% of the Peruvian Amazon); there are 170 hydropower projects in the Peruvian Amazon; there are 60,000 ha of palm oil of 600,000 declared to have potential for this crop. Most of the crops are in Ucayali and San Martín. Source: Soria, Carla, Pedro Tipula and Sandra Ríos. 2015. "Cuenca Amazónica Peruana. Territorios Indígenas, Areas Naturales Protegidas, Presiones y Deforestación." ed. Sistema de Información sobre Comunidades Nativas de la Amazonía Peruana (SICNA).

A dilemma central to the discussion of network governance is the holy grail of coordination. Is it a matter of policy design, of implementation or both? These are the views from a senior university professor and environmental policy expert based in Lima:

Divorce is the nature of the State. Divorce is the nature of the relationship in the State. The State is not designed to coordinate with itself (...) the State was designed in the 19th century with (...) the idea that because the sovereign authority of the State regulates, then it is enough for the State to approve a norm and then it is regulating. You [referring to the citizens] must abide. Now what we see is that when norms are released, the social actors read them in different ways, sometimes they organise to fight the norm and then we need to build more complex coalitions, of multiple levels and actors to implement a norm. It needs to shift to budgeting by results (032-PUCP-08 2015-National).

This comment portrays the connection between design and implementation for coordination, as well as the relevance of coalition building across levels of government.

Besides the cooperation between sectors and coalition building to improve coordination, there is also a crucial interface between multi-level governance and network governance that refers to how land use planning is integrating local communities' management plans. The local indigenous communities have their own forest management practices as shared by the municipal agent of the Junin Pablo community:

Interviewer: The decisions that you take within the management area are related to a number of trees that you will cut down or what other types of decisions are taken in the management area?

Respondent: Well, one type of decision is to be able to use the trees [that are labelled with] numbers. Those are the ones that need to be extracted.

Interviewer: Do you mean that the trees that can be extracted are coded?

Respondent: There are trees that cannot be cut down

Interviewer: And who places those codes?

Respondent: We do

Interviewer: And which are the trees that are not cut down?

Respondent: The ones that are not cut down are the thicker ones.

(041 - Junin Leader).

The management plan layed out above shows community-based planning for natural resources management, which contrasts when compared with the multiple steps and bureaucratic layers to

Chapter 7

build land use planning in Ucayali. Even more, the experience of these local networks, which include their management plans, although with obvious room for improvement, can compensate for the weaknesses of local governments. If coordinated well, this is a way in which the interaction of network governance and MLG can support the improvement of governance.

Furthermore, and as noted beforehand, the challenge for forest governance across levels of governance and for network governance is not only the administrative weaknesses of local governments (see Section 6.2), but also the absence of awareness in local communities concerning who is in charge from an institutional perspective. This is clear from a comment of a community leader of a community not far away from the capital of Ucayali, Pucallpa. When asked which institutions oversaw the management of natural resources in their area they claimed:

I assume no one is (027-Leader Yerbas).

One key way in which governance networks can facilitate implementation is in the participation of actors who can improve the legitimacy of policies, thereby decreasing implementation resistance. There is a sense of ownership and greater responsibility to attain the desired policy outcome when policy actors have engaged in influencing policy decisions (paraphrased from Torfing et al. 2013, p. 172). The following quote explicitly states the power of participation and its contribution to legitimacy:

“The participation of the relevant policy actors in the governance network tends to enhance the legitimacy of the policies and thereby create a higher level of programme responsibility that serves to reduce the risk of implementation resistance. Policy actors (...) that feel that they have been capable of influencing the policy decisions will tend to feel ownership to the policy output and tend to take responsibility for ensuring that the policy output produces the desired outcome” (Torfing et al. 2013).

On the ground, legitimacy is affected by a perception of unfairness. If people are not participating in the policy process and if they feel actively excluded by unfairness, they could be disengaged from policy implementation. There are examples that portray that the *rules of the game* for land use are not evenly applied to all actors. The leader of a rural community shared that:

What do they (...) do with the private companies that are causing damage? They ban several actions for the farmer: 'do not burn,' 'do not cut down trees'; yet the large enterprises come. What do they do with them? We need to start with those. What a farmer could burn in a year's time, an entrepreneur burns in a few days. This is where we need to work because they always attack the grower and it is not fair (011-Leader Union).

In other cases, the *rules of the game* are not respected. As several community leaders mentioned openly in relation to a reserve management:

Sometimes you need to find a way to bend the Laws and timber is sold in one way or another

Then they added:

We cannot fish paiche and other resources too, but we take them out and leave nothing behind, we bring everything (...) this is why resources are depleted (...) it would be nice to see our culture change, if I am told there is a ban, then I do not [take out the resources] (038-Leader Cunchuri).

This underscores the challenges that network governance faces, even at the community level. And despite the challenges in the region, there are also examples of network governance that support coordinated land use planning and specifically models of sustainable forest use. A regional officer of SERNANP shared the experience of administrating the Communal Reserve *El Sira*.

Respondent: ECOSIRA is the association that executes the contract of local administration for all the reserve. In this modality of communal reserve there is always a contract implementor. In this case it is an organisation whose members are indigenous, and we work with them to promote conservation. But we [referring to SERNANP] do not work alone, we work in collaboration with ECOSIRA; we also have a management committee that supports us in policy and technical decisions.

Interviewer: And who participates in the management committee?

Respondent: In that committee public and private institutions that are in some way related to the conservation activities participate. In one way that gives sustainability

to the management of such a large and diverse area (023-SERNANP-09 2014-Regional).

This model shows how policy implementation relies on a network of relations and interactions in the frontier. It integrates public and private actors as well as local communities in decision making and implementation activities. This communal reserve serves as an example of ways in which “negotiation and collaboration may facilitate resolution of practical and political conflicts arising throughout the coordination process” (Torfing et al. 2013).

7.7 Discussion and Conclusions

There are three main examples of network governance in this chapter facilitating policy implementation by promoting a continuous coordination and integrating a vast array of elements under a set of agreed rules of the game. One is the communal reserve *El Sira* which is managed using co-management. The other is the role of non-State actors supporting forest policy implementation and natural resources management by linking with government actors and the last is the local level community management. It is precisely at the local level where network governance takes a predominant role as there is less State presence at this level and can therefore harness more coordinated action.

The nature of the transition from government to governance through networks is reflected on the ground, as forest policy implementation depends on a network of relations and interactions (Torfing et al. 2013) well beyond the forest sector. Yet, this case study showed that power dependence does not necessarily translate in collaboration between organisations. Frequently, institutions focus mainly on their own goals (sectoral interests), tend to compete to perform certain functions, and do not collaborate or share responsibilities. A characteristic of networks is that they “privilege a few actors, who equate their sectional interest with the public interest. They are well placed to protect their sectional interests” (Rhodes 2017b, p. 46).

Moreover, in relation to power dependence, this case study also underscores the absence of collaboration and resource sharing with local and traditional knowledge to achieve common goals. The lack of agreed rules of the game and/or of alignment between those of networks and bureaucracy in relation to the use of the territory is also an indication of the absence of ‘shared policy objectives.’ LUP policy instruments such as the ZEE face the challenge of operating between networks and across levels of governance (the rules of the game agreed within networks and the rules established in public policies), or in other words, the juncture between MLG and network governance.

Returning to one of the key queries introduced at the beginning of this chapter and in Section 4.3, one of the main conundrums in the land use planning of the Amazon is which metagovernance strategies (hierarchical, markets, networks) work best in a frontier context to enhance the State's capacity to steer networks? The characteristics of the frontier (see Section 3.3) show that forest governance requires the application of a compound of management strategies - hierarchical markets, networks for breaking through sectoral silos and economic interests. Interestingly, there is already evidence on the ground about the plausible contribution that these compound strategies make to decline deforestation, as presented in Section 1.3.1. Metagovernance strategies must address horizontal integration across sectors as a key determinant for forest governance, as the delivery of cohesive public policy across sectors requires negotiated interaction in networks and partnerships. Moreover, there needs to be more consideration of the interaction between hierarchies and networks as well as an evaluation of the conditions under which hierarchical approaches are preferable vis-à-vis networks (paraphrased from Mette Kjaer 2004, p. 203). This is exactly where metagovernance takes a predominant role.

Network management is key given the unequal power relations between actors in Ucayali. Indeed, "variations in the distribution of resources and in the bargaining skills of participants explain both differences in outcomes in a network and variations between networks" (Rhodes 2017b, p. 44). Yet, there are some limitations to network management in frontier zones because often there are no agreed rules of the game. Governing is a process that takes place through different mechanisms and in the case of networks trust is central (Mette Kjaer 2004). Yet, in the frontier zones, network governance is limited by the absence of trust with some exceptions as underscored in this chapter.

This case study showed the behaviour of some policy networks that are not rooted in trust. The lack of trust is a prevalent characteristic in the frontier which is fertile ground for illegality, where covert networks collaborate to achieve their goals (Raab and Milward 2003) on various illegal activities such as drug trafficking and illegal logging. Another query raised was, how do the 'rules of the game' (see Section 4.3) work in a frontier context? This case study also showed the dual character of policy networks, as some of them are not necessarily promoting cooperation and making public governance more effective (Torfing et al. 2013, p. 167), but are instead resisting policy change and affecting forest governance. Networks are seen as a means to address the holy grail of coordination, nevertheless the reality on the ground in Ucayali shows the limitations of network management (Hill and Varone 2017) and how unequal power relations obstruct land use planning in the region.

Chapter 7

Considering the other queries raised, does network governance allow for improved coordination for policy implementation? A key consideration is whether it is possible to manage networks built on powerful economic interests which lead to sectoral silos. In practice, such management would mean strengthening the ability of governance networks to control or strategically steer economic interests to facilitate land use policy implementation. If networks are expected to promote coherence and coordination to allow positive synergies and avoid duplication of efforts, no one interest can be dominant (Torfing et al. 2013).

This case study also underscored that policy networks can facilitate the participation of actors, which can improve the legitimacy of policies and therefore decrease implementation resistance. Furthermore, we should not underestimate the role of networks to serve as verification and control mechanisms to reduce deforestation (local level accountability). The case of community leaders such as Edwin Chiota serving as whistleblowers illustrates this point. Yet, covert networks use strategies such as coercion and physical force (Raab and Milward 2003) to undermine efforts from the authorities and the communities to enforce the rule of law. The co-existence of various networks in the frontier requires a more hierarchical (bureaucratic) intervention to deter covert networks in action. This draws on the contribution of Scharpf (1997) who suggests that networks need to be coordinated by hierarchy. This is also important as the increasing role of networks does not necessarily mean that there is less involvement from the government as governance does not take place without governments (Mette Kjaer 2004).

Complexity is another key dimension in the analysis of network governance in this case study. Even in conditions where there are agreed rules of the game, how are those rules interacting with those from bureaucracy? Are they enabling change? How are the agreed rules of the game within networks interacting with those rules coming from bureaucracy? The findings in this case study also showed how complex rules of the game can undermine the power of networks and deter the transition from informal to formal timber extraction, or in other words, from illegality to legality. The views from regional and national officers also show that institutional complexity does affect policy implementation and land use planning. This complexity translates, for example, in excessive costs and time for formalisation. Perhaps one of the main cornerstones in forest policy implementation that will effectively reduce deforestation are mechanisms and guarantees that support the transition to formality. Once the transition is made, public policies and targeted interventions are needed to support the stability of this transition so that we avoid actors climbing out of illegality and falling back in.

The views from local level leaders confirm that institutional complexity impinges on local level actors while there are also other forms of natural resource governance designed by local

leadership. While at the national and regional levels the discussion focuses around bureaucracy and institutional complexity, at the community level some of the forest management practices are built on tribal knowledge. It seems that as we go upwards in the levels of Government, additional layers of complexity are added for natural resource governance, perhaps even setting aside other mechanisms that could yield better results within the community. The findings in this case study show how policies are translated into practice by forest-based communities and that those at the bottom of the hierarchy are subject to similar pressures, such as too many demands and few resources. Even more, weak capacity and resources, characteristics of the frontier, may lead actors to choose simpler policy frameworks that are less costly and easier to implement and monitor (paraphrased from Gardner 2014). In a multi-level governance context, network management should consider such community-based practices and therefore, consider how much of the steering and coordination aimed at obtaining better outcomes of forest policies should entail blending in with these local level practices? Looking at this from the lens of metagovernance it is a call for a transformation of the State by reinventing its governing role (Rhodes 2017b, p. 215).

The findings also show that the different dimensions of complexity must be considered. Land use planning seeks to integrate different uses of the landscape and to do so it must weigh up the balance of the politics that underpin land use. There are various political interests centrally involved in implementation. The operationalisation of land use planning faces not only technical and institutional complexity, but also political complexity. This multidimensional understanding of complexity is crucial for policy implementation.

Network governance can provide options to respond to the challenges of forest governance. However, the perennial problems of implementation are as much a complicating factor for network governance as for bureaucracy. Also, the fact that there are many levels of government (each with bureaucracies) helps to compound the problem. Inadequate information, institutional complexity, the holy grail of coordination, lack of financial resources and poorly understood cause and effect undermine both. I turn to policy implementation in the next chapter.

Chapter 8 Implementation

8.1 Introduction

This chapter analyses the main policy implementation gaps in Ucayali. It has the following objective: to identify the main gaps in forest policy implementation and the underlying politics that affect implementation. Furthermore, the chapter will compare stakeholders' views on the existing limitations for policy implementation. The chapter then presents the analysis with reference to five main themes, referred to as *implementation gaps*: objectives, politics, policy succession, resources and coordination, as discussed in Section 3.2. These themes summarize the most frequent challenges arising from top-down implementation.

Some of the main problems of the past seem to be with us today. Almost thirty years ago, when looking at the prospects for improving forest management in the Brazilian Amazon, Verissimo et al. (1992, p.170) found that the main obstacle for forest management was the undervaluation of timber, which was linked to certain arrangements that produced unequal distribution of benefits and forest destruction. This (among others) is similar to the problems we can find in the Peruvian Amazon today (see deforestation figures in Section 1.3.1 and Section 9.1.5). Why after several decades of research on natural resources governance and policy performance do we seem to be tackling the same 'old problems'? This chapter aims to contribute to this puzzle by understanding and learning from the limitations in the implementation of forest policies.

Although some of the same policy problems remain, the Amazon and the world today are different from three decades ago. Facing global concerns related to climate change, population growth, food security, the ongoing clearance of rainforests and biodiversity loss, "sustainable resource use has become even more relevant given the increasing pressures on resource systems by climate and other global change processes" (Schluter et al. 2016, p. 2). Scholars, practitioners and policy makers acknowledge the difficulties of meeting the Sustainable Development Goals (United Nations 2015) related to biodiversity, food security and decreased land degradation which will undoubtedly require "significant changes in policies, institutions and practices" (Brussaard et al. 2010, p. 40). There is also recognition of the challenges of applying policies in practice. For instance, the political science literature notes that "at the other end of the line between outputs and intentions, policy formers, at the ministries (...) do not always fully understand why the rules and regulations they laid down in laws and other official documents are sometimes not entirely executed in the way they intended" (Hill and Hupe 2014, p. 165). The environmental sciences literature also recognises this challenge. As noted by Steffen et al. (2015) "there are severe implementation gaps in many global environmental policies relating to the planetary boundaries

Chapter 8

issues, where problematic trends are not being halted or reversed despite international consensus about the urgency of the problems.”

The Peruvian Amazon offers an important case study to advance the research on policy implementation. Despite policies that aim to regulate natural resource access and use, illegal extraction of forest resources is pervasive. The department of Ucayali is known as ‘the land of illegal timber’.⁶² Regardless of the existence of forest concessions, over 80% of the timber extracted is illegal (018-SPDA-05 2014-National-05 2014-National). While the implementation of Forest Concessions has not achieved the expected outcomes, the accumulated deforestation rates for Ucayali showed a steady increase from 2007 to 2012 (see Figure 2) and then a sharp decline in 2015 (See Figure 6).

In sum, this chapter seeks to address the gap in explaining the limitations of environmental policies in Latin America, specifically in a frontier economy context. It is a timely contribution as forest loss has been recognised as one of the most pressing global development challenges. As Stated by top economists at the Annual Meeting of the World Economic Forum 2017 on protecting forests and other crucial Global Commons, “failure is not an option” (GEF 2017).

8.2 Implementation Gaps

This chapter collects the most common stakeholder narratives regarding environmental policy implementation in Ucayali. It provides data related to the five main *implementation gaps* from the literature: i) objectives; ii) politics; iii) policy succession; iv) resources; and v) coordination.

8.2.1 Objectives

Interviewees highlighted three aspects that are a main constraint for policy implementation on the ground: i) the ambiguity between policies at different levels; ii) the absence of a unified policy agenda across sectors; and iii) inappropriate policy instruments.

⁶² Sources of investigative journalism support the fact that “illegal logging remains widespread in (...) Peru.” See: Butler, Rhett. 2017. "Amazon Destruction." In *Mongabay*.

Policy ambiguity

Respondents underscored that there is ambiguity between national (Decentralisation Law) and the regional policies (Organic Law),⁶³ which also impacts the implementation of forest policies on the ground. For example, an advisor to the deputy Minister of Strategic Development of Natural Resources mentioned:

There is a now a decentralisation process in Peru and the Organic Law from the Regional Government established that since 2013 only the regional government will be entitled to assign Forest Concessions and without a doubt that is a challenge. However, the Law does not clarify, and this is a problem of interpretation that we are having, who is in charge of creating the Permanent Production Forests, which is not [their] responsibility, but the national government's (...) But which level of government is responsible is a pending discussion (...) Although the Law assigned that function to the regional government since 2013, the transfer of functions has not been automatic, therefore causing delays (017 MINAM 05 2014 National).

Policy ambiguity and delays in the transfer of functions under the decentralisation process is also caused by frictions between the national and regional governments. The same interviewee mentioned that:

There is a sort of resentment towards Lima as the centre of power and centralization in the country. If you observe that the political agenda of the country is completely fractured, and the majority of the country has an agenda which is opposite to that of Lima's. The political parties have failed to integrate the regions with this logic (017 MINAM 05 2014 National).

This comment also notes that political institutions need to achieve a broader integration of the priorities of the regions. Political parties, as key political institutions, facilitate governance. If we want to improve policy implementation through multi-level governance mechanisms there needs to be a broader political project inclusive of the regions.

An official report on decentralisation (Defensoria del Pueblo 2009) highlighted that in the past, many decentralisation efforts failed due to the absence of political will. It also underscored that the constitutional reform pursued a decentralisation model based on the distribution of power between all the three levels of government: national, regional and local. Therefore, the Organic Laws of the regional and local governments established the competences (both shared and

⁶³ La Ley Orgánica del Gobierno Regional

Chapter 8

individual) for their levels of government. Yet, the competences (both shared and individual) of the national government were still pending approval in most Ministries. Additionally, the Law established stages for the process of implementation. The fulfilment of the first stage of the instalment of the regional governments was not followed by the implementation of the other subsequent stages for the transfer of competences. More than half of the regional governments were declared 'to be strengthened' for the transfer of environmental competences. Yet there was not a system of indicators, evaluation and monitoring to assess the results and verify if regional governments had acquired the minimum requirements to implement the functions transferred.

There is ambiguity in relation to one of the main policies underpinning forest governance which is land use planning. For instance, an advisor to the deputy Minister of Strategic Development of Natural Resources mentioned that various national institutions have competences related to land use planning. They claimed that:

The Secretary of Territorial Boundaries defines the jurisdictional limits. Meanwhile the Ministry of the Environment is in charge of land use planning and the Ministry of Housing of urban planning. Therefore, there are three institutions with tools to operate in the territory, when it should only be one institution (017 MINAM 05 2014 National).

While there was a level of ambiguity about the distribution of competences between institutions and across levels of government, there was also conceptual ambiguity. For example, regarding land use planning, the former president of the Inter Regional Amazon Council mentioned:

There was a level of confusion between zoning and land use planning. Zoning is more related to the use of a territory in relation to its capacity to produce goods and services and its functionality, while land use planning involves community participation and it becomes a social agreement. Therefore some regions did not understand that planning was still a pending task (029 – CIAM).

This view is also supported by an advisor to the deputy Minister of Strategic Development of Natural Resources in Lima:

Peru has searched for planning or environmental management tools. The tools come from the North and the Brazilians also came to sell us the famous ecological economic zoning and we incorporated it. Here in Peru there was a confusion between the concept of economic and environmental zoning and land use planning. This has been traumatic for some regions that have been working on the zoning for seven and even

eight years. Some documents were finalised and for some reason they were not approved (017 MINAM 05 2014 National).

In accordance with this absence of clarity, a main bottleneck for the future implementation of the new Forest Law (see Section 1.3.3) is the lack of understanding of national policies across levels of government. This also limits the proper integration of actions at the landscape level. As stressed by an expert from the German Technical Cooperation Agency in Ucayali:

There is not enough feedback from the national to the regional level, because at this level, if we speak not only of the region, the department, but we also reach the district level, there is not a lot of attention towards the national policies, there is not a lot of understanding or knowledge of the national environmental policies (045-GIZ-09 2015-Regional).

Other actors in the field stated that regional policies are unclear and that interventions contravene the policy discourse. For instance, a regional level expert on forests linked to a regional research institute claimed:

The Regional Government who is in charge of leading everything in the region does not have a clear policy. One cannot tell exactly where the medium term policy of the Regional Government is heading to. They give an ecological speech on one side and the next day they are setting up 10,000 ha of oil palm (006-IIAP-05 2014-Regional-05-2014 Regional).

However, another dimension of policy ambiguity refers to how policies translate on the ground. For example, a regional level expert on forests and agriculture linked to a regional research institute mentioned that:

The oil palm promoted by the Regional Government and the Directorate of Agriculture (...) promoted two productive systems, as local producers are not leaving behind cattle ranching to produce oil palm. This policy promoted by the government in the last eight years has created large deforestation which has also affected communities, displacing them to open the space for enterprises (013- IIAP-05 2014 REGIONAL)."

But there are also examples that portray efforts to focus policy. A regional level expert from the same regional research institute as the stakeholder referenced beforehand pointed out:

There is a national agreement (Acuerdo Nacional), in which all parties agreed on at least 20 items to harmonise development policies. Therefore, any new government

must refer to that 'Acuerdo', that was the agreement to focus their policies. There can be other things if they want, but this has to be done and this has worked at least in the last three or four governments (013-IIAP-05 2014-Regional-05 2014-Regional).

A report evaluating progress of the implementation of State policies (see Section 1.3.2) three years after their launch (Acuerdo Nacional 2005) found that some policy commitments were not showing progress and the following setbacks: weak presence of the State and high rotation of Ministers between 2001 and 2005 (which includes the Ministry of Agriculture with four ministers during that period). This report also indicated progress in developing environmental tools such as environmental policies and the regional systems for environmental management, as well as the regulations for the Ecological and Economic Zoning.

Finally, as it will be discussed later on in this chapter (see Section 8.2.5), the international cooperation has promoted oil palm as an option to replace illicit crops in Ucayali. This is another good example of lack of clarity on policy aims and on the unintended consequences when policies translate on the ground.

Policy inconsistency across sectors

When referring to the inconsistency of policies across sectors, respondents highlighted two main constraints: one is policies of one sector affecting directly or indirectly the goals and resources of other sectors, and the other is inconsistent policy decisions made at one level of government affecting another. The latter constraint also refers to decisions made by a Government that used to be in office.

Particularly counterproductive for environmental policy goals was the effect of other sectoral policies on the ground that hampered implementation and a more sustainable integration of agriculture and forest use and conservation. Several respondents in the region mentioned a Law⁶⁴ which allows land under agricultural use (permanent plantations) to be titled. This became a perverse incentive affecting land use planning and conservation activities as it promoted illegal land invasions to gain tenure. Following up on these claims, in a meeting with an official from the Regional Agricultural Directorate of Ucayali, and inquiring on land tenure and the deforestation dynamics, they mentioned:

Certainly, this is what is happening. What the producer will do is that if they want to title 10 ha and she has agricultural activities only in 5 ha and the other is forest, she will prefer to cut down the forest to get the title of the 10 ha. This is what happens,

⁶⁴ Law of Proceedings for the titling of small agricultural areas

but it is because [of] a deficiency of the Law, of the norm (...) the issue is that the Law requires one to have economic activity in the land to grant a title and the forest is not considered as an economic activity, which incentivises small users to deforest and start any agricultural activity, even just grasslands (025- DRAgri).

This highlights that for forests and especially to curb forest loss, it is relevant to link key goals and procedures of agricultural and forest policies and Laws, to reduce the potential risk of having agricultural policy guidelines that directly or indirectly affect forest resources, also placing value on forests.

Another front of policy inconsistency is the lack of a comprehensive approach for the management of natural resources. For example, policies do not necessarily respond to the condition of the Amazon Basin where all its ecological functions are interconnected. When reflecting on his experience in Loreto, a Peruvian Department in the Amazon, an expert from the Ministry of the Environment in Lima noted that:

The importance of intersectoral relations is very clear for the aquatic ecosystems. You cannot manage fish if you do not manage the forest that is next to it. But you have a Ministry of Agriculture promoting deforestation of the riverine to promote commercial crops (...) this is when you realise that the land use zoning must be done and with multisectoral and ecosystem criteria (014-MINAM-05 2014-National-05 2014-NATIONAL).

In sum, the quote above shows that intersectoral policy consistency is fundamental for the management of large and complex ecosystems such as the Amazon. Policy inconsistency across sectors is also fuelled by existing dynamics such as the lack of continuity of the policy agenda between one regional government and the next. From the perspective of a regional level expert on forestry and agriculture linked to a regional research institute, when there is change of Government, the incoming officers will say:

This is not done this way and everything that was done by the previous Government has no value, no value at all, there is nothing (...) it is another thing, another person, another secretary, another everything, and the incoming person does not know what was done by her predecessors, in other words, there is a complete lack of synchronisation (013- IIAP).

Inappropriate policy instruments

Chapter 8

Stakeholders highlighted several limitations in the implementation of the Forest Law, specifically regarding its implementation in the lower tiers of Government and applied to the integration of agricultural activities.

In the implementation of the Forest Law, Forest Concessions overlapping with areas in which native communities lived caused social conflicts. In such cases, regional authorities lacked adequate policy instruments to respond promptly. A regional level respondent made several remarks that were relevant to this point:

Way back since the Forest Concessions were granted [2002-2003] there were conflicts. And obviously still now we have these issues. But not only do we have the problem, we have rules that do not allow us to provide a solution. Rules come from the national level, the regional authority is supposed to resolve the problems but in accordance with the national regulations, and conflicts result precisely because we lack the tools to solve them. There is a regional authority that is in charge (supposedly) to solve issues, but linked to national norms. And then the communities and the forest concession holders, which are the ones using the forests end up in conflict, precisely due to this sequence of the State (...). When they [the national level] transfer the function, you absorb all the legal framework with which you have to work with. Even if I consider I should do an exclusion with a community with which there is a conflict, I don't have a legal framework to do it. The legal framework requires documentation that we don't have. Then, how do you modify a national norm? As a regional authority I have no attribution to remove that national norm (020-DEFFS-09 2014-Regional).

Yet an advisor to the deputy Minister of Strategic Development of Natural Resources in Lima disagreed, mentioning that:

In theory the Law and the complementary rulings establish mechanisms to avoid overlaps. There have been overlaps, but there are mechanisms to solve them. At that time, there was not a national norm regulating the mechanism of previous consultation⁶⁵ and therefore there was no consultation. Since the Law of Previous Consultation was approved in 2011, only since then has it been mandatory to run consultations. In theory, in the future, Forest Concessions should not be granted in areas overlapping with indigenous rights (017-MINAM-05 2014-National).

⁶⁵ For more information on the right for previous consultation (*consulta previa*) see Section 1.3.2

The example above highlights a relevant loophole in the policy design process of the Forest Law, which impacted its implementation. Another limitation of the previous Forest Law is that it did not allow integration of agroforestry activities and did not offer more suitable alternatives for small users. An officer from the Regional Agricultural Directorate claimed that:

Right now, forests are not regarded as part of a poverty reduction strategy. But it is due to limitations in the Law. Forests cannot be assigned to people, only areas where they can perform an economic activity (i.e. crops). There is not a mechanism for agroforestry systems. The current Forest Law does not support the establishment of communal forests [smaller scale]. Forest management is conceived from a business perspective with an emphasis on large-scale investments through concessions. There are no other alternatives (025-DRAgri-10 2014-Regional).

The tools for forest access and use are also seen as inappropriate. An engineer from the Executive Directorate of Forests and Wild Fauna in Ucayali, in relation to the previous Forest Law (27308) said:

It has modalities such as forest concessions, permits for indigenous communities and private plots/authorisations for other cases. There were also Local Forests for hunting that must be outside the permanent production forests. However, the main issue was that although most of the population does forest extraction, none of those modalities really responded to their needs. This is especially the case for the small timber extractors. In the New Forest Law [no. 29763] there are Local Forests which differ to that in Law 27308 (020-DEFFS-09 2014-Regional).

Some of the policy instruments highlighted do not correspond to the reality in the lower tiers of government. Therefore, they constrain implementation rather than empowering regional and local authorities. Furthermore, these policy instruments are not necessarily considering the needs of different forest users and the integration of agroforestry.

8.2.2 Politics

Policy implementation must consider the technical aspects that will make it work, such as procedures and guidelines. Yet, implementation is also a political process. Even in cases where the technical aspects are considered, political factors can still affect the effective implementation of policies. A common topic in relation to decentralisation in the respondents' narratives, was the perception that Lima tended to dominate processes and only considered its own views. When

Chapter 8

analysing the political factors that supported or affected implementation there were two critical political dimensions: i) ownership and ii) steering.

Ownership

Several actors agreed on the relevance of involving stakeholders in the policy process which is crucial for creating social support for policies and their implementation. In relation to this, an indigenous leader from an indigenous organisation in Ucayali claimed:

And the economic dimension, what types of results we have so far on the production of these communities, how much they produced, how much they earned, we have no registries (...) yes they grow rice, maize and other crops, but we do not know their profit. It would be good for the regional government to start following-up on these matters. If they do not know how much they can earn by performing certain activities, it will be more difficult to incentivise them to follow the Law (037-AIDSESEP- 09 2015-Regional).

We have an example in Cayeria that already has the forest certification. But we still need to know their profit to have a model, we need to start there. But this certification looks closed, biased, because you bring certified timber and at the same price others are selling the illegal timber, so then, where is the incentive? Or the competitive advantage? (037-AIDSESEP- 09 2015-Regional).

This example demonstrates that policies need to provide clear information to guide policy adoption and ownership. Policy makers also need to be aware of the interaction with the illegal market as a main obstacle for policy implementation. Another respondent at the same level shared an account that underscores the absence of accountability that could negatively influence ownership in policy processes:

Regional and local governments implement projects, but many of them remain as ghosts. They say they have executed, but at the end, there is no accountability, it is left that way and more than a 100% of the budget is executed (...) there is no information sharing on the projects' results, there is not that type of socialisation or identification. If communities participate in the implementation of policies (i.e. through local surveillance committees), they will feel more committed with conservation (024-PRONAT-09 2014-Regional).

Indeed, accountability processes are needed to promote ownership and direct citizen participation as policy co-implementers. Furthermore, there is still a gap towards the establishment of a national

political agenda that promotes cohesiveness and enables coordinated action. This was highlighted by an advisor to the deputy Minister of Strategic Development of Natural Resources:

There are plenty of confrontations between the agenda of the regional authorities and that of the national authorities precluding progress and there are even some demanding re-centralisation. There is a fractured political agenda, with many opposing that of the Central Government (017-MINAM-05 2014-National).

Steering

Natural resources management in the landscape requires steering and politics. A regional officer of SERNANP shared the experience of constituting the Communal Reserve *El Sira* across different departments and constituencies:

We started from the point of managing the area in a representative manner (...) it was a challenge that we took on and the reserve is implementing it very well, it is not easy. It is a very complex work. One of our team members has to go with a lot of psychology and politics and the regional policy is different here, different there. It is a lot of work but that is the challenge (023-SERNANP-09 2014-Regional).

Various actors felt that policy implementation faced restrictions due to the absence of steering and consultation with local communities. There was criticism, especially from the communities, towards the Regional Government of Ucayali (GOREU). A leader and municipal agent from the community of Junín Pablo explained that the decisions made by the Regional Government affected his community as they could not extract timber in the same way as before. He claimed:

At times the Regional Government will do as it pleases without consulting the community, then claim 'this is this way' (...) 'you cannot extract this anymore,' then community members take this badly (041-Leader Junin).

However, the interviewee also described how the situation has evolved, portraying the relevance of steering as a pivotal part of the politics of implementation to reach agreements with local agents:

Now there are more agreements [referring to SERNANP]. Before there were conflicts. Now we communicate. Before people that lived in this community did not understand well. Now they understand (041-Leader Junin).

There were other efforts from the Regional and National Government to run consultations and seek consensus on development processes. To update the Regional Joint Development Plan, the GOREU held a workshop in 2015 with key stakeholders. Yet, steering the interests of such a diverse group

Chapter 8

of actors and especially, of the main indigenous groups present in the region is challenging. For example, in a follow up interview an indigenous leader from a regional indigenous organisation expressed their views in reference to the Regional Joint Development Plan:

The selected indicators, once again, were very distant from the plans and the guidelines within the development life projects of the indigenous communities⁶⁶ (...) the territory is not very clear in this plan, especially when, in how many years and how many communities will be recognized and titled. That is not very visible. In the economic and social dimension, it does not show clearly the 10% of the regional budget, that the Law determined to assign to the native communities. This is not included there. If we are really going to implement concrete actions to create sustainable development for these communities. This is not visible either (037-AIDSESEP- 09 2015-Regional).

The lack of steering was also highlighted as a main reason for the restrictions in implementing forest concessions. It is true that the delimitation of land to grant concessions needs more clear objectives and stronger regulation. But as a Regional Councillor from the Regional Council of Ucayali noted, what is also required is:

Foremost to seek agreements, serious agreements with the communities. But serious agreements that the communities do not sell out later on. Sometimes, as they are poor communities, they sell trees which are 80 or a 100 years old for a very low price (20 soles).⁶⁷ (...) these agreements should be monitored so that they are fulfilled by the communities (002-CR-05 2014-Regional).

There were also comments that underscore the absence of steering in the process of establishing the regulations of the new Forest Law. A Unit Director at the Regional Environmental Authority (ARAU) of Ucayali suggested the following:

I consider there was a 'sort of order' that they wanted to impose (044-ARAU-10 2015-Regional)

This view from the respondent from ARAU just mentioned beforehand is in agreement with the perspectives of an engineer from the Executive Directorate of Forests and Wild Fauna in Ucayali:

In the Law we did not have much participation. On the other hand, we did participate a lot in the regulations through national and regional workshops. They have

⁶⁶ Development Life Projects (Planes de vida integrales – as its acronym in Spanish)

⁶⁷ 1 sol is equivalent to approximately 0.25 pounds (exchange rate of 2018).

requested for our inputs and discussed our own proposals. But the Law did not have anything like that. They once requested proposals, we sent some and never received feedback. It was basically released by the national authority. But now I see that the regulations are being socialised much more, but they have to comply with the guidelines of the Law. The Law was not as socialised (...) and they give the local authorities that function (020-DEFFS-09 2014-Regional).

Regional stakeholders were involved in the design process of the regulations, but those were already framed under the Law, in which they had not participated. According to the perspective of regional actors this led to the design of measures that were inappropriate:

Officials in the central level were including a form of payment that was inconvenient, despite our recommendations to do otherwise. They have good intentions, but many of them are not from the rural areas, so what they propose is not according to the reality (020-DEFFS-09 2014-Regional).

National politics also affected the transfer of roles and responsibilities (or internal structural changes) between sectors at the national level. An advisor to the deputy Minister of Strategic Development of Natural Resources noted that:

When the Ministry of the Environment was created, or even, before it was created, everyone said 'I won't give you my functions.' For example, water-related issues should be under the mandate of the Ministry of the Environment, but the Ministry of Agriculture took it away (017 MINAM 05 2014 National).

Even more, as forest resources were under the responsibility of the Ministry of Agriculture, the interest of the Minister in charge, or the politics of those in office, influenced the agenda of work in forest resources according to a national level:

[It] all depends of the Minister in charge, if she cares about the forest theme (Earth Institute).

One of the challenges for reducing deforestation are the local dynamics of land use and the politics that underlie local management and the extension of the different agricultural crops. As the technical secretary of the Inter Regional Amazon Council claimed:

There is a lot of noise around palm oil, but if one looks at coffee and cacao they are about 70% of the production, while palm is not more than 5%. Yes, it sounds like a large amount because there are few but very large and visible units, but on the other hand, about 60% are less than one ha. Meanwhile, the large projects of oil palm are

very profitable from a political point of view, while the other (the small producers), it is the opposite (029 CIAM)."

Politics also influence funding allocation which reflects the priorities of policy makers. Although there is an agenda in Lima for forests, regional policy makers are supporting other interests. This also shows that setting priorities in national policy agendas also needs to undergo a bargaining process with the different levels of Government in order to be fully supported. In this regard, an expert from the Ministry of the Environment in Lima shared his views:

How much has the Regional Government of Ucayali invested in forests? I have been pushing this for ten years. There is funding coming from oil royalties, mostly granted for agricultural loans. How much has been invested in forest management? Not even one sol (014-MINAM-05 2014-National)."

8.2.3 Policy succession

Policy implementation does not occur in a vacuum. It builds on a legacy of previous policies and legislation, as well as policy makers' practices, from their design to their implementation stages. Therefore, policies are linked throughout time and implementation can be positively or negatively affected by this. Based on the data, the problem of succession can include the following aspects that influence policy implementation: i) the role of policy and policy makers; ii) implementation structures; iii) policy change and innovation; and iv) policy termination and succession.

The role of policy and policy makers

A problem of succession can take place when citizens repeat perverse practices from policy makers that affect policy implementation. For example, two regional leaders from a Regional Indigenous Organisation claimed:

Regional authorities lacked vision. Instead of promoting regional development with their expertise on forests, they have systematically robbed the region. And all this permeates the attitude of the people in Ucayali, promoting perverse practices (037-AIDSESEP- 09 2015-Regional).

This view was also supported by a regional level expert on forestry linked to a regional research institute:

"Until now not a single Government has a clear vision. This current government does not have a clear vision for forest development, thus far it has a clear vision for agricultural development. This is why the land use zoning is so relevant, but this

Government is not abiding by that, it is placing oil palm over forests (006-IIAP-05 2014-Regional-05-2014 Regional).

Previous weaknesses with policy and the enforcement of legislation also reinforced certain behaviours on the ground, for example the clearing of forests. A Regional Counsellor from the Regional Council of Ucayali mentioned that:

As people know that Law Enforcement is weak, they continue clearing the forest and behaving the same way. A main issue is related to education (002-CR-05 2014-Regional).

The decentralisation process has led to the transition of authorities in the region. Further, there was a transition in the regional structures. A national level advisor to the Ministry of the Environment in Lima explained that:

Before the Regional Presidents and Regional Governments existed, what was before them were the Ministries in Lima and representatives of the National Government in the regions. There also were Regional Directorates of Agriculture, Production, Fishing and Mining, of everything. Then, when the regional governments are created, they had a Regional President and a Planning Unit for the environment and natural resources. Then, the main question became what to do with the Regional Directorates. A first approach was to claim they could remain there and be under jurisdiction of the national government. But this was questioned: why depend on the national government when we have created the regional governments? What happened in practice is that the regional authorities started to gain more and more control of those working in the Directorates, until they were assimilated into the regional governments. Furthermore, the old institutions were cohabitating with the new ones, and as the regional governments were autonomous, they could decide how to structure their institutions (017 MINAM 05 2014 National).

During this transition, the behaviours of policy makers could lead to bottlenecks in policy succession and thereafter in the coordination for policy implementation. This was also noted by the advisor to the Ministry of the Environment in Lima:

There are some officers who depend on the National Government, who do not feel identified with the Regional Government. And those are the officers from agriculture. These officers regard the Environmental Authority as part of an environmental agenda (only), and as they work on forestry they claim to be of agriculture. Therefore they do not speak to the environmental authority (017 MINAM 05 2014 National).

Chapter 8

The quote above notes how changes at the regional level to strengthen the environmental authorities have encountered obstacles as the officers from the agricultural sector limit their interactions with other regional officers.

When discussing the alignment of regional and local governments with national level policies, an expert from the German Technical Cooperation Agency in Ucayali underscored how local sheriffs, governors and national level officials shape policies:

With all the realignment of the planning tools at the national, regional and local levels, we start to foresee a solution for better management and investment in natural resources. Yet, afterwards each person handles priority in their arena based on their own understanding. I am referring to the local sheriffs, the governors and the national level. This is where policies come from (045-GIZ-09 2015-Regional).

The example above illustrates how changes in the policy planning tools faced limitations to the succession of policy practices and behaviours from policy makers at various tiers of government. Interestingly, the *lack of* succession can also be inconvenient for policy implementation. Especially as it can deter the implementation of long-term State policies. In this regard, a national level policy expert mentioned that:

The change of all the five regional presidents is like starting over. It is like starting a consolidation process from zero. And we used to say we had a problem we solved with the machos⁶⁸ and the muchos.⁶⁹ Making an allusion that the machos were those with much power, the investors, the big companies that had connections with the Ministers, the president, etc. And the muchos are related to agriculture as it is the main driver of deforestation, but it is politically incorrect to face many small producers, but they are the main drivers (...) Unfortunately, all the managers in the administration changed again, as in many of our countries, where there is not a public function career and everything has to start over again (CIAM – 29)."

The quote above highlights how frequent changes in public officers at the national, regional and local levels, or in other words *the lack of* succession can slow down implementation, as processes have to start from scratch again.

Another relevant example on how the *lack of* succession might have pre-empted previous attempts to reconcile productive and conservation activities is shared by the same respondent.

⁶⁸ This word refers to "male" or "brave male"

⁶⁹ This word refers to "several people"

When inquired about the existence of bargaining and reaching agreements between the Directorates of Economic Development and Natural Resources in the region, they argued that:

Yes of course, there have been meetings, reports on those meetings and agreements. Even approval on the agreements reached from the highest authority. These changes were considered until the last administration, nevertheless, when authorities change, there is not necessarily continuity (CIAM – 29).

The previous accounts on the lack of succession show that there needs to be a balance that allows a degree of continuity while also leaving room for growth and change. Policies and the role of policy makers are closely intertwined in the implementation process.

Implementation structures

The lack of communication and coordination between sectors on the ground is a main factor affecting implementation, as Stated by several actors from the region and from Lima. Yet, part of the problem comes from the previous implementation structure that was transferred from the centre to the regions. Consequently, regional governments adopted a sectoral structure as the one used by the national government. The former president of the Inter Regional Amazon Council mentioned that:

The administration of the Regional Governments had a large, previous inheritance, because it had organised itself around deconcentrated structures that the National Government used to have and the National State had little intersectoral coordination. And in the deconcentrated structures of the National Government the approach was sectoral. While Lima was in charge of formulating sectoral policies, in the regions there was no capacity to generate an agenda for sectors. Regions inherit the same scheme, as well as the same diseases. Then the organisation in charge of natural resources was on its own, the agency in charge of economic development was taking a different route. In sum, there is a very slow process of articulation of the different approaches in the territory. It is a process that has taken time and that in part led to the conformation of the Regional Environmental Authorities (029-CIAM-08 2015-National).

The regions needed a differential approach as well as a process of transition to allow the establishment of more interconnected structures. This perspective was also supported by a Regional Councillor who mentioned that:

Chapter 8

Although decentralisation aimed to have an emphasis on territorial development, policies were not focused yet on developing the territories. They were still operating under the old sectoral approach (002-CR-05 2014-Regional).

The aim of a territorial approach for land use management is based on the vision of locals that in some way collides with the structures coming from the national level. The transfer of functions within the decentralisation process is affected by the existing fragmentation of the State. A national level policy expert claimed that:

People have a general vision of their territory, which is not fragmented but the State is organised in a more fragmented way. That is a deficit because in the modernisation of the State, or in other words the public administration reform and even with the ARAU, it has remained in the regional level, but it has not reached the local communities (029 CIAM).

In the implementation process of the new Forest Law, there is also a gap between policy change and getting policy going on the ground, responding to what users really need in a timely manner. This is in part due to the weakness of implementation structures at the local level. For example, as emphasised by an engineer from the Executive Directorate of Forests and Wild Fauna in Ucayali:

The local authorities received the function of Local Forests. It will be a while until they start to implement it, but the people, especially the small timber extractors do not want to wait for long, they do not want to wait for years (020-DEFFS-09 2014-Regional)."

It is also important to note the separation of functions between the national and regional level made these transitions even more complex, especially within the context of decentralisation and after the creation of the regional governments. As highlighted by an advisor to the deputy Minister of Strategic Development of Natural Resources, in the process of transition and delegation of functions to the regions:

Many do not fully understand, or are not aware of this in detail, and they end up claiming that the Regional Authorities are the coordinating offices of the Ministry of the Environment. Our Ministry has nothing to do with those, as they are from the Regional Government (017 MINAM 05 2014 National).

Governments inherit previous data and information (or the absence of those). The lack of proper information and data also hampers policy implementation. A Unit Director at the Regional

Environmental Authority (ARAU) of Ucayali, mentioned that a challenge for policy implementation and especially regulation, is that:

There are no studies on biodiversity in the area, both of fauna and flora, I don't think we even have those at a national level. Those studies could be useful to regulate this a bit more, this is the main problem that we have (044-ARAU-10 2015 Regional).

There are also cases where there is information, but the official reports vary. In relation to this challenge the same respondent noted:

We have worked with two datasets, the Ministry of the Environment has two datasets or information on the topic of reforestation, one under the Directorate of Territorial Planning of the Ministry, that indicate that the rate of reforestation for Ucayali is 18,000 ha annually. Then, the Direction of Forests within the Ministry has another figure, below the one reported by the other unit. Then if you see this happening at the national level, if in a Ministry they have two sets of data, just imagine how we are at the local level (044-ARAU-10 2015 Regional).

Governments also inherit governance mechanisms. As noted by a national expert:

There is an extreme sectoral approach and centralisation of the administration. The decentralisation should lead to a change of viewpoint from a sectoral to a territorial emphasis. However, even in the region they continue to think by sectors. The regionalisation copied the sectoral model (039-EI- 06 2019-National).

Policy change and innovation

Another topic that emerged from the interviewees is the lack of policy change. In Ucayali, there is a perspective that issues are stagnant, that the proposals for forest management remain the same as twenty years ago. A member of the Agricultural Secretariat in Ucayali reflected upon the Forest Laws:

In our norms, in the past and the new Forest Law, when we talk about forests, we focus on timber. It disregards other important products, the environmental services provided by the forests (025-DRAgri-10 2014-Regional).

An engineer from the Executive Directorate of Forests and Wild Fauna in Ucayali agreed that the main focus had been on timber extraction, yet he made an additional observation:

Chapter 8

The past Forest Law (no. 27308) aimed to have a holistic approach to forest use including carbon, ecotourism and non-timber forest products. However, it did not happen in practice (020-DEFFS-09 2014-Regional).

It is evident that policy change is but a first step to transform forest use and management practices.

We receive the Law and we will apply it as we wish (...) we incorporate the modern so that nothing changes. Then we incorporate it as a discourse but not in praxis (032-PUCP-08 2015-National).

Forest activities remain with the characteristics they had 40-50 years ago: informality and illegality (044-ARAU-10 2015-Regional).

Given this lack of change, there is also little opportunity for innovation. A member of the Agricultural Secretariat in Ucayali highlighted the following reference to the Forest Law 27308:

There is a mismatch of the norms that cause limitations for assigning forest carbon certificates to non-concession forest users that were transitory and had no titles (025-DRAgri-10 2014-Regional).

A national level policy expert stressed both the achievements and the remaining limitations of new implementation structures such as the Regional Environmental Authority of Ucayali (ARAU):

The Regional Environmental Authorities aimed to encompass the environmental themes in one single institution that could oversee environmental matters in the region, in a horizontal manner. The idea was for every region to establish such an organisation with this type of emphasis. It has promoted a change: the manager can change but you have dismantled a bit the structure in the area of communication, which has been to link the management of natural resources with the area of the environment that were not coupled before. Yet the challenge that remains is to bring that emphasis to other productive areas such as energy, mining and agriculture (029 CIAM).

An evaluation of the Institutional Strategic Plan 2012-2015 of Ucayali found that there is an increase of the private sector in the region that are making use of the biodiversity by applying new technologies or that are conducting responsible forest use. According to this evaluation, this is mainly due to the environmental policies established by ARAU. It also finds that the collaboration of ARAU with the Regional Directorate of Education has been important to increase consciousness of the use and conservation of natural resources (Sub Gerencia de Planificación y Estadística 2015).

Policy termination and succession

Respondents agreed that the first Forest Law (no. 21147) had no concept of forest management, rather it supported cutting timber ‘anywhere.’ Then when the more recent Forest Laws tried to implement forest management practices, they found serious restrictions. This was strongly related to the restrictions for implementing the Forest Concessions. An anonymous respondent in the region highlighted that:

Infractions are very high in the concessions, with the titles of indigenous communities being the most problematic. All indigenous concessions had problems. It seems that part of the problem has been that there is a tradition ‘to cut, cut and cut’ whenever and wherever they want. It is hard for them to follow the rules (008-ARA-08 2014-Regional).

The absence of a concept of forest management was supported by an engineer from the Executive Directorate of Forests and Wild Fauna in Ucayali who said:

Law 21147 allowed a form of extraction that could take place anywhere and the State will reforest.⁷⁰ Those who had that experience of extracting but not really managing the forest resources were used to extract timber from any place. So many of those that got Forest Concessions did not apply forest management as they were used to a different way of extraction (020-DEFFS-09 2014-Regional).

Although there were honest attempts to target the small timber users, an advisor to the deputy Minister of Strategic Development of Natural Resources noted that:

As there were many people in the forest, a priority was the Forest Concessions for small timber users, many of them who were informal, and these mechanisms attempted to help them transition from informality to formality. But of course, this transition does not happen overnight, when we are used to doing things differently and many of them have lost their Forest Concessions (017-MINAM-05 2014-National).

This comment also underscores a relevant lesson for policy implementation, especially in a context of strong policy succession (as the one described beforehand) and informality. The lesson is that policies require transition mechanisms to support a progressive adaptation and adoption of practices and close follow-up with specific target groups. These target groups should include not

⁷⁰ Although not specified by the respondent, after reviewing the Law, the claim seems to correspond to Article 36

Chapter 8

only the beneficiaries, but also the regional and local authorities in charge of policy implementation.

Some of the implementation challenges are perhaps not only due to policy succession but also to practices from the State that weakened actors' active involvement. As noted by a senior university professor and environmental policy expert based in Lima:

The State has been telling people for 200 years: 'you do not manage, I allocate'. This has significantly weakened [local level management and knowledge]. This is why there are so many strong arrangements in fisheries [that had less intervention from the State in this form]. Forests is where people have been deprived of the management (032-PUCP-08 2015-National).

Now, moving into another subject, the issues linked to the termination of forest concessions show the continuation of the same old problems with forest use and management. According to a regional level expert on forestry and agriculture linked to a regional research institute:

Despite their cancellation, the same old problems remain. These refer mainly to timber extraction from non-authorized areas, which is also known as 'timber laundering.' This problem persists, illegal timber extraction is being covered up and the main timber enterprises buy this timber (013-IIAP-05 2014-Regional-05 2014-Regional).⁷¹

In the context of decentralisation, policy succession within the transfer of competences between levels of Government can lead to implementation problems. As shared by an engineer from the Executive Directorate of Forests and Wild Fauna in Ucayali:

In 2010, when natural resources were transferred, there were many problems of overlaps with the native communities and they were protesting a lot, most likely with due reason. As these Forest Concessions were allocated by the National Institute of Natural Resources (INRENA) in 2002 and 2003, we had to assume the general conflicts that already existed. And like those, there are several hot issues that have social underpinnings and that influence the environmental dimension (020-DEFFS-09 2014-Regional).

⁷¹ Reports from a UK based NGO note that a "pervasive laundering and corruption have been an open secret in Peru's wood trade for years." See: Environmental Investigation Agency. 2012. "Illegal wood from Peruvian Amazon is entering the USA." EIA.

Social conflicts in the region were a common problem mentioned by respondents from all the different types of organisations.⁷² When asked about whether the New Forest Law will help clarify or solve the issue of overlaps and reduce social conflicts the interviewee added:

I have heard that the New Forest Law speaks to what is to come, not to the problems we already have. For instance, it claims not to grant extension of Forest Concessions to native communities (020-DEFFS-09 2014-Regional).

8.2.4 Resources

Policy implementation requires adequate resources, policy instruments and a well-established chain. Besides the appropriate 'mix' of resources, efficiency in resource use is a prerequisite. Several respondents from Lima and the region agreed that the implementation of the forest law and other related environmental activities in Ucayali had been restricted by the lack of financial and/or human resources and information. Common reference was made to the restrictions for implementing forest concessions. These were described mainly as bankruptcy and timber laundering. Meanwhile some of the existing policy instruments prevented a better integration of forest and agricultural activities as well as the participation of small-scale forest producers and farmers. The data revealed two resource issues that affected policy implementation: i) inadequate resources and ii) unequal distribution.

Inadequate resources

Environmental policy implementation is challenged by the lack of sufficient resources, both financial and human. Yet, perceptions on the ground on this issue are contested. A main critique in Ucayali of the decentralisation process is the lack of/or slow transfer of resources to the region. Indeed, an engineer from the Executive Directorate of Forests and Wild Fauna in Ucayali claimed:

One of the main constraints after the transfer of functions is the lack of budget. They made a transfer of functions without a budget. Until now I consider that we are unable to implement projects that we otherwise could implement, but that are not because there is no budget to develop them. Foremost, our functions are not short term, we need to devise a mechanism for how to permanently reduce the impact of extractive activities (020-DEFFS-09 2014-Regional).

⁷² Journalistic reports indicate that of 196 social conflicts registered in Peru in 2018, 64% were environmental conflicts. In the province of Atalaya in Ucayali more than 50 indigenous communities claimed to the Government to obtain the land titling of their territories, vis-à-vis the forest concessions that overlap with their forests. See: EFE. 2018. "Perú registra 196 conflictos sociales en agosto, el 64 % de ellos ambientales." In *Agencia EFE*. Lima.

Chapter 8

This perception is shared by local leaders. The principal of an ecological school shared that:

If the State determines the relevance of the environmental education by a decree, a Law, not only words, it has to be applied to educational institutions. The words of the teachers are not going to do all the job. There are resources that must reach the schools, materials and many other things that the Government is still not allocating. It says 'do this', just commands but it is just words without allocating funding (010-EEA-05 2014-Local-05 2014-Local).

In this respect, an advisor to the deputy Minister of Strategic Development of Natural Resources agreed on the slow process of funds transfer, but described it as:

Some are the fault of the National Government, but others are due to the Regional Governments (017-MINAM-05 2014-National-05 2014-National).

In contrast, several stakeholders in both Lima and the region considered funds as sufficient but other factors interfered in their use. For instance, a leader from a regional indigenous organisation claimed that:

If we hire someone to conduct an economic microzoning of the region, the president will be requesting 20% and finally we have to leave it there because the budget won't be enough. Because a budget is allocated to do things correctly but that is precisely what cannot be done when they have to give bribes and this is what severely affects the region (037-AIDSESP- 09 2015-Regional- 09 2015-Regional).

Although in agreement about the existence of sufficient funding, a Councillor from the Regional Council of Ucayali had different views on why funds were not properly used:

The issue is that they [the funds] are not properly used and much is lost due to lack of continuity of priorities from one government to the next. This makes the use of resources less efficient (002-CR-05 2014-Regional).

The lack of continuity in government priorities and guidelines was also mentioned as a relevant aspect in policy succession. Therefore, this comment highlights two key aspects to consider for policy implementation: i) the limitations with resources are not only due to the amount of funding, but aspects related to the efficiency of budget expenditure are also fundamental and ii) the need for a balance in terms of policy renewal and continuation that supports budget use efficiency.

Another interesting perspective came from an officer from the Regional Agricultural Directorate who said:

The Peruvian State does not lack money. That concept that we lack money is a cliché. My perception is that we lack viable and marketable initiatives, or in other words, well grounded projects so that we can have access to those funds. This is what is missing, it is not that we lack the resources (005-DRAagri-05 2014-Regional).

Meanwhile other respondents from the region underscored that budget allocation is a political process. A Regional Councillor from the Regional Council of Ucayali mentioned that:

The national government has the economic power. Fiscal decentralisation is not effective yet. All the regional and local governments depend on the Ministry of Finances. They try to keep good relations. The assignment of funds does not cover all the existing needs. If you have more needs you request more and if they are your friend and/or like you they will allocate more money. That is also corruption (002-CR-05 2014-Regional).

The Regional Agricultural Directorate supports this view claiming that:

The application of resources is generally guided by political interests or in other words, the constituency. This is a subtle factor that determines where you make more or less investments. Then the reference is that you make a project, and how many voters do I have there? Obviously the most distant areas have less voters (005-DRAagri-05 2014-Regional).

This underscores that funding allocation is prioritised not necessarily by a policy agenda, but more by political interests. This in turn can affect the implementation of forest policies in specific departments and provinces that have less population (constituency), but that are critical for forest conservation and sustainable management. Furthermore, funding allocation can become a source of competition between sectors rather than integration. According to an officer from the Regional Agricultural Directorate:

Here there is a problem that you will see, everyone has the Regional Joint Development Plan, they foresee where every sector wants to go, each one, but when you review the plans for each sector you will find that some are not linked with the other sectors. Not because they do not have a common goal but rather because each sector implements at a different pace (...) this leads to lack of coordination because if you want to reach something jointly, and the other one is delayed (...) you cannot ask your sector to wait for who is running behind.

You cannot wait because institutions compete for funding. Whoever implements more, will receive more funds (...) They will take away funding from some to give it those who are more effective, that leads to competition. So sectors can come to agreements, but in practice, everyone has their own interests (005-DRAagri-05 2014-Regional).

The situation of weak integration among sectors coincides with the view of an advisor to the deputy Minister of Strategic Development of Natural Resources in Lima who mentioned that:

Everyone makes progress with a certain degree of coordination, but each one advances on its own agenda (017-MINAM-05 2014-National).

Unequal distribution

One aspect of unequal distribution of resources is the unequal access to information. Not surprisingly, the lack of cooperation between institutions leads to the poor flow of information and dispersion between different levels of Government which hampers the management of the territory from a landscape perspective. A national expert from the Peruvian Society of Environmental Law highlighted that:

A very interesting topic is information. Information does not flow. A few years ago the regional authorities had the responsibility to allocate the forest concessions. Therefore, what happened is that the National Authority that handled this before, had a full catastro⁷³ of who received the concessions and all the traceability, and this was passed to the regions. The regions have now been granting the concessions, but I am not sure if they have the information of what has been granted vis-à-vis the national catastro. The regions have not received the information, or the National Government doesn't want to give it, or they forget, they never respond to their letters, anyhow (...). Therefore, the information between what is regional and what is national does not flow, and this takes place between sectors, but also within the same sector. It is a cumbersome topic, it is not necessarily updated, and we have always said that a unified catastro, at least at the regional level, would be very useful. From my perspective, one of the main issues is the lack of flow of information (018-SPDA-05 2014-National-05 2014).

An officer from the Regional Agricultural Directorate shared his views in reference to the dispersion of information across sectors:

⁷³ This refers to a statistical census which contains the economic, physical and legal description of the assets of a population.

What happens in the country, and this is not only agriculture, the information is spread out apparently due to its characteristics in the different offices in charge. For example, if there is a mining area, the Ministry of Energy and Mining will have the information (005-DRAagri-05 2014-Regional).

There are various challenges related to information, and these includes information sharing, dispersion and weakness of databases. On the latter, a government report States that the annals of SERFOR have incomplete information on the forest permits for indigenous communities (OSINFOR 2014, p. 20). Furthermore, a good example of the point highlighted above, is the socio-economic zoning which was a process that took several years and did not necessarily build on existing information (see Section 1.3.2). For instance, a regional level expert on forestry linked to a regional research institute mentioned that:

One of the goals was to see the forestry potential and locate the areas to target Forest Concessions and areas where they should not be located within the socio-economic zoning. Recently they came to our research institute to talk to me about the forestry zoning, and then I say 'but this has been done already with the previous zoning' (006-IIAP-05 2014-Regional-05-2014 Regional).

8.2.5 Coordination

The implementation of the Forest Law and environmental policies in the Peruvian Amazon cannot happen without the dialogue and coordination between sectors. Various actors from the region and Lima suggested that there has been weak coordination between sectors and levels of government and that each one has its own agenda. Consequently, several respondents from the local, regional and national levels agreed on the existence of activities that overlap in the territory, causing (among other issues) social conflicts over land use. The data shows some main trends that limit implementation which are: i) the hierarchical relationships across levels of government and tensions with the actors in charge of funding allocation; ii) the absence of dialogue and coordination between sectors; iii) the transfer of competences within the decentralisation process and iv) too many actors and too many links in the chain.

Hierarchical relations rather than collaborations

The interaction between actors in the various tiers of Government shows that there is unequal power dependence, leading to the weakening of institutional credibility and also to less effective forest monitoring on the ground. If there is dialogue between sectors, the playing field is generally

Chapter 8

uneven, causing some to lose credibility. An officer from the Regional Office for Natural Resources mentioned:

What we have is regulators, the institutions that monitor and create norms, which are the Ministries. We are working hand in hand with the Ministry of the Environment and Agriculture, but I would not call this an alliance, it is rather the hierarchy (004-GRN-05 2014-Regional).

It is interesting to observe that as there are actors in Pucallpa (the region) who perceive that Lima is imposing decisions, at the local level, actors also perceive the region is dictating rules to them. For example, as claimed by a leader from a regional indigenous organization in relation to the creation of conservation areas:

There has not always been coordination. What happens is that when they [referring to those at the centre] create the rules of the game, they do it on their own. This is the point and this is why many times they contravene the rights of the communities. For example, in the indigenous community of Junin Pablo, locals cannot cast for fish. Why? Because those things have not been discussed, the rules have been imposed (037-AIDSESEP- 09 2015-Regional)

These situations weaken institutional credibility, which also hampers the implementation and acceptance of policies. The former president of the Inter Regional Amazon Council, when discussing the role of the Council and its interactions with the various political actors, shared that:

With the Ministry of Economy and Finances [MEF -by its acronym in Spanish] we had a strong clash. Because in every country these Ministries tend to feel like they own everything and at the end, they are the ones in charge of making decisions (...) At one moment MEF tried to apply a policy to substitute tributary exemptions in the Amazon. We made a proposal on why this policy had low probabilities of being accepted in the region, even more if it was proposed by MEF (029-CIAM-08 2015-National).

As the MEF is directly in charge of the allocation of funding, the relationship with this Ministry was very important for Ucayali, but generally the comments from interviewees referred to having tense relationships.

Absence of dialogue and coordination

Ucayali faces an institutional fragmentation taking place in several fronts: one relates to plans or policies (Annual Operational Plan and Regional Development Plan); a second front in which a fragmentation is happening are the various offices within the Regional Government and with other

levels of government; and the third front is between public officers. As described by the leader from a regional indigenous organisation:

If you go to the Regional Government, to begin with, their Regional Joint Development Plan is dumped there [on the table or on the floor], the Annual Operational Plan is also dumped on top of the other, and, as the various documents are fragmented, all the directions and their sectors are divorced as well. This is an institutional problem. There are even fights between officials (037-AIDSESP- 09 2015-Regional).

This situation is of course not exclusive to the region. An officer from the Regional Office for Natural Resources shared that there are frictions between offices in the Ministry of the Environment in Lima:

There are frictions, even within the Ministry of the Environment. Especially between the programme of forests and the one in charge of land use planning (004-GRN-05 2014-Regional).

This can also compound the challenges to implement land use planning, as both programmes were mentioned as taking a relevant role in its operationalisation. This example is also supported by the Director and deputy Director of a Peruvian Civil Association working with rural communities based in Lima who highlighted that:

With the topic of forests there is certain tension between the Ministry of Agriculture where SERFOR is located, which is the main institution for forest management, and the Ministry of the Environment, which holds the Directorate of Forests (conservation, biodiversity, etc) (033-IBC-08 2015-NATIONAL).

The mandate for forest work is dispersed among a myriad of institutions that makes this coordination even more complex (See Section 1.3.2 and Footnote 10). Furthermore, in some way it challenges the integration of a unified vision and approach on forest use and management.

Several stakeholders in Ucayali agreed that there is no dialogue between the offices of agriculture and natural resources in the region. A regional level expert on forestry and agriculture linked to a regional research institute shared their perspectives regarding the fragmentation between the Regional Government offices:

I think that the missions from the Government are not harmonized. As a government it should have a mission. The motto of this government is to be an ecological region, but what would be interesting is that, if that is the motto, that all the offices aim to support it in some way with their activities, each one adding on its own component. However, what I observe

Chapter 8

is that each one does things to their best, but at the end there is no union, there is nothing concrete (013-IIAP-05 2014-Regional-05 2014-Regional).

Likewise, a Regional Councillor from the Regional Council of Ucayali shared his views on the disjunct between the local and regional governments:

In the region we have problems too, which is the discord with the local governments. The regional government does its work, as well as the local governments, both the regional and the local governments do their job, but there is no ground on which to find agreements on common goals (002-CR-05 2014-Regional).

The Councillor also noted some of the possible structural causes of these dynamics:

But the norm is like that, each one goes on its own. When they [the regional governments] define competences, they assign more competences on urban planning to the local governments, and when the regional governments want to enter in what is the competence of the local government, they need to request permission from the sheriff, and the sheriff, if she wants, can say 'no, here you can't... (002-CR-05 2014-Regional).

Implementation faces limitations to integrate a development agenda for forests encompassing the regional and local levels. In other words, in some occasions the limitation is not being able to implement policies *per se*, but to do it with a multi-level approach. The view from a member of a national NGO that works in Ucayali builds on the situation raised by the Regional Councillor:

It always happens that they [the local governments] are not aligned to the Regional Joint Development Plan. The plan has some data, statistics, but there is not a route that the local governments must follow, because everyone comes in with their own proposal. They will be focused in fulfilling this proposal, regardless of the development plans for the region. There is not a global thinking. Well it is global for their jurisdiction, but not for the region (...) the recommendation would be to explain local governments what they need to do, which is the route, which needs to be taken to attain the goals in the Plan (024-PRONAT-09 2014-Regional).

This comment notes the limitations for articulating a comprehensive policy implementation approach that is truly multi-level in nature. At times critics point to the disconnect between the national and regional governments and often there is less emphasis on the dynamics between the regional and local governments. But these examples show that even in the case of policy instruments designed in the region, there is dispersion and weak coordination with the local authorities.

A relevant example of the disconnection between the various offices within the Regional Government is the overlap of roles (or substitution) both in the region and the national level. There are three relevant cases to exemplify this. First, in Lima, the former president of the Inter Regional Amazon Council mentioned that:

The Ministry of the Environment is aiming to work on productive issues directly, especially in the area of business. Instead of negotiating with the Ministry of Agriculture so that it will adopt this perspective in its policies, it is directly promoting projects with this goal (0029-CIAM-08 2015-National).

Second, a consequence of the weak dialogue and coordination is the overlap of activities in the territory driving social conflicts. For instance, an officer from the Regional Office for Natural Resources pointed on a map to an entire area assigned for mining, even though there are Permanent Production Forests. When questioned about who took these decisions they responded:

I think it is the Directorate of Energy and Mining, which depends on the Ministry of the Environment, that made those decisions (004-GRN-05 2014-Regional).

Third, an example from Ucayali shows the interest of officials from the agricultural sector in substituting the roles of the forest sector. An officer from the Regional Agricultural Directorate mentioned their interest in working on forest research for timber extraction, claiming that:

There is the Directorate of Natural Resources (...) they are supposed to be overseeing all related to natural resources (...), but when you review the actions, they only perform three main duties: provide authorisations, registration and control. But the topic of forests is not only about those three actions. There is another action that is even more important: entrepreneurial development. And this institution that has the mandate is not doing anything related to that. Therefore, that area is deserted and is taken by private enterprises that collaterally coordinate with the Directorate of Natural Resources. Therefore, the organic infrastructure is creating a unit to work on this topic. We are going to use another name so that it does not bother the Directorate of Natural Resources, something like development of forest resources (005-DRAagri-05 2014-Regional).

This lack of coordination also reduces the chances for gaining more efficiencies in policy implementation, especially in terms of reducing duplications in budget expenditure. When questioned about the coordination with the Directorate of Natural Resources, the officer insisted:

Chapter 8

This would not lead to a duplication of efforts since no one is working on these activities. It is vacant. It is something we want to see on the way, but at the onset, we want to have the mandate (005-DRAagri-05 2014-Regional).

This reflects a competition for leading processes, rather than the establishment of more avenues for inter-institutional collaboration. During the creation of the ARAU the lack of dialogue and coordination was also noted. An engineer from the Executive Directorate of Forests and Wild Fauna in Ucayali commented:

Right now all the directorates within the ARAU are working towards separate directions, the one they consider more convenient or where their problems appear. A strategic direction is required to help them coordinate better (020-DEFFS-09 2014-Regional).

National stakeholders also supported the view regarding the lack of coordination within the same levels of Government. For instance, an advisor to the deputy Minister of Strategic Development of Natural Resources shared that:

At the regional level there is a problem of communication between the different areas. Therefore, in a country where informal activities have so much weight in the economy and in self-employment, this is complicated. And of course, regularly there are many promises offered that in reality are not sustainable (017 MINAM 05 2014 National).

Yet dialogue and coordination within and between organisations are also dependent on politics. As noted by a regional level officer:

ARAU won't change much of the current forest management and policy implementation. So far we have not established any dialogue.....it will depend on 'who is in charge' (022-OSINFOR-09 2014-Regional).

An officer from the Regional Office for Natural Resources emphasised on the weak coordination related to other economic activities such as oil extraction:

The Directorate of Energy and Mines [in the Regional Government], divides the region into plots without consultation with anyone in the region, as oil is of national interest. They do not care if there is a conservation area or other types of concessions. Then come the 'loose problems' as we call them in the region (004-GRN-05 2014-Regional).

National stakeholders also agreed on the weak coordination on the ground leading to overlaps. A national expert from the Peruvian Society of Environmental Law highlighted that:

The mining sector usually looks at mining and does not care for anything else. Meanwhile the forestry sector is addressing forestry and does not know what is taking place with other sectors and the oil sector likewise. Obviously all overlap, one over the other, and no one speaks to the other. Considering this, it is interesting that the new Forest Law has a specific article [see below Article 62] about this issue. That article basically mentions that when other rights are created, it is mandatory for them to coordinate to make sure there are no incompatibilities in the land use. So that the environmental impact studies can be in some way compatible between the different land uses according to the different resources (018-SPDA-05 2014-National-05 2014).

The regulation of the new Forest Law has several references to coordination and some articles explicitly refer to coordination mechanisms. For example, Article 62 notes the required intersectoral coordination to grant titles and rights over natural resources and lists several institutions including SERFOR, the National Authority of Water, the Ministry of Commerce, among others (MINAGRI and SERFOR 2015), which need to be involved in this process.

Although technical aspects such as information systems are required to improve implementation, much is needed beyond these. As was the case for dialogue and coordination within and between organisations, politics is a ‘concealed’ yet crucial driver that limits coordination and underlies the rise of social conflicts. An advisor to the deputy Minister of Strategic Development of Natural Resources in Lima shared that:

Many of these Regional Presidents are more political than technical, and by aiming to find ways to remain in power, they support popular processes that many times are not technically supported. The main social conflicts in Peru start at some communities and then the Regional Presidents are the ones that remain ‘holding the flag of the conflicts’ (017-MINAM-05 2014-National).

The transfer of competences within the decentralisation process

The transfer of competences to the regional level shows two main challenges for policy implementation. One is the institutional framework and the second is the weak integration between sectors.

There were references to a weak institutional framework that did not support the decentralisation process. An advisor to the deputy Minister of Strategic Development of Natural Resources shared their point of view on this issue:

Before there used to be a National Electoral Council (CNE by its abbreviation in Spanish), which was the National Centre for Decentralisation. The president of the CNE could participate in the Council of Ministers, despite the fact that he was not a Minister. However, that institution was abolished, and they created a centralisation office. So there is no political power and some of those who support decentralisation claim that institutions have been weakened precisely to stop the decentralisation process (017 MINAM 05 2014 National).

The interviewee also emphasised the need for a solid institutional framework for decentralisation to work:

If you have as a State Policy, a decentralisation policy, you must have that level of coordination. Otherwise, you will have Ministers doing one thing and officials from the Ministers on the other side doing others. In the Ministry of the Environment, we have coordination processes with the regions. But again, this really depends on personal decisions, is not a decision made by the State (017 MINAM 05 2014 National).

With regard to the process of transferring competences from the centre to the regions, the operationalisation of functions between the Regional Government Offices is quite fragmented. An officer from the Regional Agricultural Directorate mentioned that:

Beforehand the Regional Agricultural Directorate handled environmental issues in the model that the Ministry of Agriculture used to have. But when the functions are transferred to the Regional Governments, they do not have the units of operation. Some responsibilities have not been transferred, and others have been separated and assigned to other units. This is why in the Regional Government there is a Directorate of Economic Development which is linked to the Directorate of Agriculture and there is also a Directorate of Natural Resources. Then, when you operate in the field, the directions are not synchronised, they have different emphases and perspectives on how to approach problems. This is the issue, as the functions are divided (...) if the Directorate of Natural Resources sees a forest undergoing deforestation to set up agricultural activities, they will say 'hey, you have to act because this is your area.' Each one has its fixed responsibilities, when in reality this should be integrated to view this theme all together (025-DRAgri-10 2014-Regional).

It is also important to note that although some functions have been transferred, regional governments are still expecting to receive support for policy implementation. When asked about the policies that are aiming to reconcile productive and conservation goals, an engineer from the Executive Directorate of Forests and Wild Fauna in Ucayali claimed that:

We need to do the land use planning (...) and look outside the forests of permanent production for Local Forests or concessions for conservation. It is a challenge to grant these titles, but even more, to have those work. I think that is the challenge, so that we are supported to keep the security, management and conservation of these areas (020-DEFFS-09 2014-Regional).

Furthermore, the same respondent underscored that the transfer of functions to the regions was not yet complete:

SERFOR used to have the functions that we (DEFFS) have now. SERFOR had those at the national level and still there are some regions where those functions have not been transferred yet (020-DEFFS-09 2014-Regional).

Creating policy integration across levels has the aim of synchronising a thematic agenda. However, the implementation of a fluid multi-level dialogue faces constraints. The perspectives from a regional level expert on forestry and agriculture linked to a regional research institute indicate that:

There are initiatives from the government, but I do not see linkage or interaction with the lowest tiers (los de abajo). Meanwhile, [los de abajo] claim they are not being seen, that they are abandoned and have their problems. Then 'the ones above' [los que están arriba] say: 'we are administering, holding dialogues and doing this.' But in reality, there is no dialogue between those actors, there is separation, it is a power issue. There is a relationship that is not very direct or clear. I see there are good intentions from both sides, but it still doesn't happen (013-IIAP-05 2014-Regional-05 2014-Regional).

A relevant observation in reference to the management of Local Forests, which portrays an attempt to break through the power dynamics of *los de abajo* and *los que están arriba* is that local governments received the mandate to administer Local Forests. As indicated by an engineer from the Executive Directorate of Forests and Wild Fauna in Ucayali:

Local Forests are not within our responsibility as a Regional Government. They go to another level, of the local government, as it [Local Forests] do not depend on us (020-DEFFS-09 2014-Regional).

When asked whether the Regional Government collaborated with the local government, the engineer asserted:

We have called them, we have told them which are their functions and which functions have already been transferred to them. It is only pending for the rulings to be approved and they have to do the implementation (020-DEFFS-09 2014-Regional).

Chapter 8

With the decentralisation process, they shared stories about the slow integration across levels of government, even within the same sector. An engineer from the Executive Directorate of Forests and Wild Fauna in Ucayali said that the first time they held a meeting of integration with the Ministry of the Environment around a strategy for forest conservation and climate change mitigation was recent (in 2014). Then the interviewee added:

We engage frequently with SERFOR, or here with the Natural Resources Direction. But not with the Ministry of the Environment or the Regional Direction for Economic Development (020-DEFFS-09 2014-Regional).

In contrast, the vision from the national level is quite different and they claim that they are giving regional governments independence. An advisor to the deputy Minister of Strategic Development of Natural Resources mentioned that:

We have an area here in the Ministry which is the Direction of Policy. What we are doing is approaching the regional governments and tell them 'we are here, if you want support, let us know how you would like to work with us. What type of models would you like? (...) It is, let's say, according to the demand of the client, because what we don't want is that they feel that we are interfering with their decisions. At this point, I expect that they can be aware and make any corrections if there are any wrong decisions in this. The last thing we want is even being blamed about [their mistakes] too.

Finally, with respect to the critics of the decentralisation process, an expert from the Ministry of the Environment in Lima shared an interesting anecdote:

Some still believe that they can sign a permit in an office and administer a resource that is a 1,000 kilometres away. I like to quote the ex-premier of our Cabinet, now leader of the opposition. Once they asked him: 'why do you insist on decentralisation, if the regional governments have so many weaknesses and are performing poorly?' And he replied: 'Are we (the Central Government) doing much better? It is not that we have made few mistakes, we have already made too many' (026-MINAM- 09 2014-Regional).

This highlights the acknowledgement from some high level officials from the centre, that implementation of natural resources policy needs to have a multi-level governance approach. Furthermore, it also recognizes that even at the centre there has been a learning curve to overcome institutional weaknesses and improve policy performance.

Too many actors and too many links in the chain

Several respondents in the region and the communities (REU06, REU05, 020-DEFFS, 006-IIAP-05 2014-Regional, 001-OT-05 2014-Regional; 005-DRAagri-05 2014-Regional; 006-IIAP-05 2014-Regional; 001-OT-05 2014-Regional; 005-DRAagri-05 2014-Regional; 024-PRONAT-09 2014-Regional; 023-SERNANP-09 2014-Regional; 041-Leader Junin) reported the presence of a myriad of actors in the field supporting forest and agricultural activities (mainly NGOs and donors), whose actions may overlap and are not necessarily aligned with national and regional policies.

The real limitation, according to an advisor to the deputy Minister of Strategic Development of Natural Resources is:

In Ucayali there are forest roundtables, there must be 30,000 working groups, because everyone goes to the meetings. And yes, in these scenarios relevant issues are discussed. But the real problem is that what is discussed is not finally put into practice (017-MINAM-05 2014-National).

This account is useful to understand the complexities of the coordination of policy networks towards policy implementation. Yet, this myriad of actors can also compensate for the lack of State capacity in the region, as well as the absence of State presence. There were stories shared in this respect by several actors in the communities. A leader from the community in Puerto Libre (REU-006 Focus Group) frequently mentioned the support of NGOs in natural resources management and of USAID guiding their conservation efforts. In this account, there was no reference to regional or local authorities, even though the Regional Government's role was explicitly mentioned in the question asked:

We are doing management through the project Madebosques [funded by Dutch Aid], that was 10, 15 years ago. Back then the community was involved in management, so that remained, and we had support from USAID for conservation, we had that incentive for forest management.

Certainly, there is a significant presence of and influence from international organisations, such as USAID and UNODC, involved in the substitution of illicit crops. An officer from the Regional Agricultural Directorate mentioned that a set of oil palm plantations started back in 1987 by a small

group of farmers, but then the international cooperation intervened to expand the crop⁷⁴ (005-DRAagri-05 2014-Regional). This perception was supported by the leader of a local *colono* community by the highway:

Well, now we are not so afraid to talk about it. We used to live harvesting coca, that was our way of life (...). Then there was the perception that coca was strong. We will always be grateful to the United Nations and USAID who incentivised the oil palm crop. At that moment we were attached to coca, as it is easier for us to grow coca, and in a few months we have cash (...). Then USAID came to convince us and empower us in licit activities, the work with oil palm (REU-006 Focus Group).

There are several links in the forest chain that restrict policy implementation. For instance, in the case of the allocation of Forest Concessions for private investors, the regional government has limited decision making power when it comes to giving approval for concessions. Nonetheless, it will be expected to have certain supervision roles. This was indicated by an officer from the Regional Agricultural Directorate:

The Regional Direction of Natural Resources has relatively little influence in decision-making, because what happens is that the entrepreneur comes to the region, identifies an area and makes the proposal through the Regional Direction of Natural Resources. The proposal is reviewed formally in terms of its contents and once the review is finalised, they have to send it to Lima who at the end approves it or not. (...) Then, the other function will be when the proposal comes back. The Regional Office will then be in charge of supervising certain aspects, but if there is need to apply a sanction it will be decided in Lima. The roles are very biased (005-DRAagri-05 2014-Regional).

8.3 Discussion and Conclusions

Going back to the main query raised in this chapter, why after several decades of research on natural resources governance and policy performance do we seem to be tackling the same 'old problems'? In order to address this query, this chapter identified the main gaps in forest policy implementation and the underlying politics that affect implementation.

This conundrum is explained, in part, by the existing patterns of power dependence. As was the case for the previous case study, power dependence underlies the dynamics taking place in

⁷⁴ A report from UNODC highlights their promotion of palm oil activities in Ucayali since 1999. United Nations Office on Drugs and Crime, UNODC. 2009. "Experiences of Alternative Development."

Ucayali in relation to forest governance. Power dependence is at the core of three main theoretical approaches used in the last two case studies: network governance, metagovernance and implementation. Power dependence “treats policy networks as sets of resource-dependent organisations. Their relationships are characterised by power dependence; that is, any organisation is dependent on other organisations for resources, and to achieve their goals, the organisations have to exchange resources” (Rhodes 2017b, p. 44).

The underlying politics also contribute to this ongoing conundrum. Hill and Hupe (2014, p. 165) point to the literature on policy instruments and identify that choosing policy instruments is a political as well as a pragmatic matter. When analysing the politics of implementation, this is exactly what the dynamics of the integration of the regions in a broader political agenda in Peru showed. It became more a political rather than a pragmatic choice, perhaps because the regions felt underrepresented in the agenda building process of this policy instrument. The process also encountered resistance related to relinquishing existing political schemes.

The politics of implementation are also closely interlinked with deep-rooted inequalities in the social structures of Peru. When discussing the role of policy and policy makers, the reference to the *machos* and the *muchos*, connotes the existing social classes. There are some clear preferences to work with and/or towards the interests of those who are more powerful (*the machos*).

In Peru, policy ambiguity also contributes to the continuation of ‘the same old problems’ in policy implementation. For example, this chapter illustrated the unclear allocation of roles and responsibilities in relation to the Forest Law across levels of government (see Section 8.2.1). This finding echoes with the contribution of Hill and Hupe (2014, p. 187) on operational governance and managing implementation where clarity on the activities and domains of competence is essential.

Furthermore, this case study showed evidence of weak coordination that also contributes to the limits in policy implementation. First, the fragmentation of regional development policies lacking a cohesive approach to forest development. Second, the mandate for forest work is dispersed among a myriad of institutions at all levels of government which complicate coordination efforts. Third, the above is also aggravated by the absence of dialogue between the offices of agriculture and natural resources in the region. As indicated in this chapter, implementation faces limitations to integrate a development agenda for forests encompassing the regional and local levels. In other words, in some occasions the limitation is not being able to implement policies *per se*, but to do it with a multi-level approach. The examples in this thesis show that the coordination dilemma in Ucayali goes beyond the conception within MLG which regard them as “the extent

Chapter 8

that policies of one jurisdiction have spillovers (i.e., negative or positive externalities) for other jurisdictions” (Hooghe and Marks 2003). What implementation actually shows, is that the coordination dilemma is not only about policy spillovers between jurisdictions, but that it also needs to pay close attention to at least three core conditions: one, policy fragmentation across institutions and levels of governance; two, lack of mechanisms to promote dialogue and collaboration between actors; and three, the absence of harmonization of policy goals across critical sectors that influence forest governance. This also means that is relevant to create proper arrangement with other policies and institutions. As noted by Pressman and Wildavsky (1973, p. 133), “no suggestion for reform is more common than what we need is more coordination” and the identification of these core conditions can guide the development of concrete policy recommendations to improve coordination.

Furthermore, another critical element for policy implementation, is that in the Amazon the coordination dilemma refers to both horizontal and vertical coordination. This case study underscored policy inconsistencies which translated in the lack of a comprehensive approach to the management of natural resources. From the perspective of our forests, this comprehensiveness underpins sustainability, which involves not only policies responding to the needs of the Amazon ecosystem, but ultimately it is an element that is fundamental to solve the pressing issues of our time (see Section 1.1).

But this case study also demonstrated another angle of coordination, which can provide an alternative to overcome this dilemma (also analysed in Chapter 1). There is evidence from the accounts of regional and especially of the local actors of the presence of a myriad of non-State actors who are providing several goods and services, as well as supporting forest governance. Even though we can find that the State is still the main provider of goods, services and regulations, more of these are now provided by other types of actors such as private entities (Torfing et al. 2013, p. 123). As we find that the role of the State is changing, there is more room for policy building through bargaining and interaction in networks and alliances, which entails more attention being given to ‘interactive governance arenas’ (Torfing et al. 2013, p. 123). This possess an interesting example for top-down and bottom-up policy implementation analysts, as there is an adaptation on the ground through these interactive governance arenas of the choices made by political leaders, as well as an emergence of governance options from the bottom-up (Hill and Hupe 2014). This is evident in the case of programs coordinated by regional and local actors not only to define but also to guide policy implementation, such as those funded by the international organisations.

The growing role of non-State actors shows that in policy implementation the central government is not necessarily the main influence on policy outcomes, which supports the bottom-up literature on implementation (Cairney 2012, p. 37). This case study also shows three main challenges for these growing interactive governance arenas. One is the presence of too many committees which can disperse management efforts. Another is the challenge of putting the agreements reached into practice. The third challenge are the loopholes in the consultation processes. These challenges highlight the need to “shape and enhance the self-governing capacities of decentred governance arrangements” (Torfing et al. 2013, p. 124). Implementation needs to be fully engaged with network governance to align all these non-State actors towards the fulfilment of policy objectives. Identifying the complementarities between the actors on the ground could contribute to more effective policy implementation. On the last challenge noted, respondents claimed that the rulings of the new Forest Law were undergoing previous consultation. Local level respondents acknowledge these consultations, but only for the rulings and not for the Law. The loophole is indicative of the need for strict consultations with the draft of the Law as well, if it is intended to be a genuinely participatory process. Consultation is a relevant strategy for policy implementation. It builds trust and ownership. In such a complex context, building ownership can become one of the cornerstones to tackle the ‘same old problems’ of implementation. Or in words of John (1998, p. 204), it is a key ingredient to “turn policy intentions into action.”

This chapter underscored that forest policy implementation in the Amazon faces context specific challenges. This is why the frontier economy will be explored in the next chapter.

Chapter 9 Multi-level governance and implementation at the frontier

The context in which MLG and implementation takes place is complex. This complexity must be contextualised to advance understanding of policy implementation in the Amazon. The previous case study chapter offered an overview and analysis of some of the main policy implementation gaps. Those gaps helped to explain, in part, the implementation challenges that policies encounter. However, there are other barriers to implementation in the Peruvian Amazon frontier and this chapter aims to uncover those. Governance and implementation literatures focus on affluent countries and this chapter is a statement on the limits of the existing literature. It is the last findings chapter in this thesis, and it introduces one additional theme which is relevant to understand the limits to MLG and implementation: the covert networks of the frontier economy (also see Section 7.5).

9.1 Frontier Economy

The analysis of the interview data shows that the existing literature on implementation and governance disregards the unique challenges of frontier regions (see Section 3.3). Such regions have characteristics that undermine 'Western' notions of good implementation. I suggest that the future lies in analysing policy implementation in diverse policy contexts. In the context of frontier economies, such analysis must confront the consequences of: i) migration and economic boom; ii) informality, corruption and market pressure; iii) weak rule of law; iv) unfair market conditions; and v) unequal distribution of benefits.

9.1.1 Migration and Economic Boom

The Amazon is perceived as a land of endless economic opportunity and with resources ready to be reaped. An officer from the Regional Agricultural Directorate shared the story:

In the 1960's it [the Amazon] was seen as a vast territory for cattle raising, where the costs of investment were considerably low. This vision was inserted by professionals from the universities in Lima that were trained in the United States (...). These professionals suggested that the main cattle area was the jungle, and why the jungle? Because it is wide open, there is food in a fast way and with no cost. Here a seed drops and it grows, you can eat and there is no need to do much investment in grasslands. This is why this area has deteriorated, because of the installation of large extension cattle farming. Only in the 70s

did the concepts of the fragility of the Amazon soils start to rise. What happened is that it wasn't true that the grasslands will renew themselves. Once you broke the cycle of the forests and water, it could become a desert (005-DRAagri-05 2014-Regional).

This underscores how the development and land use approach of the Amazon was dictated by specialists from Lima that at the time overlooked some fundamental concepts for the sustainability of this ecosystem. It is in line with the contribution of Barbier (2007) on the frontier which are seen as areas with an abundance of natural resources that provide economic opportunities.

This abundance of natural resources is not only regarded as an opportunity for agriculture, but also for forest-related activities. As noted by the Regional Director of the Mining Office:

In the decade of the 80's, Ucayali was known as the industrial capital of timber (012-DM-05 2014-Regional).

Historically, there has been extraction and commercialisation of products from the Amazon, driving social and economic transformations in the region. Migration combined with fast economic change led to the establishment of cities in the Amazon. The region became an epicentre for economic growth. Both national and regional stakeholders shared their views on this:

The growth of the big cities in the Amazon has been linked mainly to the exploitation of natural resources. At that time (end of 19th century), it was the rubber (017-MINAM-05 2014-National). Pucallpa is a strategic logistics centre of the Amazon. The Ucayali river and as we have a highway connected to the capital, it becomes a logistic place and we are strategically located (006-IIAP-05 2014-Regional).

This historic trend has accentuated in the past 20 years, when Ucayali has faced exponential social and economic change. Strong economic growth linked to the expansion of economic activities and a demographic boom was described by several respondents. Migration from the highlands (*La Sierra*) to the Amazon was high, especially during the times of terrorism in Peru.⁷⁵ As noted by several respondents, migrants brought along their agricultural traditions, while people from the Amazon did not have a strong agricultural vocation. Those from *La Sierra* used practices such as slash and burn to establish their chacras.⁷⁶ An officer from the Regional Office for Natural Resources noted that:

⁷⁵ Peruvians frequently refer to the time of terrorism. This was the time of internal conflict in Peru from 1980-2000.

⁷⁶ Referring to an agricultural field

Most people in Ucayali are migrants. There are not many people that are really locals (...) 20 years ago the first street of Pucallpa was paved. In the 1980s there were about 50,000 inhabitants, now there is over half million and the highway has a lot of pressure. You can see a lot of cattle and agriculture and almost nothing of forest (...) and waves of migration (004-GRN-05 2014-Regional).

The growth of the infrastructure in Ucayali enabled the expansion of the frontier, in turn causing deforestation (Nepstad et al. 2002). Moreover, according to a local respondent, the issue was the way migration was promoted. They pointed out that areas with abundant species of fauna and flora are now depleted. The principal of an ecological school shared:

When they started to open the highway (...) the Government instigated a migrant wave to the jungle. But here what was missing is for the Government to prepare people by building awareness of natural resources management. Land was provided, each person managed it in 'their own way' and forest destruction prevailed (...) there used to be big vegetables and fish, but now there is no fish, there are no bush animals, because to extract timber they have used machines. They did not care how they down the trees, [it was] a slaughter. Here in La Union they cut down all the forest (010-EEA-05 2014-Local).

This trend shared above resonates with the contributions of Barbier (2007) on the frontier, as one identified characteristic is the opening of new frontiers once others have been closed or depleted. Consequently, land use change in the region is frantic, especially at the forest-agriculture interface. Timber extraction, coca crops, agriculture and oil extraction are the main economic activities. Yet all this change is happening in the midst of weak institutions and law enforcement, while growth is not evenly distributed (see below). Further, the norm is the random use of the territory, especially by migrants seeking large areas for crops. In this respect, a member of the Territorial Planning Unit of Ucayali shared:

As we do not have territorial zoning (...) migration of people seeking large extensions of land to grow crops (...) they think that it is jungle, crop A or B will develop in this area (...) Another topic is that the regional governments in office lacked a vision to guide land use in the territory, i.e. crop areas, conservation areas, etc. Twenty years ago we did not know about zoning and land use planning (001-OT-05 2014-Regional-05 2014-Regional).

This wave of migration also responds to land grabbing interests. As noted by Gardner (2014), agricultural development in the frontier happens in the midst of intense competition for land. National level experts agreed with the view of regional experts on the limitations of land use

Chapter 9

planning vis-à-vis the wave of migration and land grabbing. For instance, an advisor to the deputy Minister of Strategic Development of Natural Resources claimed:

When there is not a clear land use policy, whoever arrived could colonise, become owner and then the next one came...and they have seized land, and then, how do you control that? How do you organise all that has been seized? We are now facing the consequences of the lack of planning when defining 'what to do' in the Amazon (017-MINAM-05 2014-National).

The wave of migration and the use of the territory without any type of control or planning poses serious risks to the Amazon. As noted beforehand, abundance and fragility are closely intertwined. The concept of fragility is explained by an expert from the Ministry of the Environment in Lima:

The ecosystem services, all the climatic machine for rain, could collapse (...) if there is an excess of intervention in the forest ecosystems. Then, look, now there have been droughts in the Western Amazon, droughts of even two months without rain (014-MINAM-05 2014-National).

This view is reinforced by an actor in the region who refers to the depletion of the capacity of the soils in the Amazon. The Regional Director of the Mining Office mentioned that:

It is a disaster to do monocropping to destroy the forest. Here we have more than 60,000 ha of oil palm (...). After 30 years the palm won't even grow here because of the type of soil (012-DM-05 2014-Regional).

Perhaps, one of the main challenges during this process of growth and colonisation, using the terms of Nepstad et al. (2002), was the weakness of the governance of the frontier expansion. Finally, it is worth sharing the perspectives of a regional expert a regional level expert on forests linked to a regional research institute on the main consequences of the dynamics of economic growth on the people from rural areas:

I am perceiving that they are changing their way of life. For example, before, you will arrive to a community and typically they will only have one food deposit mainly with bush meat. In the menu of local communities you would not find chicken, only bush meat and some additional crops. But now communities have two or three deposits with products as if they were in the city. There you can buy whatever you want. They are changing their way of life (006-IIAP-05 2014-Regional).

The trends of social and economic transformation analysed in this subsection, combined with the depletion of resources are also leading to behavioural change even at the community level. This

upsurge of activity is another characteristic of the frontier regions where population, infrastructure, behaviours (and rules) are in constant flux (Gardner 2014).

9.1.2 Informality and corruption

Several respondents from the national and regional levels agreed that one of the main governance challenges in Ucayali is informality. This informality can be split into separate categories: i) land grabbing and sale of forest lands; ii) land tenure; iii) informal practices of timber extraction and other illegal activities and iv) transitioning into formality.

Land grabbing and sale of forest lands

According to regional stakeholders, informality was not as prevalent in the past. When asked about the problems that from the interviewee's perspective did not exist 20 years ago, an officer of the Territorial Planning Unit of Ucayali mentioned the growth of informal practices of land use, including land occupation and appropriation:

Informality is related to the occupation of [land] and, now also there are the invasions, land usurpation, illegal extraction and informal activities such as gold extraction (001-OT-05 2014-Regional).

The severity of the problems related to land grabbing are well illustrated by recent episodes in Ucayali. These refer to the involvement of regional officials of the highest rank in Ucayali in illicit activities which portrays the degree of deep-seated corruption affecting the State institutions.

One is the case of the Regional Director of Agriculture of Ucayali, Isaác Huamán Pérez and the Director of Titling and Land Formalisation, Christofer Hernández Larradala, both taken in custody in December 2018. They are accused of leading a criminal organization dedicated to the illegal traffic of land in Ucayali (Chumpitaz 2018; Dammert 2019). The second, is the emblematic case of the former Regional Governor Jorge Velásquez Portocarrero (2007-2014) who is in prison. But even from prison he has continued his illicit actions and was found guilty of leading a criminal network that was using illegal funds linked to bribery and money from his period as a Governor, coming mostly from infrastructure projects that were overvalued or not completed (El Comercio 2017). Other investigations linked to Velásquez Portocarrero pointed to his direct involvement with the irregular sale of agricultural land from the Regional Directorate of Agriculture to a private company (America Noticias 2014).

Land grabbing is responding to strong economic interests in the region and in some cases, agriculture is used as a means for this. When asked about which actors had the power to decide

how to use the territory and which were the groups and organisations that were taking those decisions (beyond the existing policy prescriptions), a Regional Councillor from the Regional Council of Ucayali claimed that:

The only one here is the agricultural industry. They are the ones that have the competence on land management (...) there are small and big farmers as well. There is a problem with the land, because of the way they used to distribute lands. The Regional Agricultural Directorate is reversing land titles and selling to large oil palm entrepreneurs, 300, 500, 1,000 ha creating conflicts with locals that have lived there for more than 10 years. Then the Regional Agricultural Directorate says: 'for you to demonstrate if you have over 10, 15 years [in the land], you need to prove it through permanent crops.' But here [in Ucayali], the farmers are more into subsistence agriculture, only growing their cassava, their plantain, papaya and those [subsistence] crops that do not allow them to prove permanence in the territory for more than 10 years (002-CR-05 2014-Regional).

The quote above notes the interweaving between corruption, agriculture (especially oil palm) and the land grabbing dynamics. The land conflicts in Ucayali illustrate the market perspective on frontier economies, where politically manipulated markets, corruption and the arbitrary enforcement of rules and regulations are pervasive (Musacchio and Werker 2016). A report from the Center for International Forestry Research (CIFOR) supports the findings above and indicates that informal access to the forest and timber extraction happen most frequently in buffer zones of protected areas, permanent production forests that have not been allocated (in or outside the indigenous communities) and forest concessions. These invasions are in part incentivised to show possession of the land by planting crops and are also due to land trafficking (Mejía et al. 2015, p. 51).

There are other examples of the role of oil palm in land grabbing. Reports from an international NGO (Dammert 2019) refer to the company Ocho Sur (before known as Pucallpa Plantations), in the district of Nueva Requena, in Ucayali, arguing its participation in the most emblematic case of linkage between oil palm and land trafficking. In 2008 lands in this district were acquired by the means of a "ghost titling." This means that a group of people in coordination with the Regional Government acquired individual titles of land that counted together reached 5,000 ha even when they did not live there or occupy the territory afterwards. In 2011 the company Dennis Melka⁷⁷ bought the titles previously acquired by Ocho Sur and deforested over 6,000 ha affecting the

⁷⁷ An anonymous regional actor indicated that the company Ocho Sur changed its name to the company Dennis Melka.

ancestral territory of the native community Santa Clara de Uchunya.⁷⁸ This case also highlights a way to access large land extensions in the Amazon, which is through the direct purchase of individual land titles. The Law to promote investments in the Agrarian Sector (Law 953) requires certain procedures such as the classification of land as agrarian and an environmental impact assessment. This has been used few times in the past years as it is more expedient to buy titled lands to have access to land for agriculture and omit all these procedures (Dammert 2019).

While MLG was seen from the centre as a means to strengthen forest governance in the lower tiers of government, the example above illustrates the cases were actually the opposite happened. A regional decree serves as an example of how decentralisation was used to establish a legal scheme to promote land grabbing. An anonymous respondent indicated how the Regional Decree 012-2015 was instrumental to allowing these cases of corruption (related to land) and causing deforestation. This decree indicates that there was a transfer of competences within the Statutory Law of Regional Governments which gave Regional Governments the competence to promote and administer rural property. It also approved a Directive called “procedures for the direct sale of reversed lands or of private domain of the Regional Government of Ucayali of free availability.” In reference to this directive, in another section of the Decree it indicates that it is an exceptional policy instrument of transfer (GOREU 2015a). The cases above illustrates the connections established between different covert networks in order to achieve their goals (Raab and Milward 2003).

Besides “ghost titling”, there are other practices in place to promote land grabbing. More specifically, the actors linked to oil palm plantations in Ucayali are buying land from peasants and paying a higher price if it has no forest. An expert from the Ministry of the Environment in Lima mentioned:

One thing is oil palm established in family farming in certain areas where the economic and ecological zoning allows it. But another thing is oil palm at large scale, what these Governments have done is sell primary forests to companies in a murky, suspicious and tortuous way. In some cases even in territories already occupied, causing social conflicts. There are big interests in oil palm, especially from multinational companies and what follows is the granting of large properties in the Amazon to grab forests. These had never been granted before; well perhaps 80 years ago large extensions were granted, but not in recent years. There were policies of 30-

⁷⁸ The claims from the community can be seen in a video documentary. To this date, their territories were still not titled to these communities. See: OXFAM en Perú. 2018. "Palma aceitera en Ucayali: Testimonios desde Santa Clara de Uchunya." YouTube.

40 ha per family. From the Ministry we aim to adjust the legal framework and we have denounced one of the groups promoting oil palm near the highway as they were paying locals 500 soles per hectare to buy their land if it had forest and 800 soles per hectare without forest (014-MINAM-05 2014-National).

Generally these corrupted practices such as the one illustrated with the company Ocho Sur affect 'the weakest' in the chain. They transgress the rights of local settlers, promote a perverse perception that only permanent crops grant land titling and favour the interests of large entrepreneurs promoting oil palm cultivation. It is important to clarify here that the problem is not 'the crop,' but the fact that it became a means through which powerful actors have advanced their economic interests causing land usurpation and clearing of forests (See Section 6.2.3). Also, as noted in Section 6.2.3, there are also small growers of oil palm, therefore, there is a relevant social aspect of this crop as many families in the region depend on it for their livelihoods. Oil palm has another relevant connotation in the frontier: it was a crop promoted to substitute illicit crops, and therefore it was an emblematic crop to transition from illicit to licit economic activities in Ucayali.

Yet, land grabbing takes place not only through direct purchase of titles or using policy instruments in perverse ways (such as the case of Regional Decree 012-2015). It also happens through direct negotiation with the communities (land owners), who become subject of different pressures. An indigenous leader from a regional indigenous organisations shared their views on these land struggles:

The division of the communities, its causes (...) has been mainly market pressure. There is a high demand for the products and as the entrepreneurs do not have land, and the communities do have it, then they become their target. They [the entrepreneurs] negotiate with two or three leaders on behalf of the community, causing fights even between brothers and they divide the community (...). They [the community] end up abandoning their lands. For oil palm is the same, they have concessions close to indigenous communities and they end up invading the land of the communities. But they also negotiate with some sectors internally due to commerce pressure, all is commercial pressure (037-AIDSEP- 09 2015-Regional).

On the example above, it is important to note that the direct negotiation is taking place under uneven power structures which underscores the complex implementation politics. Further, there are other strategies used besides the direct negotiation with the communities, which is to buy-in loyalty from local actors. A Unit Director at the Regional Environmental Authority (ARAU) of Ucayali describes how land use change takes place in the region:

When there is desire to change land use, with or without authorisation which is what they are doing, the first thing they do and that they will rely upon later on is to create endless jobs for people in the area. They will become their main allies forward, when a problem arises, environmental problems and this is what we are seeing now. It is very rude the way in which land use is taking place, without people following the procedures to get an environmental licence, to carry out these type of operations (044-ARAU-10 2015 Regional).

Last, despite some of the challenges noted above, there is legal progress in land titling to address the perception that the use of land with agriculture is the only means to obtain titling. An expert from the Peruvian Society of Environmental Law summarised this as follows:

This problem comes from way back, but it has been addressed in the last years. The Legislative Decree 667, Law of Registry of Rural Lands referred to 'economic exploitation' to access to property. That was understood generally as preparing land for agriculture, which in the Amazon could equal deforestation. That Law was abrogated years back and the next ones (Legislative Decree 1089 and its regulation, approved by Supreme Decree 032-2008-Housing), made reference in article 12 once again to 'economic exploitation' and in practice this idea was still encouraged. Then, it is in the new Forest Law 29763 [where there is a new shift], that explicitly states that for land titling 'economic exploitation' can also be understood as keeping forest and conserving it (article 123 of its regulation on forest management) (030-SPDA-08 2015-National).

This is a relevant progress in the legal framework in Peru that supports building a view of economic value in the use of land, being inclusive of agriculture and forest-related activities. This can be mainstreamed in the political discourse to shift paradigms regarding land use and forests. What is yet to be seen (which could not be covered in the timeline of this thesis) is how this new perspective affects practice in the region of Ucayali, especially through the Regional Directorate of Agriculture (in charge of granting land titles) and the forest institutions.

Land tenure

Land grabbing is also facilitated by the existing land tenure conditions in the Peruvian Amazon. The lack of land use tenure is a problem, especially for the indigenous communities that live in the territory. It is a political statement of the power relations in the frontier. Regional officers in charge of the Territorial Planning Unit of Ucayali, when asked what communities perceived as their main needs, shared that:

There are several communities, indigenous as well as owners that occupy a territory but they are not formalised. A common problem is the informality in land use tenure (001-OT-05 2014-Regional).

In a report of the State of indigenous communities' lands in Peru in 2016, the Institute for the Common Good notes that in the last decade the State has formalised less than 1% of the lands that seek titling. Of the 10,529 communities in Peru (this includes native and peasant), 4,023 communities still do not have their land titles (Instituto del Bien Común IBC 2016). However, the Peruvian Government is making progress towards this goal. In a private meeting (July 2019) with the Minister of Agriculture of Peru, Fabiola Muñoz, she mentioned that for the first time several organisations had come together to agree on the official figures of pending land titles to the indigenous communities and estimate a price for their allocation. Surprisingly, the costs were lower than expected, reaching only 38 million soles.⁷⁹

The view from national stakeholders is that the lack of land tenure exacerbates governance problems. In relation to this, an expert from the Ministry of the Environment in Lima said:

The problem are the areas that are free which are not titled. This is where the absence of governance takes place in some way (026-MINAM- 09 2014-Regional).

Regional actors agree with the aim of strengthening governance through land titling, especially as a strategy for forest conservation and surveillance. An engineer from the Executive Directorate of Forests and Wild Fauna in Ucayali mentioned that:

When people and enterprises have land titles they can support us to keep the security and conserve these areas, because we cannot be in...there is no budget neither the personnel to be able to be in diverse areas (020-DEFFS-09 2014-Regional).

Informal practices of timber extraction and other illegal activities

Besides the long lasting land struggles noted in the previous sections, there are also informal practices of timber extraction. Corruption underpins these as well. On this matter, an officer from the Regional Office for Natural Resources said:

Here in Pucallpa is where timber is cut and when illegal timber arrives to Pucallpa it has become legal. There is corruption because, if timber is not legalised it could not

⁷⁹ This is equivalent to an approximate of £ 8,632. This amount can change according to the fluctuations in the exchange rate

go out. Despite the fact that they are extracting timber from all those places, they can just leave from here (004-GRN-05 2014-Regional).⁸⁰

The concept of timber considered as illegal is explained in Section 8.2.3, which describes the main transgressions to the Forest Law, rendering timber illegal. Several reports from OSINFOR confirm the existence of these informal ways of timber extraction (OSINFOR 2014, 2017). As there is no traceability system in place, it is more cumbersome to run enforcement and verify timber origins. A regional level expert on forestry and agriculture linked to a regional research institute mentioned that:

Everyone in Manantay⁸¹ work under the concessions system. But noone can really verify that all the timber is coming from those areas. That traceability is not very clear. There are some that are doing it, but more because it is a business requirement for them to provide certified timber, for example to the European markets. But this is just very few; it is more the exception to the rule (013-IIAP-05 2014-Regional-05 2014-Regional).

In the meantime, in the frontier other illegal activities thrive supported by covert networks. They even compete with each other. The Regional Director of the Mining Office also highlighted the illegal activities taking place:

Do you know how much have the coca plantations grown? [It's] at least doubled. A total of 120,000 ha have been cut down to continue coca plantations. Then there is no balance. But why there is not a balance? Because here drug lords have more arrangements with the farmers, they pay them a bit more. If the payment for a day of work cutting timber is 30 soles, and the drug lord will pay 50 soles per day, then people will prefer to work with the coca producer (012-DM-05 2014-Regional).

National actors coincided with the view of regional actors on the presence of various illegal activities in the frontier, but actually pointed to how illegal timber extraction also supports other illegal activities taking place on the ground. As mentioned by the Director of the Biodiversity Unit of the Ministry of the Environment:

⁸⁰ An environmental science and conservation news and information site reports on the land trafficking problem in Ucayali and highlights that “business owners, illegal loggers, and timber traffickers use corrupt methods to illegally acquire land and cause deforestation.” See: Sierra Praeli, Yvette 21 December 2018. "Land trafficking in Peru: officials arrested for falsifying documents."

⁸¹ This is one of the seven districts of the province Coronel Portillo in Ucayali

Chapter 9

Timber covers illegal drug trafficking because it allows them to transport the necessary materials to distant areas. Therefore, they go on boats with fuel, food, people...(026-MINAM- 09 2014-Regional).

Transitioning into formality

So far, this section has underscored some of the main dimensions of informality taking place in the frontier. It is also important to observe ways to promote formality.

When asked whether such illegality will be stemmed by the new Forest Law, especially of the small timber extractors, an engineer from the Executive Directorate of Forests and Wild Fauna in Ucayali claimed:

I think this is a good step for many of them to get formalised and organised (020-DEFFS-09 2014-Regional)."

Yet the deterrence of illegality or what we could also refer to as promoting legality, is not straightforward. As highlighted by an expert from the Ministry of the Environment in Lima:

Why do some illegal miners not get formalised? Because they see no advantage in doing it and as you perceive that it is more beneficial to continue being informal, rather than formal [legal], you will continue to be informal. In Lima, some merchants got formalised because the risk of having their merchandise confiscated was high while the benefits of being formalised were high as well. Meanwhile what is happening in Ucayali is that ...you have a high cost of formalisation and a low risk of being captured as informal (014-MINAM-05 2014-National).

This equation (high costs of formalisation and weak enforcement) could in part explain the barriers to promoting formalisation in the frontier. In the prioritisation of public policy interventions, the reversion of this equation should be ranked as a priority. According to CIFOR, timber extraction lots pay a right for timber use in relation to the total area of the concession of USD 1,5/ha on average, whereas the costs of formalisation range from USD 3500 to USD 5300 for the annual operational plan (Mejía et al. 2015, p. 16).

In reference to the formalisation process a national level expert mentioned that:

You chase down people so that they become legal, but the context does not allow them to be legal (039-EI- 06 2019-National).

Furthermore, the prevalence of complexity (see Section 7.4) in the frontier translates into more corruption. CIFOR also points to concessions users that claimed that any procedure for forest use

is extremely bureaucratic, therefore they use bribes to speed-up procedures. Meanwhile public officers accept these bribes as they consider themselves to have low salaries. Furthermore, the weak fiscalization and control is fertile ground for the growth of an extortion network of police and forest authorities (Mejía et al. 2015, p. 52).

Informality in this thesis has mostly referred to a lack of compliance with rules. But there are other aspects to informality that are also relevant for forest policy implementation in the frontier. For example, the existence (or not) of a formal work contract. National statistics⁸² indicate that 87.7% of the labour force in the Peruvian Amazon works under conditions of informality, and in Ucayali it represents 80.9% of the workforce (Gestión Perú 2015). Informality has a strong connotation of social exclusion and the perpetuation of inequality. As noted by the Organisation for Economic Cooperation and Development (OCDE) more than 80% of the informal workers in Peru are part of the vulnerable class and work for sectors of low productivity. According to the OCDE, access to formal employment is very difficult for workers in rural areas, with low levels of education (among others) (Organización para la Cooperación y el Desarrollo Económicos (OCDE) 2016).

9.1.3 Weak Rule of Law

Respondents agreed on the weak rule of law in Ucayali. Official reports speak for themselves. OSINFOR led 124 supervisions between 2005 and 2014 in Ucayali on forest permits granted to indigenous communities, which includes Forest Concessions (OSINFOR 2014, p. 23). Between 2011 and 2014 OSINFOR applied sanctions to 206 indigenous and peasant communities due to transgression of the Forest Law, which equalled to 14.3% of the total sanctions applied by OSINFOR (OSINFOR 2014, p. 29). The main infractions related to the following articles of the Forest Law Regulations (27308):

- Article i) To extract timber without authorisation or to extract it outside of the authorised areas, as well as the commercialisation and transformation of those products.
- Article k) Extracting trees undergoing regeneration, those marked to perform studies or seedlings and those that do not comply with the minimum size for extraction, as well as the commercialisation and transformation of those products.
- Article l) The transgressions of the conditions established in the modalities of forest use.

⁸² Report from the Entrepreneurial Research Centre of PERUCAMARAS. See: Gestión Perú. 2015. "Más del 80% de trabajadores son informales en la Macro Región Oriente." In *Gestión Perú*.

Chapter 9

Article w) Facilitate the extraction, transport, transformation or commercialisation of forest resources illegally extracted through a concession contract.

According to the above, OSINFOR reports that 51.9% of the 107 indigenous and peasant communities transgressed articles i) and w), followed by 28 communities with 13.6% of the transgressions to articles i), l) and w) and last 20 communities that transgressed articles i), k) and w) (OSINFOR 2014, p. 29). Another irregularity is the declaration of non-existent trees in the Annual Operational Plans (OSINFOR 2014, p. 40). Ucayali stands as the second department with most sanctions (OSINFOR 2014, p. 32). While in 2009 Loreto and Ucayali are the departments with 82% of the total timber extracted from non-authorized areas (OSINFOR 2014, p. 42), in 2012 this percentage increased with Loreto, Ucayali and Junin reaching 99% (OSINFOR 2014, p. 46). This report is an important input for analysing how Forest Concessions worked out on the ground, yet, it does not provide more analysis about the real causes and dynamics underpinning these trends.

One possible explanation for the transgression of article i) is that the informal small and medium timber extractors prefer to work in distant areas, generally invaded areas or those that are not titled, since there is more commercial timber available there, meaning tree species with higher market demand such as *shihuahuaco* and *tornillo*⁸³ (Mejía et al. 2015, p. 51).

An analysis of Ucayali comparing the authorised volume of extraction with the volume illegally sourced shows the following percentages of illegal sourcing per year: 2009 (22%), 2010 (23%), 2011 (23%), 2012 (31%), 2013 (3%)⁸⁴. The provinces with the major incidence of this infraction were Coronel Portillo and Padre Abad (OSINFOR 2014, p. 54). Despite the transgressions noted beforehand, an analysis of the deforestation shows that 10% takes place within forest permits granted to native communities while 90% takes place outside the area of the permits (OSINFOR 2014, p. 65). This underscores that forest permits assigned to local communities is a way to deter deforestation.

The frontier is not a context where denouncing policy infractions is effective. It can actually have the contrary effect. An indigenous leader from a regional indigenous organization said:

The level of corruption is what is so harmful and by my own experience I can tell you, I faced the illegal activity, mainly forest related (...). Unfortunately in Ucayali whoever denounces illegal timber extraction, ends up being denounced by the strongest

⁸³These are Amazonian trees.

⁸⁴In the report there is no explanation on the sharp decline in 2013.

sectors. It is a chain that comes from the sectors that have to do the surveillance (037-AIDSESP- 09 2015-Regional).

A Regional Councillor from the Regional Council of Ucayali supports this claim:

The first problem that we have is illegal timber extraction, indiscriminate extraction and the process of corruption linked to those. The control systems are very weak and there are several interests from entrepreneurs that speculate with timber prices causing chaos and depredation (002-CR-05 2014-Regional).

In a context where network governance can be used to strengthen legal timber extraction as a means to counterbalance the weak presence of the State, local and regional covert networks can debilitate that capacity enormously. Furthermore, when referring to control systems in place such as the on the ground surveillance of land use in Ucayali, a Unit Director at the Regional Environmental Authority (ARAU) of Ucayali shared how the hierarchical relations and limitations in the transfer of competences within the decentralisation process led to less effective monitoring and surveillance on the ground:

The General Attorney's Office requires us to go, but we already know that if we go, we do not have the competence. Furthermore, people [referring to two large oil palm companies: Plantaciones Pucallpa and Plantaciones de Ucayali] will tell us they already presented their documentation to the Ministry of Agriculture, but we have no information if that is the case. By fortune, we have some contacts in the Ministry, we exchange information and we know they did not present the required documentation. But they are there, and if we say 'we will stop your activities,' they won't stop (044-ARAU-10 2015 Regional).

This account illustrates that enforcement on the ground to reduce deforestation and in general to enforce land use agreements is necessary but not sufficient to achieve policy outcomes. Even if controls are stronger, some actors, such as the large agricultural enterprises disregard the authorities. Thus, this respondent also noted that:

Even when presented with sanctions or regulations to stop operations, some actors such as the oil palm companies [Plantaciones Pucallpa], (...) have not stopped operating, they continue doing what they are doing and this is the main problem (044-ARAU-10 2015 Regional).

This flouting of authority actually confirms the market perspective on the frontier from Musacchio and Werker (2016) in which there is corruption, an arbitrary enforcement of rules and regulations and an absence of checks and balances. Further, these interactions show that clearly the *rules of*

Chapter 9

the game (see Section 4.3) are not set by either the national or regional governments. Rather, the interactions between the different levels shows that local actors continue bending the rules to their own advantage. In the analysis of the inter-relationship between macro and meso-levels, these types of interactions show that in the current network relationships in the Peruvian political landscape, policy implementation (or the lack of it) is ruled by those on the ground.

But authority is not only overlooked at the regional level. National authorities share similar struggles, which underscores the limits of multi-level governance to effectively control land use change. A Unit Director at the Regional Environmental Authority (ARAU) of Ucayali highlights:

The environmental licence is not provided by the Regional Government of Ucayali. It is provided by the General Directorate of Agricultural and Environmental Affairs, of the Ministry of Agriculture. And the entrepreneurs are not registering before them, they simply carry on the land use change. I have seen on TV that not even the national officials are allowed to enter their land. We could say we are in 'no man's land' (044-ARAU-10 2015 Regional).

And it is precisely in this 'no man's land', where covert networks are able to flourish. Furthermore, the Unit Director also expressed that:

What is affecting the whole Amazon is land use change. We already know very well that the main activity is land use change either for migratory agriculture or for starting crops, especially oil palm. The land use change for oil palm without control is strictly related to the land availability for entrepreneurs. If she has the opportunity to acquire 1,000 or 5,000 ha, she will do so and install oil palm. This will be the priority prevailing over the information of what is the capacity of use of land [technical guidelines such as the ZEE]. Even the national Government at one point declared it will support oil palm crops (044-ARAU-10 2015 Regional).

What is most interesting about this Statement is that it highlights the expectations of those in the region about such policy instruments as socio-economic zoning and land use planning. These policy instruments address the challenges of unplanned land use change, deforestation and social conflicts, but the practice is that land use decisions are based on individual (mostly economic) interests and do not necessarily abide by existing regulations (technical guidelines).

In reference to the capacity of use of land, a national level expert claimed:

Now there is a more sophisticated process to define the capacity of use of land and there are rules. Nevertheless, this should not be the main factor in the decision making process (039-EI-06 2019 National).

There were references to private sector groups, and more specifically *el Grupo Romero*,⁸⁵ who are reported as doing as they please. For example, as reported by the Director of the Regional Economic Development Authority in Ucayali:

They for example, intervene, but they use satellite information, they take over the entire forest, all of it (007-GDE-05 2014-Regional).⁸⁶

This also demonstrates that beyond local actors and government authorities, the private sector also participates and/or complies with other actors within the covert networks.

Last, the frontier is not only characterised by the absence of rule of law, the informality and other features presented here. A national expert also made reference to other types of frontiers that intersect with the one presented here and that also influence the policy implementation scenery in Peru. These frontiers are legal, administrative and conceptual:

There is a legal, administrative and conceptual frontier. For example, for OSINFOR to understand that within agroforestry concessions there can be mixed systems was a confrontation of two years. The conceptual barrier is the most difficult, for example, how an agroforestry system is conceived (039-EI- 06 2019-National).

The conceptual frontiers can be a limitation for the cross integration of sector's actions in policy implementation.

9.1.4 Unfair market conditions

Several respondents mentioned that there are no incentives in place to follow the Law or to promote sustainable practices, especially from the market. There are few regional efforts to certify timber production and guarantee fair and transparent payment practices. An indigenous leader from a regional indigenous organisation claimed:

⁸⁵ It is a Peruvian Business Group and a transnational company

⁸⁶ This account is in sharp contrast with what can be found in Grupo Romero's website. As a matter of fact they claim that their *ethics* and *values* are: "The behavior of all the people that are part of the Romero Group denotes integrity and ethics." Grupo Romero. "About Us." Available online at http://www.gruporomero.com.pe/en-GB/el_grupo_romero/quienes_somos/.

*The issue is that if you bring certified timber to the market, others are selling at the same price. So there is no competitive advantage (037-AIDSEEP- 09 2015-Regional).*⁸⁷

Other key actors in the region also provide anecdotes that support this claim. An engineer from the Executive Directorate of Forests and Wild Fauna in Ucayali shared:

There is already an unfair competition for a new concession owner and it is difficult to survive as the prices are very low (...) there is illegal timber extraction that only sells in the regional market (...) then there is unfair competition (020-DEFFS-09 2014-Regional).

Another regional level expert on forestry linked to a regional research institute also provided relevant information on this:

The legal timber extractor, has to respect the norms, which is an additional cost. In contrast, the illegal extractor goes to any area, deals with the owner, buys the tree, cuts it and takes it out and then buys the document from a concession owner (...) and that is it, then they sell their timber. Then it is not competitive, the legal producer has a production cost and the illegal producer has another cost. This is despite the fact that the State has several mechanisms through which the legal extractors have incentives in relation to their forestry taxes, the right of use, so they can pay less, but anyway, they do a series of activities that are costly (...). There are a series of incentives that are difficult to access: (...) 'is someone going to pay me more for my certified timber?', asks the concession owner (006-IIAP-05 2014-Regional).

This interaction between the formal and informal markets is a relevant underlying limiting factor for forest governance. Even if the issues of complexity were addressed and in general forest policy improved in other aspects, if there is not sufficient attention given to informal markets, efforts for formalisation and improved governance might not considerably reduce deforestation. This is similar to the challenges present in other Amazon countries in value chains such as cattle. Brazil, for instance, which is the largest beef exporter in the world, has designed interventions to strengthen the complex supply chain from ranch to slaughterhouse in the Amazon, yet two thirds of their industry still includes legal and illegal slaughterhouses (F. Walker et al. 2013).

⁸⁷ The absence of economic incentives from the market to support more sustainable production practices, is also noted in a report from a UK based NGO that notes that although the Roundtable on Sustainable Palm Oil (RSPO) has adopted a new higher standard for palm oil production, the oil palm that follows these standards does not receive a price premium in the market. See: Environmental Investigation Agency. 16th November, 2018. "RSPO adopts higher palm oil standard, but will there be any buyers?": EIA.

Another critical element beyond the interaction noted above, is to enable fair market conditions. For example, a Unit Director at the Regional Environmental Authority from ARAU highlights the attempts to strengthen governance in Ucayali while facing difficulties promoting viable economic alternatives to illicit crops. He claimed that:

Since a few years ago work is being done on governance, but I think more strength is required. Alternative development offered alternative crops to coca. They offered cotton and many people accepted it, but the prices plummeted rendering very low revenue per hectare (044-ARAU-10 2015 Regional).

As noted in Section 1.1, crops in Ucayali still face price instability. There is an interesting trade-off in that although there was a negative social impact as this instability affected income, it also contributed to the plummeting of deforestation rates and to pursuance of other market alternatives such as the Roundtable on Sustainable Palm Oil (RSPO). The ideal policy intervention of course should address both the social and environmental concerns. There is an ongoing process in Peru to attain certifications at the RSPO, which is an important milestone to guarantee that crops that have contributed to land use change for a long time are more sustainably sourced. At this moment, the RSPO is contextualising the guidelines for the Peruvian case and there is now more interest from actors in attaining certification.⁸⁸ This is also a good example of how price instability has been an opportunity to transition to different business models where international markets and incentives play a key role. Yet there are criticisms of international certification standards in that they have not been able to promote changes in relation to sustainability at a larger scale by reaching other producers (Stickler et al. 2018, p. 9).

9.1.5 Unequal distribution of benefits

The informality in the extraction of resources is one key pre-condition for the unfair labour dynamics and unequal distribution of benefits taking place in the frontier. Although the strengthening of formality does not necessarily translate into more sustainability in the use of the resources and territory, having more formal arrangements could set the base for policies and institutions to be more effective.

Regional stakeholders claim that the unfair distribution of the benefits from the forest goes back several decades as before the timber it was the rubber:

⁸⁸ Personal conversation with Francisco Naranjo, Director LATAM Operations, RSPO. May 6th, 2019

Chapter 9

They exterminated indigenous peoples, more than 100,000 died in the production of rubber, other people became wealthy, and communities, joined the poverty groups and even disappeared. Now only about 40 communities remain (...) and they are still 'carrying on'. This terrible situation of not knowing, of not understanding a government that has abandoned them (012-DM-05 2014-Regional).

The disappearance of communities was confirmed by national actors too. For example, an advisor to the deputy Minister of Strategic Development of Natural Resources mentioned:

At the onset, I am talking about the beginning of the last century or the end of 19th, the themes related to human rights did not exist. On the contrary, basically the communities were enslaved and had high mortality (017-MINAM-05 2014-National).

When asked about the people that were close to the rubber boom and whether there were changes in their income, the Director of the Regional Economic Development Authority in Ucayali said:

The people remain the same, probably poorer than what they were before (007-GDE-05 2014-Regional).

This trend of abuse towards communities and the unequal distribution of benefits is also evident in the forest sector. In this respect, a key message from the Regional Director of the Mining Office was:

Timber extraction in Ucayali goes at least 150 years back, which is not so much, but 'if there are deaths, there are jobs' (...). [The employer will say,] 'I will take you to the jungle, I will say I will pay you, I do not pay you, I only feed you, I sell all my timber' (...) this is the most criminal sector, it does not have any contracts, it does not have an adequate control, nothing. It is 100% informal (012-DM-05 2014-Regional).

Several other respondents from the region and Lima mentioned that not everyone benefits from the revenue created with the extraction of resources. An officer of the Territorial Planning Unit of Ucayali referred to the fact that locals do not receive the benefits:

The topic of resources is sensitive (...) in some cases it is extracted from here, but they do not see the return (001-OT-05 2014-Regional).

In Ucayali, the conditions of inequality and abuse towards the communities in the timber extraction sector are confirmed by regional and national respondents:

They [the timber extractors] meet with the communities to explain to them that they want timber, to give them the permit. They never explain to the communities about costs or amounts in soles or dollars, they refer to percentages. So from 100% of extraction, they claim they will give the community only about 20%, 25%. The community does not know what this means, they accept and all of them sign, because they were invited for lunch or a drink. In your study you must discuss this, these type of contracts, the community has no support of a lawyer, of the State, and they have nothing. A third party goes, commits fraud to them and everything (012-DM-05 2014-Regional).

Such fraud is generally part of a strategy of not sharing the benefits of the extraction of the resources. The weak institutional framework in the frontier favours the emergence of these type of actions. Even more, some timber extractors pressure communities to pay them back. The same respondent also shared:

When the community comes six months or so later to ask the extractor to pay them back, the timber extractor will tell them: 'no, I serviced your community, I gave them rice, pasta, etc, etc, and since it was the 25%, lets say 7,000 soles, but all that I serviced you costed 9,000 soles, therefore you owe me, I owe you nothing.' The community comes [to Pucallpa] with their families and they become disappointed with the agreement. They do not even have the financial means to go back home [pay their fare]. No one supports them, the NGOs, lawyers and the State are not interested in this (012-DM-05 2014-Regional).

A relevant aspect to note from the examples above is that the existing power structures in the region influence policy implementation, because at the end the interactions between timber extractors and communities affect the way forests are managed. To address the problems of fraud and abuse towards the communities with forest concessions, and after consultations with legal experts from the Peruvian Society of Environmental Law, the new Forest Law, contains the following articles that provide protection to communities: Article 54 (third parties assume responsibilities and benefits if there is a cession of a contract to them), Article 58 (responsibility of third parties), Article 96 (to support communities negotiating with third parties) and Article 136d (about those than can occur infractions).

In this respect, an advisor to the deputy Minister of Strategic Development of Natural Resources shared insights about the unintended consequences of strengthening law enforcement around forest management:

When more control was placed on timber extraction in Forest Concessions, 'the Law was circumvented as soon as it was made.' Extractors turned to take advantage of the timber in the territories of the communities, paying very low fees (if anything) to community members (...) The main issue is that the communities have the responsibility towards the State [as they own the concessions but the timber extractors do not]. So the entrepreneurs pay little, but they also have the advantage of not having any responsibility. Then some entrepreneurs started to inquire: 'How can we put the communities on equal conditions for negotiating and prevent them becoming the 'bypass' to the process of timber formalisation? Also [can we] to put them on equal conditions for negotiating?' (017-MINAM-05 2014-National).

These power dynamics translate in a deep-seated inequality in the frontier as the economic benefits from land use change are mostly enjoyed by a handful:

The industrial timber extractor, who has not even stepped in a University, has a lot of money, buys a car, a truck, a luxurious home, and goes overseas on vacations. And the place where they take the timber from? That population is in extreme poverty. It is unbelievable, I take timber from here and I become wealthy and the people who live there in those towns are dying (012-DM-05 2014-Regional).

Other accounts from the field show how little power local communities have to counterweight or prevent land use change (through peaceful resistance or not participating in illegal timber extraction). The communities seem to be malleable, especially when they have needs that can be purportedly satisfied by third parties. A Unit Director at the Regional Environmental Authority (ARAU) of Ucayali mentioned an example of how those needs from the communities drive land use change, even in cases where the value of keeping the forest is higher in the long term:

NGOs could come with studies to support the fact that they are not against the forests, producing 50 million dollars of oil palm in a certain number of years. An area that was worth 300, 500 million was cut down. However, the local communities, do not see those 500 or 300 million, they only see the daily income they are receiving. Indigenous communities are the forest guardians, but in this case they are quite the opposite, if they have needs, they will support actors driving land use change (044-ARAU).

The account above also underscores that forest policies must encompass economic development strategies that provide income generation alternatives to forest and riverine communities.

Furthermore, they need to be coupled with other policies, such as agriculture, that support in creating income. This is reinforced by another relevant story shared by the above interviewee:

You will see a little boat with enormous pieces of timber and they come with 4 or 5 people. Mainly they are families that have gone to work, to cut timber and they bring it to their boss, the industry. They arrive here [referring to Pucallpa], they have worked at least for 3, 4 or 6 months in the middle of the jungle, and they only return with rice, pasta, sugar, salt. For the meat, the jungle is so big and bountiful that you can fish (...) go hunting (...). Then again, there is not a strict follow-up to labour contracts, neither for contracts to grow crops, or to sell. Those are the two weakest points we have in Peru and particularly in Ucayali (012-DM-05 2014-Regional).

The comment above shows the relevance of strong labour laws and mechanisms in supporting a more legal and fair use of natural resources. For this purpose the gradual transition to formality is relevant. Yet, there is another dimension as efforts to change unfair practices will face serious obstacles due to the entrenched dynamics of the politics that underpin inequality. An expert from the Ministry of the Environment in Lima shared an anecdote concerning a community in the Amazon:

In 2003 or 2004 there was a community that signed an agreement with a company to allow them to extract some timber in exchange of an electric plant: we made the calculation, I can't recall the exact numbers, but they were going to earn about half million soles and pay the community 5,000. So we informed the community leaders (...) so they dismantled the agreement. What did the timber extractors say? 'These idiots have taught these Indians and ruined our business.' Here is where you realise that certain 'big interests' are not interested in the empowerment of communities. They want them to continue to be ignorant, unable to apply the norms and not able to access formality. Why? Because it allows them to access inexpensive timber and labour (026-MINAM- 09 2014-Regional).

In other words, the strengthening of formality can be perceived by certain economic interests as a threat to their own economic power. As mentioned beforehand, locals tend to sell their timber at very low prices. The principal of an ecological school shared that:

What they have done is to sell to the timber extractor in a symbolic price, let's say 20-25 soles per tree. This for a tree that has lasted 80, 90, a 100 years or more to grow. (...) and at the end, the farmer will sell it for a very low price and now we do not have those types of timber trees, only shrubs (010-EEA-05 2014-Local).

On the other hand, what is also missing is to have more added value in the region to the products extracted from the forest. A regional leader mentioned:

If the Regional President launched a regional resolution saying: 'lets use the timber and give it added value'. The Peruvian State will complain and will tell you: 'your resolution is wrong, it has to be 'from above' in the Peruvian State with a norm that says [so]' (012-DM-05 2014-Regional).

This claim also underscores the low degree of autonomy that regional authorities perceive, despite having a decentralised State. This statement makes clear that such decisions depend not only on the regional authorities, but also on the will of national authorities.

9.2 Discussion and Conclusions

This chapter aimed to analyse MLG and policy implementation in a frontier economy. In this frontier, abundance and fragility are closely intertwined. This land attracts squatters and entrepreneurs that look for new economic opportunities (Schneider 1995), while the recklessness of the process of economic growth and colonisation in Ucayali, is due in part to the weak governance of the frontier (Nepstad et al. 2002).

Previous results chapters have examined covert networks and corruption in the frontier, whereas this chapter has focused on informality, an aspect of the frontier which has to be understood when analysing policy implementation in such scenarios. A main characteristic of the frontier is the informality. This informality has multiple dimensions including land grabbing and sale of forest lands, land tenure, informal practices of timber extraction and other illegal activities. Other key characteristics of the frontier include the weak rule of law, unfair market conditions and unequal distribution of benefits.

The results in this chapter show that informality in the extraction of resources sets a fertile ground for unfair relations in the frontier. Informality has a strong connotation of social exclusion and is a means to perpetuate inequality. Moreover, this informality also underpins the frantic land use change in the forest-agriculture frontier as it reinforces the perception that there are no rules to follow. A relevant clarification to make is that the strengthening of formality does not necessarily translate into more sustainability in the use of the resources and the territory. Nevertheless having more formal arrangements could set the base for policies and institutions to be more effective.

The transition to formality is gradual. Therefore, decision makers should determine a step by step process to allow this transition. It requires technical direction, policy adjustments, but also

political will to break through the interests of those that want the *status quo* to access labour and timber at low prices. Additionally, there is an interesting disjunct between formal and informal processes in the frontier. From one side, some actors claim that abiding by the rules in the frontier creates 'an additional cost' unless there are market incentives that support formal and more sustainable production. Consequently the co-existence between formal and informal markets is an underlying limiting factor for forest governance. Yet, from another side, the experiences with land use planning in the frontier show that economic interests (the politics) guide land use decisions often disregarding technical guidelines or regulations. In this context, several strategies are required as one approach (i.e. markets only) might not be sufficient to affect those individual interests.

Yet markets (incentives, sustainable sourcing and quality standards) can play a relevant role in frontier economies, especially to drive agreement and compliance towards a set of rules. The evidence shown in this thesis shows that market trends, including price volatility and the establishment of new standards to access new buyers, were effective to deter deforestation. Market trends still encountered limitations on the ground such as the lack of traceability. The latter presents a two-fold challenge. One, is that timber or oil palm sold as certified might not really meet the reported standards, as authorities on the ground struggle with monitoring and traceability. The other is that the real efforts on the ground, from communities for sustainable sourcing, are not receiving a fair economic retribution.

Peru is in process of attaining RSPO certifications, which from the market's perspective is an important milestone to guarantee that crops that have been related to land use change for a long time are more sustainably sourced. Yet there are criticisms of international certification standards in that they have not been able to promote changes in relation to sustainability at a larger scale by reaching other producers (Stickler et al. 2018, p. 9).

Other barriers to promoting formalisation in the frontier include the high costs of formalisation and weak enforcement. In the prioritisation of public policy interventions, the reversion of these limiting factors should be ranked as a priority. The politics noted above are fundamental for understanding the limits for policy implementation in the frontier. In this respect there were clear examples of powerful economic groups and/or individuals driving land use change. Furthermore, in the frontier enforcement seems to be insufficient to make policy implementation more effective. This is the case because when authorities (at all levels of governance) try to enforce the regulations, actors in the field do not always follow the rules. This speaks to the perception of authority in the frontier and underscores the limits of multi-level governance in effectively controlling land use change. In the frontier actors play the rules to their own advantage with less

Chapter 9

limitations, and this is an intrinsic dimension of politics that decision makers should be aware of for policies to be more likely to succeed (Hogwood and Gunn 1984).

Another debilitating characteristic of the frontier is corruption. Although corruption and its impact in public administration is not a new phenomenon, what we find in the frontier is the severity of its scope and depth reaching the highest levels of authority being pervasive at all levels of society. Furthermore, it involved those responsible for land titling which is a key issue underpinning social conflicts and forest degradation and deforestation in the region. As a result of the widespread presence of corruption, covert networks possess higher levels of impunity and this diminishes the role that network governance can have in deterring illegality and deforestation.

This deep-seated corruption is linked to several economic dynamics, of which two are predominant: land trafficking and timber extraction. Furthermore, institutional complexity in the frontier translates into more corruption. Bureaucracy, which frequently causes delayed procedures, can be overcome with bribes and other related strategies.

A third element of the frontier is the dynamic forest-agriculture interface. The link between oil palm and deforestation is still being debated. Yet in the frontier, 'the crop', which in this case is oil palm (but could be any other crop), as evidenced by past issues with coca, is clearly used as a means through which powerful actors advance their economic interests causing land usurpation and forest loss. Therefore, the crop is a means used to serve other underlying interests related to land, which range from gaining ownership to promoting trafficking. There is also an underlying social dimension to oil palm production, as there are small and medium size growers from the region. Many of them entered the oil palm industry when joining alternative production programmes promoted by the Government. The forest-agriculture interface in Ucayali speaks to "the way in which [these actors] interact and compete for land and available resources [which] can have profound consequences for the development trajectory and environmental stewardship of frontier regions" (Gardner 2014).

The dynamics of the frontier ascertained above support the conclusions from Chapter 8. It shows that there is a need to establish proper arrangement with other policies and institutions. Namely, in a context of the frontier, this arrangement (or policy consistency) is crucial to overcome covert networks. This is a common challenge in the frontier and the implementation literature falls short in providing explanation of this concept, since entanglement refers not to the gap between objectives or coordination *per se*, but to the integration or linking of different policy components across sectors. In other words, it is about the *synchronicity* between the various components of policies.

As mentioned beforehand, this entanglement also refers to identifying and addressing loopholes that can undermine policy implementation in a timely manner. The results in this chapter show two main loopholes in the agricultural policies that affect forest governance. The first is the buying small plots of titled lands to establish large scale agriculture overlooking guidelines such as the classification of land as agrarian and environmental impact assessments. The other is the Law⁸⁹ (see Section 1.3.2) which provides titling of land under agricultural use (permanent plantations) creating a perverse incentive. On the latter, the new Forest Law aims to address this loophole, but it requires a proper integration with the agricultural authorities in the region and between them and the forest authorities.

But how different is the Peruvian frontier vis-à-vis other frontiers in the Amazon? Do they face similar challenges? Can the lessons learned in Peru serve other regions in the Amazon? It is interesting to note the similarities in terms of the dynamics of drivers of land use change and deforestation. A main dynamic is that of external influences that arrive to clear up forests and start an economic activity leading to land use conversion. For example, in the Colombian Amazon, and specifically in the department of Caquetá, there have been journalistic reports regarding “foreigners that have arrived armed with saw machines and money, a lot of money, to clean territory for large-scale cattle ranching, of the kind that takes place in large extensions of territory. They are converting the jungle into grassland” (Revista Semana 2018). Furthermore, as is the case in Peru, there are also trends of occupying large extensions of land. The *colono* families are taking over land in Caquetá, Colombia: “at least 100 ha per family. Some people are fencing 800, even 1,000 ha. Families are under pressure to occupy territories and this leads to deforesting” (Revista Semana 2018).

Another similarity between frontier areas relates to the unequal distribution of benefits, as we are in a time of cultural transition some indigenous communities are starting to relate to the forest in a different way. Specifically, in Colombia a journalistic report shares the views of a local indigenous leader: “supposedly we, the indigenous peoples, are the best stewards of the forests, but no one says we are the poorest Colombians that live in the midst of the forests. Our people are going to the cities to seek better opportunities” (Revista Semana 2018). Further, another example of the unequal distribution of benefits is that as “in Caquetá *colonos* started to arrive offering 100,000 pesos for every tree that took 80 or a 100 years to grow” (Revista Semana 2018).

Furthermore, there are also examples in frontier areas that underscore the lack of integration between different policies or policy inconsistency across sectors. In Colombia, several farmers

⁸⁹ Ley de procedimientos para titulación de pequeñas áreas agrícolas

Chapter 9

claimed that the State was promoting deforestation: “if I go to the Agrarian Bank to have a loan approved, we need to prove we have ha of pastures for milk production”(Revista Semana 2018).

I conclude that in the dynamics of these frontier economies (Colombian and Peruvian Amazon), cattle (in Colombia) plays the same role as oil palm (in Peru), which is part of a strategy to gain control over the territory by affluent actors which are generally new to these areas. Further, in both countries there are policy inconsistencies across sectors that create perverse incentives that drive deforestation. In both countries, forests are being lost by paying locals pennies, in relation to the real value of trees in the market. A striking difference is that while in Peru some are buying land from local actors, in Colombia they are encouraging locals to take over the territory.

Why is the so-called criminal sector or in other words, covert networks able to thrive? Corruption, informality and covert networks are part of the reason. Besides the detrimental consequences for the forests and the environment overall, there are several other serious social connotations in the background. In the frontier policy implementation must confront the inequalities of social structures and more specifically social classes. The results in this thesis show that there is a key loophole in the forest policies that affects forest governance as well as the marginalised social groups in the Amazon. This loophole is the absence (in the past) of legal safeguards to protect indigenous communities’ rights and their Forest Concessions from third actors that would like to profit from them.

In Chapter 3, this thesis introduced a key debate in the implementation literature regarding the use of top-down or bottom-up approaches, and which were more appropriate for implementation (Hill and Hupe 2014, p. 199). Political science scholars agree in that in a context where change is unpredictable and difficult to control, implementation should have an adaptive approach, with an iterative policy making process (Hogwood and Gunn 1984, p. 209). In some circumstances, command and control is used and it works for a period of time, but can be an expensive method of implementation. If a Government is able to get people to adopt and organise networks as part of a bottom-up approach, it is a much cost-effective way to achieve implementation. Both of these, local-level consensus and national-level imposition, are present in policy implementation structures. No policy arena is just ever one way. The issue then regards the appropriate *mix*: when should hierarchy or steering be used to best achieve solid networks? The issue in the frontier is that sometimes both face challenges, and this is when the implementation literature falls short to explain the policy implementation dynamics. This was clear in the examples of the Regional Governor Jorge Velásquez Portocarrero who continued his illicit actions from prison and the covert networks operating through Regional Decree 012-2015 to promote land grabbing. Yet,

what is interesting is that a *mix* of hierarchy, markets and networks could possibly yield better results, as the examples of the role of markets showed.

Finally, there is much to learn and to adopt from forest governance taking place on the ground. Attaining better forest policy outcomes in frontier economies correspond to Rhodes' views on networks and metagovernance: "if governance is constructed differently, contingently and continuously, we cannot have a toolkit for managing it" (Rhodes 2017b, p. 217). I discuss how we can respond to these several challenges in Chapter 10.

Chapter 10 Conclusion

The overarching aim of this study was to contribute to the understanding of the limitations to implementing forest policies in order to reduce deforestation and forest degradation. Preserving the planet and providing food that is sufficient, safe, affordable and nutritious are two key priorities of the 2030 Agenda for Sustainable Development (UN General Assembly 2015b). Yet these priorities are not easily reconciled. Between 2000 and 2010 approximately 7 million ha of forest were lost per year in the tropics (FAO 2016, p. 14), and agriculture continues to be the main driver of deforestation (FAO 2016, p. vi). There is an urgent need in the Amazon to devise interventions that integrate agriculture and forests adequately (Gardner 2014). Gaps in knowledge remain in reference to governance arrangements to deter forest loss (Agrawal et al. 2008; Dietz et al. 2003; Gardner 2014); and although there are often strong statutes, they are frequently poorly implemented (NYDF Global Platform 2018). Further, public administration and public policy offer little help in coming to terms with the dilemma of programmes falling short of their promises (Salamon 2011).

There is much emphasis in the literature on the management of natural resources looking at sustainable community-based institutions as a response to the limitations of top-down approaches (Goldman 2003; Ostrom 2007, 2009, 2010; Ostrom 1990). Other disciplines such as public administration focus on implementation research, which draws upon the stage of the policy process concerned with turning policy intentions into action. Equally relevant is the work on multi-level governance. Overall, there is a persisting aspiration to explain and reduce the gap between public policy goals' and the actual results (Hill and Hupe 2014). Thus, the motivation for this research endeavour stems in part from the need to expand the knowledge on how to strengthen policy effectiveness for natural resource governance. In doing so, this thesis aims to contribute to reducing the pressure on forests and attaining global commitments on achieving zero hunger while conserving and using sustainably life on land.

The key research objectives set at the start of this research were:

- i. To assess the State capacity of the Regional Government of Ucayali for forest governance using a multi-level governance perspective and focusing on three core functions of the State: i) administrative capacity; ii) resources; and iv) control of corruption.
- ii. To analyse stakeholder views on land-use planning (LUP) with a focus on network governance.

iii. To identify the main gaps in forest policy implementation and the underlying politics that affect implementation. Further, to compare stakeholders' views on the existing limitations for policy implementation.

iv. To identify the strengths and weaknesses of theories of multi-level governance and implementation for analysing forest policy in a frontier region.

This thesis makes a novel contribution by expanding the knowledge base on how to promote more effective policy implementation, specifically in a frontier context. In doing so, it examines how a frontier economy exacerbates policy implementation gaps; how stakeholders from various levels of governance understand the implementation gaps; and it identifies and analyses other factors that affect policy implementation in the frontier and how they interact with the implementation gaps. Furthermore, it reflects on the reasons that could explain the continuation of the same 'old problems' on natural resource governance. It analyses various strategies to promote policy implementation, such as the promotion of formality and policy management strategies. Also, this research looks at network governance and the changing role of the State and State capacity through the lens of multi level governance. In this chapter, the key findings of this thesis, their contribution to knowledge and their implications for future research (theoretical innovation) are presented, followed by reflections on the methods and data used and the implications of the findings.

a. Findings

This thesis aimed to contribute to the advancement of knowledge regarding how to understand and explain policy implementation in a complex policy context such as the frontier. From a public policy and public administration perspective, a way to address this is by analysing the policy management *mix*. An option for the frontier is a comprehensive approach through metagovernance that involves command and control, markets and networks (or *the mix*). No one approach to implementation works - it's *the mix* that matters. This metagovernance is linked to the whole institutional framework as part of public policy-making (paraphrased from Mette Kjaer 2004, p. 57). Policy makers need strategising on the *when, how* and *to what degree* to use metagovernance various 'ingredients'. The key is to forge collaboration to support the implementation of this *mix*. Policy options are important and finding the 'best bet' policy options matters as well as the 'best policy *mix*.' Another strategy to address this challenge is the arrangement of policies within and between sectors but also across levels of governance. This is relevant since most policies "are changes to existing policies (...) they will nevertheless be entering

a crowded policy space, impacting upon and being influenced by other policies” (Hill and Varone 2017, p. 17). At the end, after considering the *mix* and the *arrangement*, it's *the fit* that matters.

In short, this thesis finds the following implementation gaps which will be explained in more detail in the following paragraphs:

- Objectives
- Politics
- Coordination
- Resources
- Policy succession

The review of some key policies and the main proximate and underlying driving forces of deforestation (see Section 2.1.3) are central to explaining these implementation gaps. Several of those forces underpin the dynamics of the gaps, as it is the case of the extractive economies, agricultural intensification, land tenure and the incentives in place. For example, issues with land tenure and settlement policies affect the compliance with policy goals (**the objectives gap**). Furthermore, the economic interests behind extractive economies can influence the political process of implementation (**the politics gap**). The review also underscored the use of various forms of governance to reduce deforestation and strategies such as command and control, yet a more in-depth analysis of implementation is required.

The stakeholder perspectives from the national, regional and local levels on implementation, in general identified the same policy implementation gaps. For instance, there was agreement from all levels of government that social conflicts caused by weak institutional coordination (see Chapter 8) led to overlaps of Forest Concessions and other activities in the territory (**the coordination gap**). A key restriction on implementation has been the dearth of sufficient financial and human resources (see Section 6.2.2) to undertake actions on the ground (**the resources gap**), which confirms one of the main bottlenecks identified by a diagnostic study of public administration in Peru (SGP 2012). Yet, the availability of financial resources was a contested issue and stakeholder perspectives differed at the regional level. While some respondents considered there to be insufficient funds, others claimed the problem was the ineffective use of resources and corruption. On hierarchy, the findings in this thesis showed that the most prevalent strategy of the national government was to keep the control of resources (see Section 6.2.2). The tendency that Hood (1976) raised more than three decades ago could be perceived in the ‘makings’ of the new Forest Law and its future implementation at the local level in Peru (**the objectives and resources gaps**) (see Section 6.2.1.). He claimed that “there seems to be (...) a tendency for the

political demands (...) to push administration to its limits, both by pursuing incompatible goals simultaneously and by stretching administrative resources too far” (Hood 1976, p. 205).

Common reference was made by respondents from Ucayali and Lima to the restrictions for implementing Forest Concessions (see Section 6.2.2.). These claims contrast with those in the literature which conclude that Forest Concessions have been effective in containing deforestation (Oliveira et al. 2007). These restrictions were described from different perspectives. Some referred to the lack of successful means to create a sustainable source of income, while others underscored the limitations for sustainable forest management and reducing illegal timber extraction (**the policy succession gap**). In relation to the social dimensions often overlooked by policies, several national and regional respondents agreed that finding the most appropriate policy instruments for small forest users has been a hopeless enterprise for a long time. The new Forest Law attempts to respond to this gap through the notion of Local Forests (see Section 1.3.3), but several respondents in the region agreed that it is beyond the existing capacity of local governments (**the objectives and resources gaps**) (see Section 6.2.1). The findings also underscore the separation between sectors, the unbalanced relations between organisations and a plethora of actors intervening directly or indirectly in the policy processes hampering coordination (**the coordination gap**). Furthermore, in the analysis of the implementation gaps it was also evident that some of the gaps naturally interact and overlap. These are some of the prevailing limitations for policy implementation.

But stakeholders also emphasised other aspects taking place in the frontier. Forest Policy in Peru takes place in a frontier economy. The sustainability of policy implementation is influenced by both economic interests and the political environment in the frontier. As noted above, although this thesis showed evidence of five main implementation gaps (objectives, politics, policy succession, resources and coordination), these do not sufficiently explain the limits of environmental policy implementation in frontier economies. **The thesis also finds other factors that impede policy implementation: informality, corruption, the weak rule of law, covert networks, and social inequalities and it also shows how these factors interact with the implementation gaps.** These findings could contribute to the academic debate of theories of governance.

There is a fine line between informality and illegality that is worth noting here with some examples. Informality can refer to practices of land occupation (producers that do not have the titles) and appropriation or extraction of resources that is not authorised, which also becomes illegal. Illegality can refer to illicit activities such as planting coca crops or extracting timber or fisheries in non-authorised areas.

In a frontier context, **informality** refers to the activities of a myriad of actors that perform their activities in parallel to the formal rules and institutions. In other words, informality mostly refers to not complying with the rules. The combination of high costs of formalisation and weak enforcement could in part explain the barriers to promoting formalisation in the frontier. Often, informality leads to the unsustainable use of resources as the informal actors do not follow any standards or regulations. Further, they compete with formal actors as they offer lower prices for the products that they source creating an unfair competition. Therefore, in the frontier, respecting the norms is often perceived as having an additional cost. Conversely, if informal markets are not properly counterweighted, efforts to establish formalisation and improve governance might not considerably reduce deforestation.

Corruption is deeply rooted in the frontier, generating the perfect ground for covert networks to thrive. In the frontier, the main illegal economic activities are timber extraction and land usurpation and trafficking. Both underpin forest degradation and deforestation. An emblematic case of land grabbing, involving two regional officials of the highest rank in Ucayali in charge of land titling portrays the degree of deep-seated corruption affecting the State institutions (see Section 9.1.2). This corruption translates to policy making as well as is the case of the creation of the Regional Decree 012 -2015, which shows that even decentralisation was used to create a scheme in Ucayali that supported land usurpation (see Section 9.1.2).

In Ucayali there is an intricate web of **covert networks** that specialise in various illegal activities related to timber, land and others. The evidence and analysis in this thesis showed an organised and long-standing network around the illegal extraction, distribution and sale of timber resources. These networks have a broad membership, including public officers. In many cases, agriculture is used as a way to advance the economic interests of the most powerful actors and gain control of the territory. The problem is not 'the crop,' but that it became a means through which powerful actors have advanced their economic interests causing land usurpation and clearing of forests. Loopholes in the regulations promoted a perverse perception that only permanent crops grant land titling, and this favoured the interests of large entrepreneurs promoting oil palm cultivation. Another critical loophole identified in the agricultural policies that affect forest governance was the buying of small plots of titled lands to establish large scale agriculture, overlooking guidelines such as the classification of land as agrarian and environmental impact assessments. These loopholes show the relevance of considering the politics of implementation to improve policy implementation.

Besides corruption, informality and covert networks, **social inequalities** also influence policy implementation in the frontier. Deep-seated power relations reinforce unequal social structures

in Peru. One must not overlook the fact that this frontier is located in one of the most unequal regions of the world (Latin America) (CEPAL 2019). This is a relevant fact for understanding the limits for forest policies in Peru. Policy implementation differs in countries where inequality is rampant and where there are structures in place to support its perpetuation. This is because efforts to enforce the rule of law can be debilitated as the most powerful actors use communities to bypass the rules, therefore affecting forest governance. As the stories of extractors opposing the empowerment of communities portray (see Section 9.1.5), for some policy ‘failure is better than success,’⁹⁰ so there will be impediments for achieving a more equal distribution of benefits through policy implementation in favour of the *status quo*. Unfair market conditions are also a relevant limitation and a common form of social inequality in the frontier.

The trends and findings of the frontier in the Peruvian Amazon share similarities with other frontier zones (as in Colombia), based on the analysis of secondary data (Revista Semana 2018). Some of these similarities are related to the economic perspective of the frontier with the use of the territory to drive land use change (Barbier 2007; Gardner 2014). Moreover, in the dynamics of these frontier economies (Colombian and Peruvian Amazon), cattle (in Colombia) plays the same role as oil palm (in Peru), as part of a strategy to gain control over the territory by affluent actors, generally new to these areas.

In sum, when viewed through an implementation lens, as well as the usual gaps that beset policy implementation, this thesis identifies several additional blockages to implementation in the Peruvian Amazon, namely, informality, corruption, weak rule of law, covert networks and social inequalities.

There are also **legal or conceptual frontiers** that also influence policy implementation. The frontier refers as well to the legal and conceptual disagreements or misconceptions between actors. The case of forest authorities resisting the inclusion of mixed land-use systems (trees and crops) under the legal structure of Agroforestry Concessions, is a good example of these other frontiers (see Section 9.1.3). This example also shows how different sectors or organisations conceptualise the policy guidelines (which in this case refers to the Agroforestry Concessions). This in turn influences the operationalisation of policy.

In this context, even if policy entanglement is in place, policies face limitations to improve forest governance. Therefore, this thesis finds as some of its main contributions to governance in

⁹⁰ The phrase is that of Ann Chih Lin. See: "When Failure Is Better Than Success: Subverted, Aborted, and Non-Implementation." Paper presented at the annual meeting of the American Political Science Association, 1996.

practice that the promotion of formality is a key pre-condition to improve policy effectiveness. The strengthening of formality is a step-by-step process that requires technical input, policy change and political support. Public policies need to provide stability in this transition to prevent the reversal of the process of formalisation. When this process involves several organisations, the Colovipes' model of local level management of fisheries can be useful. Formalisation does not depend on one sector only. This is why this model established a unique one-stop window which can allow more expedient results and could considerably reduce the costs of transaction (see Section 7.4). Costs and time for formalisation also need to be considerably reduced and enforcement bolstered building on the legitimisation of the State in the frontier. An approach to bolster the legitimacy of the State is to strengthen participatory and consultation processes, which the case studies underscored that had some limitations. This approach refers to the power of shifting from government to governance (Bache 2007). For example, in the process of designing the new Forest Law the consultations were made for the rulings and not for the Law. If it was intended to be a participatory process and to allow more impact on the outcomes it required strict consultations with the draft of the Law as well (see Sections 8.2.2; 8.3).

Yet, **formalisation alone in a frontier context is not enough to attain a more effective policy implementation or to achieve sustainable natural resource use. It also requires a mix of management strategies (hierarchical, networks and markets)**, as mentioned at the beginning of this section, since formal and informal systems co-exist in the frontier with politics of implementation (economic interests), frequently guiding actions that overrule formal regulations. These management strategies could play a role in reconciling conflicting land uses and the expansion of the agricultural frontier at the expense of forests and therefore could be an important contribution for governance in practice. For example, in the case of markets, agreements for sustainable sourcing towards deforestation-free supply chains⁹¹ (especially for oil palm) could become a way to tackle informality and illegality in the frontier economies and ensure compliance. As Lambin and Meyfroidt (2011, p. 3471) note "land use decisions could also be regulated through new forms of global governance linking trade with environmental protection." Yet, these agreements must be crafted to respond to the needs of producers *in situ*.⁹² Further, the *mix* of the management strategies is relevant, as markets alone can be influenced by a sudden increase of prices that can provide incentives to expand agricultural production.

⁹¹ For more information see: <http://www.thegef.org/news/400-million-fund-launched-davos-stop-tropical-deforestation-and-boost-farming> and <https://www.tfa2020.org/>

⁹² In a workshop held by CIAT in Ucayali oil palm producers highlighted that their priority is the increase of competitiveness and wellbeing, and that reduced deforestation should be complementary, but not the main focus. CIAT, Climate Focus, Nature Conservation and Nuclear Safety Federal Ministry for the Environment and GOREU Gobierno Regional de Ucayali. 2019. "Taller Construcción participativa de la

This thesis also aimed to understand why, after several decades of research on natural resources governance and policy performance, we are tackling the same old problems? There are several reasons. First, as previously discussed, there are factors unique to policy implementation in the frontier which exacerbate the implementation gaps. Second, power dependence (Rhodes 2017b) underpins forest governance in the frontier, which means that the limits to policy implementation lie well beyond matters such as defining policy objectives more consistently. As a result, the gap of implementation as a technical and as a political process (the politics of implementation) is a relevant consideration for any response to this query and affects the allocation of resources and efforts to integrate interventions across governmental boundaries. Third, in the frontier, policy implementation is confronted with multidimensional technical, institutional and political complexity.

A common theme across the case studies is that any progress made in policies is affected by the change of authorities: there is no continuity. What is interesting is that implementation theory points to policy succession as a limiting factor: problems evolve and guidelines introduced by previous policies can remain throughout time, affecting new policies. However, the *lack of* policy succession (continuity of both policies and policy officials) can also affect policy implementation, especially as it can deter the implementation of long-term State policies. This does not imply that reducing the lack of policy succession could be a silver bullet to the same ‘old problems.’ Nevertheless, a frantic political turnover does not allow proper completion of policy cycles, policy agendas and advancement of understanding through policy evaluation on *what* yields better results and *why*.

Crucially the role of the State is changing, in part, influenced by the growth of a myriad of non-State actors (and networks) that also participate in and influence policy implementation. These changes represent opportunities as these actors provide expertise, local presence and flexibility that in some cases is not provided by Government bodies. There are also challenges in these new forms of governance as they can complicate coordination of policy implementation on the ground and can also struggle to transition plans into actions. Mette Kjaer (2004, p. 57) refer to this dichotomy of networks supporting implementation and simultaneously driving fragmentation as “new networks (...) [which] may deliver a more efficient service but also lead to fragmentation, providing a challenge to overall coordination.” Networks are a relevant component of the *policy mix* noted at the beginning of this section. Further, in a frontier they can counterweight the interference of covert networks.

estrategia sectorial de competitividad para la cadena de palma aceitera con enfoque libre de deforestación en la región Ucayali.”.

This thesis also demonstrates the challenges of integrating conservation and productive activities in the Amazon. A main obstacle to achieving this are the sectoral silos and economic interests that prevail over an integrated perspective. Network management becomes a relevant strategy to overcome this barrier. Yet in the frontier covert networks co-exist with other networks in a context of unequal social structures with no agreed rules of the game. So, networks collide. Network management needs to be bolstered by other instruments in *the mix*; for example, hierarchic intervention to support networks and improve coordination (Scharpf 1997). This thesis suggests that such a compound strategy could be more effective in deterring deforestation and forest degradation.

This thesis finds that integrating conservation and productive activities delivers benefits (see case of Communal Reserve *El Sira*, Section 6.2.1). Regulated economic activities can be integrated in conservation schemes and be pivotal for their sustainability. The previous Forest Law in Peru did not consider forest governance mechanisms to appropriately integrate agricultural activities, while the new Forest Law incorporated different mechanisms to foster this integration, such as the Agroforestry Concessions (6.2.1). Hence, there needs to be monitoring and evaluation of these approaches to understand their contributions to reduce deforestation and support livelihoods as well as the barriers for their implementation. Another relevant shift is in the new Forest Law that explicitly refers that for land titling ‘economic exploitation’ can also be understood as keeping forest and conserving it. This needs monitoring on how the agricultural and environmental organisations will coordinate to put this in practice. This also requires to develop the necessary State capacity to be able to deliver.

Does analysis of MLG and the implementation of MLG in the frontier show whether there was an erosion or a transformation of State capacity? The limited transfer of resources, the ambiguity in the allocation of authority and competences across the different tiers of government, weak coordination and power struggles have hampered this transformation of State capacity. Despite the ambition to transform capacity through decentralisation, policy implementation faced several obstacles. These included severe administrative and resource limitations compounded by corruption and the unclear distribution of authority and competences. There was also a partial transfer of functions from the centre to the regions, which limited enforcement of forest policy at the lower tiers of government. Resources and some critical decisions laid with the national government while local actors depended on their cooperation and resources to act.

These obstacles also affected the performance of promising institutional innovations such as the ARAU. The existing dynamics of power dependence within MLG also explain the erosion of State capacity, and the limited distribution of resources to the regions signifies the limited

redistribution of power (Bache 2007). However, interdependence is a key variable in the decentralisation process in Peru, especially as the growing role of non-State actors in forest governance is an indicator of a burgeoning MLG. This interdependence can gradually shift the balance of power from the center to the regions in the policy implementation process. The involvement of non-State actors can support the fulfilment of policy goals, therefore, complementing State capacity. This will require more coordination to prevent the duplication of actions of various actors working towards similar objectives. Duplication is the besetting sin of network governance and MLG. Where there are scarce resources it is even more important to prevent or significantly reduce duplication and overlap, yet it is a risk of applying MLG. The growing interdependence noted above also underscores the way in which network governance and multi level governance interlink in practice.

Decentralisation in the frontier shows that the coordination dilemma not only refers to the spill over of policies in other jurisdictions (negative or positive externalities) (Hooghe and Marks 2003) (see Sections 6.6, 8.3). What implementation actually shows and which could be relevant to advance the academic debate of theories of governance, is that it also needs to pay close attention to at least three core conditions: one, policy fragmentation across institutions and levels of governance; two, lack of mechanisms to promote dialogue and collaboration between actors; and three, the absence of harmonization of policy goals across critical sectors that influence forest governance. This also refers to the need for better integration and triangulation between actors in and across the various levels. Convergence can enhance coordination on the ground. Torfing et al. (2013, p. 138) highlight an example of convergence when reflecting on the policy discourse: “there is a clear convergence at the level of policy discourse that might stimulate mutual learning and future convergence in problem definitions, policy objectives, and policy instruments.” In this thesis some of the means to achieve convergence include CIAM and ARAU that, although they faced obstacles, set examples of institutional arrangements and policy approaches to reach the holy grail of coordination.

MLG pushed for centralised functions to be difused to other territorial levels to provide more flexibility and a re-arrangement of State power (see Section 6.2.1). Yet, this re-arrangement is not necessarily improving forest governance at the local level as the evidence with the management of Local Forests showed (see Section 6.2.1). From a public management approach, the establishment of State capacity is a fundamental building block for decentralised functions to be effective. On the other hand, ownership is a key prerequisite for transforming State capacity. As mentioned beforehand, a relevant finding in this thesis is that participation needs to evolve into governance to build ownership of the policy processes and the institutions in place (Bache 2007) (see Section 8.2.1; 8.3). For example, in the process of designing the new Forest Law the

consultations were made for the rulings and not for the Law. Ownership is enhanced by having more influence over the outcomes (Mette Kjaer 2004), which in the case of the new Forest Law would have referred to having consultations for the Law as well. Torfing et al. (2013) also note that there is a sense of ownership and greater responsibility to attain the desired policy outcome when policy actors have engaged in influencing policy decisions. Ownership can also enhance the rule of law, through stronger processes for bargaining, which is consistent with Ostrom and Nagendra (2006) who show that an actor's engagement in crafting the decisions can increase their prospects of abiding by the rules.

The policy recommendation of early scholars on implementation is to “keep it simple” (Pressman and Wildavsky 1973). This resonates strongly with the findings of this thesis. There are other elements to consider besides reducing bureaucracies, government fragmentation, timelines, costs and requirements. This is the case of new and sophisticated policy programmes which need to be properly socialised and require policy implementation support. In the frontier, these other elements refer to quite simple policy guidelines such as training and information sharing which can improve implementation significantly.

Multi-level governance was limited by the frontier. MLG assumes rule of law and institutional capacity at the local and regional level yet covert networks, as discussed above, place serious limitations to the operation of MLG. Moreover, in the frontier enforcement seems to not be sufficient to make policy implementation more effective. This is the case because when authorities (at all levels of governance) try to enforce the regulations, actors in the field not always follow the rules. This speaks about the perception of authority in the frontier and underscores the limits of multi-level governance to effectively control deforestation and forest degradation (see Sections 9.1.3, 9.2). **The relationship between network governance and multi-level governance is no longer unclear.** This thesis finds as some of its main contributions to governance in practice that network governance is particularly useful when looking at bottom-up implementation and the role of civil actors in implementation. Local-level practices as part of network governance can also be used as a tool to harness coordination and steering efforts within MLG processes. Yet, it is precisely at the local level where network governance takes a predominant role as there is a reduced presence of the State at this level (see examples such as Communal Reserve *El Sira*, Colovipes and other non-State actors Sections 6.2.1, 7.4, 6.5). Furthermore, in a MLG context, metagovernance should consider the blending in with these local level practices as part of the strategies for steering and coordination of forest policies. This is a call for a transformation of the State by reinventing its governing role (Rhodes 2017b, p. 215). The findings also show an additional juncture between MLG and network governance. Policy instruments face the challenge of coordinating between networks and across levels of governance

(rules from networks with rules from public policies). This challenge, if addressed properly, actually presents a great opportunity to weave-in stronger interactive governance (see Section 4.3).

b. Theoretical innovation

Potential of linking the theories

The integration of the analysis of MLG and policy implementation in the frontier tells us that there is a need for properly mapping policies across sectors and levels to identify the coordination dilemma and the implementation gaps. Beyond this, it is necessary to promote synchronicity between policies and identify policies' pitfalls so as to correct them and prevent the intrusion of covert networks. Policy inconsistency across sectors allows perverse incentives that support deforestation.

As mentioned in Section 4.5, the analytical potential of linking network governance and multi-level governance remains undeveloped. These theories are not identical but they are closely interrelated. An example of this overlap is what Bache and Flinders (2004a, p. 3) referred to as *governance* and the growing interdependence between governments and non-governmental actors at various territorial levels. Once MLG moved beyond governmental jurisdictions to include non-State actors, it became a variant of network governance typified by its focus on intergovernmental relations (see Section 4.2). As noted by (Bache and Flinders 2004a), there is more participation of non-State actors in the decision making processes taking place at different levels. In the case studies presented in this thesis there is a growing interdependence across governmental levels (MLG) that influences policy (implementation). The findings in this thesis show an example of MLG between the regional and local level joining forces between different State and non-State actors to strengthen forest monitoring (see Section 6.5). Furthermore, although steering in MLG has the potential to strengthen policy implementation, it also needs to address the risks related to complexity.

Implementation theory looks at 'too many links in the chain' as a limitation (or gap), while network governance theory is looking at the informal processes of public governance that reflect these growing links. This transition from government to governance is trying to respond to current challenges of fragmentation. There is an interesting intersection between these theories. The response is steering with a *mix* of policy instruments - hierarchy, markets and networks - that is neither top-down or bottom-up but both, and includes horizontal coordination.

Politics and power dependence

Power dependence underpins forest governance in all the case studies of this thesis. In other words *the politics* cuts across all the theoretical mainstreams analysed and is fundamental to understanding the limits of policy implementation. These power dynamics determine how resources are allocated, to whom, with what consequences for network behaviours and many other key elements that influence policy in practice.

Furthering the research on network governance can provide a better understanding of the transformation of the State power, or in other words, “the extent to which power has slipped away from States, in what circumstances, and with what effect” (Bache and Flinders 2004a). Conversely, the transformation in State power contributes to the academic debate of MLG and shows an evolution beyond State-centric perspectives, as there is not a “zero-sum conceptualization of power” (Bache and Flinders 2004a).

The new role of the State

The evidence showed a changing role of the State with growing participation and increased prominence of non-State actors in formal and informal governance processes. Several of these processes are built from the bottom-up which includes decision-making arenas and programs where NGOs, communities and international organisations have a leading role. These could be referred to as the ‘sprouts of the new governance’. This shows the increasing relevance of networks in governance (Rhodes 2017b), of the interactive forms of governance (Torfing et al. 2013), as well as of bottom-up approaches (Elmore 1979-1980; Hupe et al. 2015; Lipsky 1980; Maynard-Moody and Musheno 2003; Vinzant and Crothers 2007). In the frontier, the way rules are enforced require multifaceted strategies including novel forms of governance. This natural evolution in the role of the State is also in some way a response to what Torfing et al. (2013) noted as a growing interdependency between policy areas, policy levels, and policy actors. In this context, a priority from the State should be to support the sprouts of new governance to enhance their self-governing capacities (Torfing et al. 2013).

These sprouts manifest in different ways and the evidence in this thesis showed a growing presence of regional and local forest governance roundtables. These can be considered as an example to respond to Koliba’s query: “what policy tools does the governance network rely upon in exerting influence?” (Koliba et al. 2011, p. 65).

The emergence of networks in the frontier

The case studies presented in this thesis contributed to the understanding of the different types of networks, especially the importance of the covert networks that emerge and thrive in the frontier. Their existence limits policy implementation and more research is needed to understand their incidence. We need to understand “what type of network emerges in what conditions with what policy outcomes?” (Rhodes 2017b, p. 48). The case of Ucayali shows how fertile is the frontier for covert networks which actually showed an adaptive approach to changes in policies by adjusting their *modus operandi* limiting the implementation of policies such as Land Use Planning, Forest Concessions and Local Forests. This was the case of shifting illegal timber extraction from Forest Concessions to Local Forests.

Implementation Gaps and Policy Succession

Forest policy implementation in the Amazon has been challenged by the frequent ambiguity of policies and pursuance of often incompatible goals between sectors (Fearnside 2005). The evidence highlights that current implementation structures, the roles played by policy actors and the process of policy termination and succession have negatively impacted on policy implementation. In fact, one of the main reasons restricting the implementation of Forest Concessions was the way owners were used to extract timber which shaped specific social norms. Any area of the forest could be a target of extraction (see Section 8.2.3). Although Chapter 8 focused on five policy implementation gaps, another gap identified was that of social norms, most notably in discussions with Regional Authorities about the implementation of the Forest Law.

This indicates that lessons learned from previous Forest Policy Reforms in Peru remain valid: policy change is not sufficient to transform logging practices, and social norms (shaped by previous policy experiences) must change as well (Smith et al. 2006, p. 458). Smith et al. (2006) show the challenges of bringing change in the way people interact with forest resources, particularly in countries that have experienced governance failures in the past. Policy change and transforming social norms is necessary for improving forest policy implementation in the Amazon. This finding calls to expand the avenue of inquiry on the intersection between social norms and policy change as a key determinant of policy implementation outcomes.

The evidence on policy succession suggests that public administration in the regions was heavily influenced by the structure of the national government, with weak intersectorial coordination. Past policies and institutional practices shaped regional policies. As Chavez and Perz (2013) suggest, adoption of past policy incentives, including those offered many years ago, continue to influence future land use plans. The interaction between past and present policies as well as pre-existing institutional frameworks influence policy outcomes and deserve more attention in the implementation literature. That interaction also draws attention to the close link between policy

design and policy implementation throughout time and how the former can impact policy outcomes down the road (see Section 2.1.3).

The focus on *implementation gaps* provide a useful analytical framework to understand some of the main factors that limit the successful application of forest policies in the Amazon. However, they are insufficient to explain fully why forest policies continue to face serious limitations in frontier economies. The findings show that implementation research has much to learn from work on frontier economies. This thesis underscores the value of a bottom-up perspective to strengthen the analytical potential of the policy implementation gaps. The bottom-up perspective factors in local and regional levels of Government and their officials, networks operating at these levels, among other elements. This top-down and bottom-up interaction is key as the latter can bring forth the nuances of the frontier context necessary to advance the understanding of the implementation gaps.

To continue strengthening this field of study it is imperative to also learn more from the success stories on policy implementation. Further, it is relevant to analyse forest cover trends across time vis-à-vis the existing institutional frameworks in place that could help to understand the relationship between institutional change and forest cover gains and losses. Peru stands at a critical moment in its stewardship of the Amazon frontier, and it must take bold choices with regards to policy implementation. There are several international agreements and partnerships to reduce deforestation and forest degradation (United Nations 2014) and relevant institutional change in the country (MINAM 2016). Implementation research could inform choices and guide the crafting of solutions for the underlying wicked problems of forest governance to improve policy delivery. Yet, if the lessons learned from the implementation of the previous Forest Laws and other environmental policies are disregarded, the chances of failure could be greater.

Metagovernance

The creation of the ARAU was an attempt of institutional innovation for metagovernance with several aims including the integration of environmental activities in Ucayali and a better articulation with the productive sector. Its limitations to operate related to the implementation gap of resources and especially to characteristics of the frontier such as corruption and the omission to its authority. It is a fascinating avenue of inquiry that requires more research related to “the strategic structuring and managing of particular institutional forms of governance in order to facilitate sustained interaction, prevent dysfunctions, and advance particular political goals” (Torfing, p. 131).

Network Management

Chapter 10

Coordination is an 'old-time' problem, and despite efforts at improvement, even industrialised countries show moderate progress in central government coordination (Rhodes 2017a, p. 9-10). Local-level networks (or network governance) that buy into local ownership can help overcome coordination problems on the ground and improve policy implementation to prevent forest loss and degradation. The network in Ucayali comprises of a myriad of actors (such as NGOs, private sector, donors, government officials, communities). The findings show that there is a risk that network members will pursue different policy agendas or duplicate efforts. As mentioned beforehand, policy instruments face the challenge of coordinating between networks and across levels of governance (rules from networks with rules from public policies). Nevertheless, there is also opportunity for all levels of Government to harness their potential for supporting policy implementation, through well-established coordination mechanisms, collaborative leadership and technical support (Rhodes 2017a, p. 1). In the future, more research is warranted to understand the way these mechanisms operate, their results, as well as strategies and tactics for managing policy networks in a frontier economy.

Other relevant aspects for managing networks for policy implementation include legitimacy and fostering responsibility of actors participating in programmes (Torfing et al. 2013, p. 172). Legitimacy is also one of several natural resources governance principles underscored by environmental studies scholars (Lockwood et al. 2010), while others highlight cooperation as critical to achieving sustainability for ecosystems that spread across jurisdictional boundaries - like the Amazon (Young, 2002, p. 58). Ideally, these local-level networks should also engage local communities' committees that could support implementation (as well as surveillance and control) in their territories. The fisheries sector in Ucayali has interesting models with local communities for monitoring and control that can resonate for the forest sector (see Section 7.4).

Within those networks, and as shown in the findings, establishing policy processes that sufficiently rely on bargaining and reaching agreements is critical to overcome the risks of the frequently ignored realities of local politics. It is also a fundamental process for delivering policies that respond to the real problems on the ground. Local politics matter as frequently local authorities can exercise discretion that could impact the realisation of policies intentions and expectations (Barrett and Fudge 1981, p. 72-73). In this respect, this thesis found the absence of dialogue and coordination between regional and local authorities with respect to the transfer of competences, affecting the implementation of policies (see Section 8.2.5).

Policy Management – Markets

This thesis looked at the triad of policy management in a multi-level governance context, which consists of three key concepts: hierarchy, markets and network steering. In reference to markets,

new public management has led to “the incorporation of market mechanisms in the delivery of public goods and services [which] needs to be integrated into a conceptualization of network administration” (Koliba et al. 2011, p. 193). This paradigm has a “a strong focus on the creation or use of markets or semimarket mechanisms, or at least on increasing competition in service provision and realizing public policy” (Koliba et al. 2011, p. 193). This perspective on markets relies more on privatisation and contracting practices. The analysis in this thesis shows that markets can have a strong role not only in the provision of services, but also have a *regulatory* role in forest governance. This is especially true from a macroeconomic dimension (supply and demand). As shown in the figures in Chapter 1, Section 1.2.1, after years of steady increase in deforestation trends, market prices had a strong influence in reducing the forces driving deforestation (mainly oil palm, cocoa and rice crops). Moreover, the evidence in this thesis showed the pursuance of other market alternatives that can lead to more sustainable sourcing of forest resources (see Section 9.1.4). Future research should explore further the links between markets strategies and the strengthening of regulation in frontier contexts.

c. Reflections on methods used and data

This subsection includes some reflections on the limits of my methods and my data. On the data collection methods and interviewee selection, there was few representation from the agricultural sector at the national level in the interviewees selected. Actors from this sector were important to capture more diverse perspectives and the cross-sector interactions. It was not possible to target more of these interviewees due to the limited resources and time, which restricted me to focus on specific actors.

Another limitation on the interviewee selection is that there was no contact with members of religious organisations which could have provided insights for the network and policy implementation analysis. For example insights regarding ways to improve forest governance from the bottom-up. Religious organisations are playing a relevant role in matters related to deforestation in the Amazon and therefore, could have been a relevant source of information (Collins 2019).

In relation to the data, there were less interviewees from the local level, which could affect the MLG analysis. The location of local actors was quite distant, it required several hours to get to those places and in some instances it was not safe to travel especially to the communities located by the river. More perceptions from local actors would have been useful to better understand the dynamics between levels of governance, and the operation of networks. Having few local level

actors can limit the generalizability of the findings, yet this was also compensated through policy analysis and the meetings held with the ASSETS project.

On the methods for data analysis, the coding of large datasets can become a daunting process and although there was a coding tree and a systematic approach applied for thematic analysis, there are challenges to the process when coding is done off and on throughout long periods of time. Furthermore, the coding process of large amounts of qualitative data is quite time consuming.

Also, on the methods for data analysis, there can be other themes to analyse in multi-level governance, network governance, metagovernance and implementation, besides the ones prioritised in this thesis (See Table 7). Other research themes that could have been useful to analyse the data include the policy cycle focusing on the stages through which policies go before a decision is made (Cairney 2012, p. 44). This theme would have been useful to identify more of the politics that underpin policy implementation.

Despite these limitations, the methodology for data collection is robust because it used semi-structured interviews and focus groups that allowed in-depth discussions. Furthermore, the methodology used for data analysis had several advantages for the context where this research took place. For example, the research themes prioritised allowed to capture a double edge of networks: those that support policy implementation and those that limit implementation (covert networks).

d. Future Research

Potential of linking the theories

The interaction of multi-level governance, network governance and policy implementation and their potential to improve forest governance and policy outcomes deserves more attention in future research. Especially, research is needed on how MLG and networks can facilitate implementation and the role that steering can play in this process as “the existence of networks may facilitate implementation of a policy if it is based on negotiation” (Mette Kjaer 2004, p. 36).

Politics and power dependence

As power dependence is at the heart of the main theoretical mainstreams applied in this thesis, deepening its understanding is crucial to advance the potential of linking MLG, implementation and network governance.

The new role of the State

The forest policy roundtables and other such formative sprouts of new governance in Ucayali should also be examined further to better understand if networks are increasing efficiency in policy implementation (Mette Kjaer 2004, p. 11). It is a prospect that offers a new agenda for environmental policy making and management.

Implementation Gaps and Policy Succession

As the transformation of social norms is necessary for improving forest policy implementation, it is important to expand the avenue of inquiry on the intersection between social norms and policy change as a key determinant of policy implementation outcomes.

Network Management

More research is warranted to understand the way networks operate, their results, as well as strategies and tactics for managing policy networks in a frontier economy.

Policy Management – Markets

Future research should explore further the links between markets strategies and the strengthening of regulation in frontier contexts.

Appendix A Primary Sources

Table 11 List of interviews

Level	Total
Local*	
Communities	5
Focus Groups	4
ASSETS Meetings	3
Local Total	12
Regional	
Agriculture	3
Agriculture and Forest	3
Fisheries	2
Economic Development	2
Environment	9
Environmental Law and Indigenous Rights	3
Land Use Planning	3
Regional Council	1
Mines	1
Natural Resources Enforcement	2
University	1
Regional Total	30
National	
Agriculture and Forests	2
Environment	8
Development and Social Inclusion	1
Environment and Indigenous Rights	1
Interregional Amazon Council	1
University	1
National Total	14
Grand Total	56

*3 ASSETS meetings

1. List of fieldwork notebooks
(FWNB No. 1 2014-2016)
2. Archival material, i.e. regional government file cabinets
3. ASSETS PRA Data
4. Other consultations
 - a. Carlos Manuel Rodríguez, Minister of the Environment and Energy of Costa Rica, February 2019 and May 2019. Duration: 15 minutes each

Appendix A

- b. David Kaimowitz, International Programme Director, Natural Resources and Climate Change, Ford Foundation and former General Director of CIFOR, March and July 2019. Duration: 1 hour and 2 hours respectively
- c. Fabiola Muñoz, Minister of Agriculture of Peru, May and July 2019. Duration: 15 minutes and 1 hour respectively
- d. Gabriel Quijandría, Deputy Minister of the Environment of Peru, May 2019. Duration: 10 minutes
- e. Francisco Naranjo, Director LATAM Operations, Roundtable on Sustainable Palm Oil, May 2019. Duration: 15 minutes
- f. Mauricio Galindo, Country Representative Colombia, Rainforest Alliance, May 2019. Duration: 30 minutes
- g. Cristián Samper, President of the Wildlife Conservation Society, May 2019. Duration: 1 hour

5. Email communication

There was permanent email communication throughout the past 6 years with one regional actor and two national stakeholders whose identities are kept confidential.

Appendix B Site overview and stakeholder-organization overview Semi-structured interview protocol

Target: key informants from multiple organisations

Initial discussion questions

1. Can you please briefly introduce yourself and describe your role in the organization?
2. What would you identify as the main natural resource management activities and issues in this region?
3. What would you identify as the main natural resource management activities of your institutions and the main issues it has in this region? Which areas would you say are affected by these issues or where would you draw the boundaries around them spatially?
4. And which are the main agreements/collaborations of your institutions in reference to natural resource management? Which areas are benefiting from the collaborations/agreements?
5. Which would you consider to be the main land and natural resource management policies and practices in this region that respond to these issues (where can I find them)?
 - 5.a Which ones do you think support synergies between various natural resources?
 - 5.b To which considerations of the territory are they responding to (e.g. social, geographical, economic, cultural, ecological, others)?
6. Can you please describe these policies and practices to me? What are their aims and how do they try to achieve these aims?
 - 6.a. At what scale are those land and natural resource management policies and practices taking place (e.g. local, regional, national)?
7. Do you think this is the right scale at which these resource management issues need to be addressed?
 - 7.b. Does this coincide with the spatial spread of the resource management issues and agreements/collaborations that we discussed before?
8. Are these policies and practices usually only focusing on one resource or do some of them address several resources at the same time? (specify resource, the institution in charge and the jurisdiction its under)

Appendix B

9. Are there any policies or practices that aim to reconcile development (e.g. economic) and environmental aims? Which are the main challenges they have encountered?
10. Which policies and practices stand out both in Pucallpa and la Pedrera (especially in the former), to increase food production, while maintaining the provision of ecosystem services?
11. Which are the priorities and main needs of the communities that live in this area? Do they differ from the priorities of local/regional/national organisations? Are the land and natural resource management policies and practices responding to any of these priorities/needs?
12. Which are the key coordination efforts between scales (local, regional, national) for natural resource management? (e.g. fisheries, forestry management). Which can be highlighted as “success stories” and why? Which remain are the main challenges in reference to integration and coordination at the landscape level?
13. “Landscape” is a complex concept and I would be interested to hear how different people understand it. Can you tell me how you understand the “landscape” concept? From your own perspective and experience (e.g. of the organisation you represent), is it a geographical, economic, cultural or ecological construct? Why?

A. Mapping of Government Organisations

1. Which are the main government agencies that are associated with resource management in this LANDSCAPE?
2. Why were they created and for how long have they been operating?
3. What motivated their creation?
4. Which is the jurisdictional level at which they operate? (national, provincial/departmental, local)
5. What kind of resource do they manage?
6. Where in the landscape do they operate?
7. What are the principal activities of this organization in the landscape?
8. Does this organization engage in land use or governance activities in the landscape?
9. Which are their legally (de jure) defined land/resource management rights and responsibilities?

B. Mapping of NGOs

1. Which are the NGOs that are active in issues regarding resource management in this LANDSCAPE?

2. Which type of organisations (international, national, local) are they?
 3. Are they involved in management activities within the LANDSCAPE? (specify resource)
 4. Where in the landscape do they operate?
 5. Why were they created and for how long have they been operating?
 6. What motivated their creation?
- C. Mapping of the private sector
1. Which private companies or producer associations use the resources in this LANDSCAPE? (specify resource)
 2. What type of organization are they? (multinational, national, local)
 3. Are they located in the landscape?
 4. Do they use natural resources for commercial purposes?
 5. Do they use natural resources for subsistence purposes?
- D. Mapping of land-use / land management policies and rules
1. Which groups or organisations do you consider to be *most influential* in deciding the land-use rules?
 2. Which groups or organisations do you consider to be the *least influential* in deciding the land-use rules?
 3. In the last five years, have rules (formal or informal) changed (been modified or created) regarding resource use in the landscape? If yes, please explain the change & who participated in creating or changing the rule.
 4. Do any users (organisations or individuals) have advantages in accessing or using the natural resources in your jurisdictional areas or areas of operation? If yes, please explain who and how
- E. Land management
1. Who decides who can make rules about resource management?
 2. Who makes rules about access, ownership, or use of a resource? (must specify resource)
 3. Who decides on sanctions?
 4. Who monitors and enforces management rules?
 5. Who makes budgetary decisions?
- F. Communities and resource systems
1. Which communities reside in this LANDSCAPE?
 2. What is their principal activity in the LANDSCAPE?

Appendix B

3. Which are the main resources that they use/depend upon?
4. How are the resource systems interacting with each other?
5. Are there competitions for resources? Where?
6. Are there opportunities to work together?
7. Are there any additional stakeholders in this landscape?

G. Land management prescriptions

1. Are any of these lands in this LANDSCAPE currently under specific management prescriptions (zoning)? (e.g. Protected Areas / Natural Reserves; Territorial Management Plan; Timber Concessions; Sustainable Forestry Management Plan; Agricultural Lands, Mining, etc)

H. Formal land-use policies present in the LANDSCAPE

1. Are there rules that restrict access to resources? (specify resource, the institution in charge and the jurisdiction its under)
2. Are there rules that restrict use of resources? (specify resource, the institution in charge and the jurisdiction its under)
3. Are there incentives to support mineral extraction?
4. Are there policies to support the development of producer cooperatives (timber, NTFP, or agricultural/animal products)?
5. In the last 5 years, have there been any significant reforms to the formal rules that influence land management in the LANDSCAPE?

I. Perceptions of land-use change

1. Thinking back over the past twenty years (find a defining event for recall), how has land-use or land-cover changed in this region.
2. What do you consider to be the principal drivers of these changes

Appendix C Focus Group Questions. Leaders and Communities

1. What are the key natural resource issues in this area? (for probing: which natural resources are the most important for your livelihoods? Which ones are changing the fastest? Which ones are leading to the most conflict/concern?)
2. Are you able to take decisions on the management of (e.g. fish) resources? If yes, at what scale (for instance local, regional, national)? (separately, for each resource, e.g. fisheries). And what specific management decisions do you make?
3. Are there other people who can take decisions at the same scale? If yes, who are they?
4. Do decisions taken beyond this area have an impact on the (e.g. fish) resources in your area? If yes, who takes these decisions?
5. Which do you think is the most important scale for taking decisions about (e.g. fisheries) these resources?
6. In this area, are there competitions for (e.g. fish) resources? Please tell me more about these competitions.
7. Are people working together towards the management of (e.g. fish) resources?
8. Who from the community has access to the (e.g. fish) resources? Do everyone has access or only specific community members? Which are the factors that determine access to resources?
9. Which institutions are managing natural resources in this area? Where (spatially) do their activities take place?
10. You have helped me to understand the main scales at which each of these important resources is managed, and some of them are quite different. I am interested in how you use the term landscape. Does it differ depending on which resource you are thinking about, or does it overlap with a particular resource or administrative decision-making area?

Appendix D Landscape Performance Scorecard

Landscape Performance Scorecard	
<p><u>Directions:</u> Score each question below by circling a number. A 1 indicates very poor performance and a 5 indicates very high performance. Circle 2 numbers together to give an intermediate score. For example, circle the 1 and the 2 together to give a score of 1.5.</p>	
<p>Conservation Goal: The landscape conserves, maintains, and restores wild biodiversity and ecosystem services</p>	
<p>Conservation Questions</p>	
<p>C1: Does the landscape contain an adequate quantity and suitable configuration of natural and semi-natural habitat to protect native biodiversity?</p>	
<p>C2: Do natural and semi-natural habitats in the landscape approximate the composition and structure of the habitats historically found in the landscape?</p>	
<p>C3: Are important species within the landscape biologically viable?</p>	
<p>C4: Does the landscape provide locally, regionally, and globally important ecosystem services?</p>	
<p>C5: Are natural areas and aquatic resources adequately buffered from productive areas and activities?</p>	
<p>Production Goal: The landscape provides for sustainable, productive, and ecologically compatible agricultural production systems.</p>	
<p>Production Questions</p>	
<p>P1: Do production systems respond to demand by internal (local) consumers and buyers, and by external buyers?</p>	

P2: Are production systems financially viable and can they adapt to changes in input and output markets?	
P3: Are production systems resilient to disturbances , both natural and human?	
P4: Do production practices have a neutral or positive impact on wild biodiversity and ecosystem services ?	
P5: Are species and varietal diversity of crops, livestock, fisheries and forests adequate and maintained?	
Livelihood Goal: The landscape sustains or enhances the livelihoods and well-being of all social groups that reside there.	
	Livelihood Questions
L1: Are households and communities able to meet their basic needs while sustaining natural resources?	
L2: Is the value of household and community income and assets increasing?	
L3: Do households and communities have sustainable and equitable access to critical natural resource stocks and flows?	
L4: Are people in the landscape able to adapt to changes in human and non-human (plant & animal) population dynamics ?	
L5: Are households and communities resilient to external shocks such as flooding, draught, changes in commodity prices, disease epidemics and others?	
Institutions Goal: Institutions are present that enable integrated, ongoing planning, negotiation, implementation, resource mobilization, and capacity-building in support of the goals of integrated landscape management.	
Institution Questions	
I1: Is there effective cross-sectoral and cross-boundary planning, monitoring and decision making at landscape scale?	

I2: Do farmers, producers, and communities have adequate capacities to contribute to effective landscape management?	
I3: Do relationships among public and civic institutions support the management of integrated landscapes?	
I4: Do markets provide incentives for the management of integrated landscapes?	
I5: Do knowledge, norms and values (culture) support integrated landscape management?	

Appendix E Twenty Questions for Assessing the Performance of Ecoagricultural Landscapes

Twenty Questions for Assessing the Performance of Ecoagricultural Landscapes

Conservation Goal: The landscape conserves, maintains, and restores wild biodiversity and ecosystem services.

Criterion C1: Does the landscape contain an adequate quantity and suitable configuration of natural and semi-natural habitat to protect native biodiversity?

Criterion C2: Do natural and semi-natural habitats in the landscape approximate the composition and structure of the habitats historically found in the landscape?

Criterion C3: Are important species within the landscape biologically viable?

Criterion C4: Does the landscape provide locally, regionally, and globally important ecosystem services?

Criterion C5: Are natural areas and aquatic resources degraded by productive areas and activities?

Production Goal: The landscape provides for the sustainable production of crops, livestock, fish, forest, and wild edible resources.

Criterion P1: Do production systems satisfy demand for agricultural products (crops, livestock, fish, wood) by consumers inside and outside the landscape?

Criterion P2: Are production systems financially viable and can they adapt to changes in input and output markets?

Criterion P3: Are production systems resilient to disturbances, both natural and human?

Appendix E

Criterion P4: Do production systems have a neutral or positive impact on wild biodiversity and ecosystem services in the landscape?

Criterion P5: Are species and varietal diversity of crops, livestock, fisheries and forests adequate and maintained?

Livelihoods Goal: The landscape sustains or enhances the livelihoods and well-being of all social groups who reside there.

Criterion L1: Are households and communities able to meet their basic needs while sustaining natural resources?

Criterion L2: Is the value of household and community income and assets increasing?

Criterion L3: Do households and communities have sustainable and equitable access to critical natural resource stocks and flows?

Criterion L4: Are local economies and livelihoods resilient to change in human and non-human population dynamics?

Criterion L5: Are households and communities resilient to external shocks such as flooding, draught, changes in commodity prices, disease epidemics and others?

Institutions Goal: The landscape hosts institutions that support the planning, negotiation, implementation, resource mobilization, and capacity-building needed to integrate conservation, production and livelihood functions.

Criterion I1: Are mechanisms in place and functioning for cross-sectoral interaction at landscape scale?

Criterion I2: Do producers and other community members have adequate capacity to learn and innovate about practices that will lead to integrated landscapes?

Criterion I3: Does public policy support integrated landscapes?

Criterion I4: Are market incentives conducive to integrated landscapes?

Criterion I5: Do knowledge, norms, and values support integrated landscapes?

Appendix F Site & Block Overview Form (IM Form 1)

The purposes of this form are to gain an overview of actors and institutions operating within a territory. Information should be gathered primarily via secondary research of laws, a literature review (gray and published) of natural resource management activities in the region, any available GIS information on resource management and governmental jurisdictions in the SITE, and information provided on governmental and non-governmental agencies web pages. Information on the stakeholders, tenure arrangements, and the formal rules will also be supplemented by data gathered in the field.

I. INVENTORY OF STAKEHOLDERS

The following is intended to provide an overview of the principal stakeholders engaged in land-management activities in the SITE, and more specifically linked to the SL Biophysical PLOTS. More specific information on the communities is gathered via the household survey, IFRI, and supplemental institutional mapping community forms (IM forms 3 & 4). More specific information on the stakeholder groups is gathered using the Institutional Mapping Inter-Organization Form (IM form 2). Depending on the size of the site and the number of actors and their accessibility, it may not be possible to interview all stakeholders. Please follow instructions on IM form 2 for selecting stakeholder interviews.

1. GOVERNMENT ACTORS

Please list (1) all government agencies that are associated with resource management in this LANDSCAPE, (2) their jurisdictional level, (3) whether they are involved with resource management, (4) their legally (de jure) defined land/resource management rights and responsibilities (every intent should be made to interview a member from each government organization active in the region):

Government Organization Name	Jurisdiction: (1) National (2) Provincial/Departmental (3) Local	Manages (Specify type of resource)	Land Management (list all that apply) (1) Decide who can make rules about resource management. (2) Make rules about access, ownership, or use of resource. (3) Decide sanctions (4) Monitor and enforce management rules. (5) Make budgetary decisions.

2. List the names of all NGOs that are active in issues regarding resource management in this LANDSCAPE, the type of organizations (international, national, local), whether they are involved in management activities within the LANDSCAPE,:

Non-Governmental Organizations	Organization Type (1) National (2) Provincial/Departmental (3) Local 4) International	Involved in management of BLOCK (Y/N)

Appendix F

3. List the communities that reside in this LANDSCAPE:

Community Name	Inside LANDSCAPE? (Y/N)

4. List any private companies or producer associations that use the resources in this LANDSCAPE, type of organization, if located in the landscape, and whether an interorganisational form (IM form 2) has been filled out:

Private Organization Name	Type: (1) Multinational (2) National (3) Local	Inside LANDSCAPE? (Y/N)

5. Any additional stakeholders:

Additional Stakeholder Group	Principal activity in LANDSCAPE

II. FORMAL RULE OVERVIEW

1. Are any of these lands in this LANDSCAPE currently under specific management prescriptions (zoning)?

Management Prescriptions	Present in LANDSCAPE (Y/N)	Present in BLOCK (Y/N)	Under jurisdiction of (Organization Name):
Protected Areas / Natural Reserves			
Territorial Management Plan			
Timber Concessions			
Sustainable Forestry Management Plan			
NTFP Concessions			
Colonization Project			
Land Titling Reforms			
Agricultural Lands			
Watersheds			

Formal Land-Use Policies	Present in LANDSCAPE (Y/N)	Under Jurisdiction of: (Organization Name)
Rules that Restrict Access to Forests		
Rules that Restrict Use of Forests		
Rules that support multiple use of Forests		

Formal Land-Use Policies	Present in LANDSCAPE (Y/N)	Under Jurisdiction of: (Organization Name)
Incentives (i.e. tax incentives, credit, or extension services) to produce commercial crops.		
Rules that establish ownership of land based on use.		
Incentives to support mineral extraction.		
Policies to support small-holder access to credit.		
Policies to support the development of producer cooperatives (timber, NTFP, or agricultural/animal products)		
Others		

2. Last 5 years, have there been any significant reforms to the formal rules that influence land management in the LANDSCAPE? ____ Yes, ____ No. If yes, please explain these reforms:

3. Looking specifically at land-use and tenure type within the biophysical BLOCK for this site, who owns the following resources in this plot (may mark multiple answers):

	Government	Communal/Territorial	Private/ w papers	Private no/papers	Other (explain)	Not applicable (Resource not in BLOCK)
Forests						
Agriculture lands						
Agroforestry lands						
Pasture lands						
Minerals						
Other						

4. In separate excel file, please keep a list of all formal land management rules that apply to the SITE. The file should include:
- SITE NAME
 - Municipalities to which law applies
 - Law number (if applicable)
 - Briefly what the rule promotes or restricts
 - The incentive or sanction to be applied
 - Who is responsible for applying the rule

Appendix G Stakeholder Inter-Organization Form

Purpose: This form is to be administered to stakeholder organizations that (i) actively use and/or (ii) attempt to influence the use (via creation and/or application land-use rules) of land-based resources (specifically, forests, agroforestry lands, agricultural and pasture lands, and potentially minerals) in the SL site. Such organizations include government agencies, non-governmental agencies, and private cooperatives or companies. Community organizations are not included in this form, as information on these organizations is captured in the Community Land Management Organization IM Form 3.

The intention of this form is to understand how organizations operating across jurisdictions influence land-use within the communities, and more broadly, the SL site.

Selection of Stakeholder Organizations: There are potentially a large number of stakeholder organizations in any SL site. Selection of stakeholder organizations should prioritize:

- a) Federal, Regional, & Municipal agencies involved in making land management rules that impact land-use in any of the study site communities.
- b) Any governmental agencies that have special jurisdictions (ie protected areas, forest concessions) within the SL site, but are not captured in (a).
- c) Non-governmental organizations that work directly in the study communities.
- d) Indigenous organizations operating in SITE, but not included in data gathered in the selected study communities.
- e) Private corporations that directly engage in resource use in the territory.

Data Gathering: The researcher should bring a copy of a map with the SL study area to the interview so that the respondent can talk specifically to activities within the SL site. All questions should be asked open-ended in conversational style. The researcher will then code the responses into the form.

INTER-ORGANIZATION ID INFORMATION

1. Site that this Organization corresponds to: _____
2. Landscape that this Organization corresponds to: _____

Appendix G

3. Name of study community (or communities) that this organization corresponds to:

4. Name of person filling out this

form: _____

5. Name of persons & positions/titles with whom discussions held:

6. Name of Organization:

7. Type of organization

- 1) Agency of a national government ____
- 2) Agency of a State government ____
- 3) Agency of a local government ____
- 4) Aid agency of foreign government ____
- 5) An in-country not-for-profit organization (NGO) ____
- 6) An international not-for-profit organization (NGO) ____
- 7) A for-profit regional or national firm, company or corporation ____
- 8) A for-profit multinational firm, company, or corporation ____
- 9) A cooperative or producer association ____
- 10) Indigenous organization ____

8. Sectors related to this organization. Check all that apply:

- 1) Forestry ____
- 2) Agroforestry ____
- 3) Agriculture ____

- 4) Cattle_____
- 5) Mining_____
- 6) Planning/Territorial Organization_____
- 7) Land titling_____
- 8) Roads_____
- 9) Protected Areas_____
- 10) Environmental Conservation_____
- 11) Community Development
- 12) Other_____

I. ORGANIZATION ACTIVITIES IN THE STUDY REGION (RIGHTS & RESPONSIBILITIES)

1. In which jurisdictions does this organization operate (list names of municipios, cantones, provinces as appropriate):

2. What are the principal activities of this organization in the landscape?

3. Does this organization engage in land use or governance activities in the landscape?
____Yes, ____No. If yes, please specify activities.

4. How does this organization influence land-use or land management in the landscape?

Activity "0" = No, "1" = Yes

Appendix G

Decides who can make rules about access, use, or management of land-based resource systems.

Makes rules about access, use or management of land-based resource systems.

Consulted on rules about access, use or management of resource systems.

Lobbies on rules about access, use or management of resource systems.

Makes budgetary decisions—has budget powers

Monitors or Enforces rules

Applies Sanctions

Uses natural resources for commercial purposes (IF YES, PLEASE LIST PRINCIPAL RESOURCES)

Uses natural resources for subsistence purposes (IF YES, PLEASE LIST PRINCIPAL RESOURCES)

5. In considering the above-mentioned activities, does your organization face any limitations in realizing these activities? ___ Yes, ___ No. Please explain:

6. Which organizations (governmental, non-governmental, private) does this organization interact with most frequently? Generally speaking, how describe the interaction?

Name Organization Type:

- 1) Governmental
- 2) Non-governmental
- 3) Private Corporation
- 4) Other community organization How describe the interactions
 - 1) Cooperative
 - 2) Neither cooperative nor conflictive

3) Conflictive Explain Relationship

II. PERCEPTIONS OF LAND-USE CHANGE

1. What are the principal land-use activities in this site (forestry, agriculture, mining, etc)?

2. Thinking back over the past twenty years (circa 1995—find a defining event for recall), how has land-use or land-cover changed in this region (referring to the SITE).

3. What do you consider to be the principal drivers of these changes

III. LAND-USE / LAND MANAGEMENT POLICIES

1. There are many governmental policies, at different levels (national, regional, and local) that influence the use of land-use – such as permits, concessions, roads/infrastructures, territory planning, etc. Some of these policies promote certain land or resource uses, others, tend to restrict resource use.

a. In terms of land productivity, what, if any, do you consider to be the principal land management policies or programmes to promote the use of natural resources (agriculture, cattle, mining, forest products) in your jurisdiction (max 3):

Policy to Promote Use of Natural Resources Who created

Appendix G

b. In terms of conservation or sustainable use of resources, what, if any, are the principal land management policies or programmes that restrict resource use (max 3):

Policy/Rule to Restrict Resource Use	Who created	Who monitors /enforces
--------------------------------------	-------------	------------------------

2. In considering the land-use rules for this SITE:

a. Which groups or organizations do you consider to be most influential in deciding the land-use rules?

b. Which groups or organizations do you consider to be the least influential in deciding the land-use rules?

3. In the last five years, have rules (formal or informal) changed (been modified or created) regarding resource use in the landscape? ____ Yes, ____ No. If yes, please explain the change & who participated in creating or changing the rule.

4. In general, do the land-use rules complement one another, or conflict?

- 1) Generally complement
- 2) Mixed
- 3) Generally conflict.

If they conflict, please explain areas where they conflict:

5. Do any users (organizations or individuals) have advantages in accessing or using the natural resources in your jurisdictional areas or areas of operation? ____ Yes, ____ No. If yes, please explain who and how:

6. Are there currently conflicts between organisational policies and what resource users would like in terms of resource management policies? ____ Yes, ____ No. If yes, please explain:

7. If yes, are there any mechanisms for resolving these conflicts? ____ Yes, ____ No. If yes, please explain:

IV. MONITORING AND ENFORCEMENT OF LAND-USE REGULATIONS

8. On average who complies with the land-use rules?

- 1) ____ Most users comply
- 2) ____ About half comply
- 3) ____ Few or no one complies

Appendix G

9. Are there any public records of infractions and sanctions? ____ Yes, ____ No, ____ don't know.

10. What are the principal challenges in monitoring and enforcing the laws?

11. To what extent do you believe the activities aimed at reducing deforestation are actually addressing the causes of deforestation? Please explain

12. What other actions or policies should be implemented to address the drivers of deforestation?

13. With regards to land-use and land-management in this landscape, are there any other groups or organizations we should contact? (If yes, get contact information).

Appendix H Research Framework for Institutional Mapping

Research Framework for Institutional Mapping

Prepared by Tanya Hayes for IMSAO SL Western Amazon. Consortium Research Programme (CRP) on Forests, Trees and Agroforestry (FTA) of the CGIAR. March, 2014

Impact of Resource Rules

How does land tenure impact resource management outcomes of sustainability and multi-functionality?

What is the impact of different resource rules on: sustainability, livelihoods, equity, multi-functionality? Which are the key challenges these resource rules face for sustainable landscape management?

Impact of Rulemaking Rights & Responsibilities

Does who made the rules, impact the uses permitted or restricted, livelihood benefits, rules regarding distribution of benefits, multi-functionality?

Does who made the resource rules influence resource use?

Does who is assigned monitoring and enforcement responsibilities influence whether rules are in fact applied?

How do budgetary powers impact the ability to implement management activities and monitor and enforce rules?

Impact of Processes for Rulemaking & Application of Rules

How do rule-making processes influence the specific rule Statements (sustainability goals, intended livelihood outcomes, distribution of benefits, and multi-functionality)?

How do rule-making processes influence resource users' perception of legitimacy of rules and equity of outcomes?

How does access to information influence user perceptions of legitimacy of rules, and legitimacy of sanctions?

Appendix I Interview transcription format

Código entrevista: Interview Code

Fecha (día/mes/año): Date

Ciudad: City

Institución: Institution

Comunidad: Community

Nombre y Apellido: Name and Last Name

Cargo: Title

Notas del transcriptor: Notes of the transcriptor.

In this place general comments will be included related to the quality of the audio, expressions not understood, expressions or terms that should be highlighted, such as new lexico or which meaning in the context of the interview is not usual. It is a section independent from the notes that can be included throughout the transcription to highlight the entonation or emotiveness of the interviewee.

Transcripción: Transcription

Entr.: ¿? Interviewer

Edo.: Interviewee

Entr.: ¿?

Edo.:

Entr.: ¿?

Entrevista (CÓDIGO DE ENTREVISTA). Página 1 de _____. Transcriptora: Laura Díaz

Appendix J N-Vivo Coding Tree

N-VIVO Codes
Agriculture
Amazon Fruit Production
Cattle Raising
Cocoa Production
Illegal Crops
Oil Palm Production
Forest-Agriculture Interface
Governance
Bottlenecks
Illegal Use of Resources
Perverse Incentives
Community level natural resource management
Enforcement
Incentives
Integration between conservation and sustainable economic development
Monitoring and Evaluation
Power Relations and Dynamics
Organisations
ARAU
ARAU-Consolidation Process
ARAU-Implementation Challenges
ARAU-Role
CIAM
CIAM-Consolidation Process
CIAM-Implementation Challenges
CIAM-Role
Oil
National Park
Communal Reserve
Planning Tools
Annual Operational Plan
Forest Management Plan
Forestry Investment Plan
Forestry Potential Zoning
Operational Institutional Plan (POI)
Ordenamiento Territorial
Regional Joint Development Plan
Socio-economic Zoning
Strategic Institutional Plan (PEI)
Strategic Regional Plan of the Agricultural Sector of Ucayali
Policies

Agricultural Policies
Decentralisation Policy
Food Security and Nutritional Health Policies
Forest Law
Forest Concessions
Forest Concessions - Challenges
New Forest Law
New Forest Law-Bottlenecks
Past Forest Law
Water Policies
Strategies
The Biological Diversity Strategy
Social Groups
Indigenous Groups
Migrants
Social Dynamics
Multi-Level Governance
State Capacity
Administrative
Resources
Control of corruption
Steering
Distribution of authority and competences
Interdependence and non-State actors
Coordination of MLG across policy sectors
Land use planning
Stakeholders' views on land use planning
Dependence
Steering
Complexity
Networks as obstacles
Coordination
Implementation
Implementation Gaps
Objectives
Policy ambiguity
Policy inconsistency across sectors
Policy inconsistency between Governments
Politics
Ownership
Steering
Policy succession
The role of policy and policy makers
Implementation structures
Policy change and innovation
Policy termination and succession

Resources
Inadequate resources
Inappropriate policy instruments
Coordination
The hierarchical relationships across levels of government and tensions with the actors in charge of funding allocation
The absence of dialogue and coordination between sectors
The transfer of competences within the decentralisation process
Implementation in the Amazon Context
Frontier Economy
Migration and economic boom
Informality, corruption and market pressure
Weak rule of law
Unfair market conditions
Unjust social practices
The Paradox of Plenty
Uneven distribution of benefits
Wasteful and unsustainable practices

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