

Uncovering REDD+ readiness in Mexico: Actors, discourses and benefit-sharing

PhD Thesis | December 2015
Jovanka Špirić



Supervisors:

Dr. Esteve Corbera (UAB)
Dr. Victoria Reyes-García (ICREA-UAB)
Dr. Luciana Porter-Bolland (INECOL)

PhD Programme in Environmental Science and Technology
Institut de Ciència i Tecnologia Ambientals, ICTA
Universitat Autònoma de Barcelona, UAB



Uncovering REDD+ readiness in Mexico: Actors, discourses and benefit-sharing

PhD Thesis
Jovanka Špirić

Under the supervision of:

Dr. Esteve Corbera (UAB)

Dr. Victoria Reyes-García (ICREA-UAB)

Dr. Luciana Porter-Bolland (INECOL)

PhD Programme in Environmental Science and Technology
Institut de Ciència i Tecnologia Ambientals, ICTA
Universitat Autònoma de Barcelona, UAB

December 2015

Mojoj porodici

Abstract

Reducing Emissions from Deforestation and forest Degradation, plus conservation, sustainable management of forests and enhancement of forest carbon stocks (REDD+) is an international policy mechanism that seeks to mitigate climate change, while potentially alleviating poverty and contributing towards biodiversity conservation in developing countries. The United Nations Framework Convention on Climate Change (UNFCCC) laid the foundations for REDD+ design and implementation in 2005 and the mechanism's architecture was finalised in 2015. During that period, parties to the UNFCCC debated and developed procedures and guidelines on REDD+ technical and governance issues, including for example how to guarantee the meaningful participation of all relevant stakeholders and how to respect the rights of indigenous peoples and local communities. In parallel, several developing countries, supported by multilateral and bilateral aid, entered the so-called REDD+ readiness phase and started developing national strategies for implementing REDD+ activities through specific policies and actions.

This thesis addresses three main issues of concern for REDD+ scholars and practitioners using Mexico's readiness process as an example. First, it analyses the design and legitimacy of the institutional arrangements established by the Mexican government to draft the REDD+ national strategy. Second, it identifies the REDD+ discourses mobilised by the actors involved in the country's REDD+ readiness process and it highlights how such discourses are reflected in national policy documents, thus shedding light on dominant ideas and narratives permeating into the national strategy. Third, using two rural communities as case studies, the thesis investigates the preferred scenarios for REDD+ implementation and benefit-sharing at the local level, and it identifies the key contextual and socio-economic factors mediating such preferences.

At the national level, there is a high level of decision-making centralization within the federal government's environment agencies and there are two groups of participating actors with contrasting perceptions about the legitimacy of the REDD+ readiness phase. Among these actors, three main REDD+ discourses are identified. The first discourse relies on global environmental justice arguments to challenge the assumptions and foundations of REDD+ and, therefore, such discourse is not reflected in policy decisions to date. The second and partly institutionalised discourse encourages legal and

policy reforms for REDD+ implementation to achieve social benefits and equitable outcomes across national REDD+ stakeholders. The third and dominant discourse openly supports REDD+ implementation but remarks the importance of making it an effective mechanism from a mitigation perspective. At the local level, findings indicate that, in the hypothetical case that REDD+ activities had to be developed, local people would prefer to implement a combination of land-use productive and conservation activities with governmental support, in exchange of direct payments. The results also reveal that individual preferences for REDD+ implementation and benefit-sharing are mediated by land tenure, gender and social status.

This thesis contributes to a growing body of research analysing REDD+ governance processes. It suggests that Mexico's government needs to decentralise the REDD+ design process to improve its legitimacy and perceived fairness. This would likely increase actors' participation and the institutionalisation of their ideas. Overall, the research suggests that countries can only develop legitimate and fair REDD+ architecture if they avoid reproducing old-fashioned, government-led policy processes that might result in unfair policies. Instead, REDD+ host countries should design novel institutional arrangements to recognise the diversity of actors involved in land-use activities and their uneven power in policy design, while being sensitive to a diversity of narratives and positions about how to operationalize REDD+ at the desk and on the ground.

Resumen

La Reducción de Emisiones por Deforestación y Degradación forestal, además de la conservación, el manejo sostenible de bosques y aumento de reservas de carbón forestal (REDD+) es un mecanismo de política internacional que busca mitigar el cambio climático y, a su vez, aliviar la pobreza y contribuir a la conservación de biodiversidad en los países en desarrollo.

La Convención Marco de las Naciones Unidas sobre el Cambio Climático (CMNUCC) sentó las bases para el diseño e implementación de REDD+ en el 2005 y la arquitectura del mecanismo se finalizó en 2015. Durante ese período, los países miembros de CMNUCC debatieron y desarrollaron procedimientos y directrices sobre las cuestiones técnicas y de gobernanza de REDD+, incluyendo por ejemplo la forma de garantizar la participación significativa de todas las partes interesadas, y cómo respetar los derechos de los pueblos indígenas y las comunidades locales. Al mismo tiempo, varios países en desarrollo, apoyados por los fondos multilaterales y bilaterales, entraron en la fase de preparación para REDD+ y comenzaron a diseñar estrategias nacionales para la implementación de actividades a través de políticas y medidas concretas.

Esta tesis aborda tres cuestiones fundamentales para los académicos y profesionales interesados en REDD+, utilizando como ejemplo el proceso de preparación en México. Primero, analiza el diseño y la legitimidad de los mecanismos institucionales establecidos por el gobierno mexicano para elaborar la estrategia nacional REDD+. Segundo, la tesis identifica los discursos movilizados por los actores involucrados en el proceso de preparación para REDD+ y subraya cómo se reflejan esos discursos en los documentos de política nacional, identificando así las ideas dominantes que permean en la estrategia. Tercero, la tesis investiga las preferencias para la implementación de la REDD + y la distribución de beneficios en las dos comunidades rurales e identifica los factores contextuales y socio-económicos que median dichas preferencias.

A nivel nacional existe un alto nivel de centralización en la toma de decisiones por parte de las agencias de medio ambiente del gobierno federal. Hay dos grupos de actores con percepciones opuestas sobre la legitimidad de la fase de preparación para REDD+. Entre esos actores se identifican tres principales discursos sobre REDD+. El primer discurso moviliza argumentos de justicia ambiental global para criticar los principios y

fundamentos de REDD+ y, por lo tanto, no se refleja en decisiones políticas. El segundo discurso está parcialmente institucionalizado y propugna las reformas políticas y legales para que la implementación de REDD+ logre beneficios sociales distribuidos de manera equitativa entre actores a nivel nacional. El tercer discurso apoya abiertamente la implementación de REDD+, pero señala la importancia de convertirlo en un mecanismo eficiente desde el punto de vista de la mitigación. El tercer discurso domina en las discusiones nacionales. A nivel local, los resultados indican que, en el caso hipotético de que las actividades de REDD+ se desarrollaran, la gente preferiría implementar una combinación de actividades productivas y de conservación con el apoyo del gobierno, a cambio de pagos directos. Los resultados también revelan que las preferencias individuales para la implementación y la distribución de beneficios de REDD+ dependen de la posesión de tierras, el género y el estatus social de la persona.

Para concluir, esta tesis contribuye a un creciente cuerpo de investigación analizando los procesos de gobernanza de REDD+. La tesis sugiere que el gobierno de México necesita descentralizar el proceso de diseño de REDD+ para mejorar su legitimidad y el grado de justicia percibido por todos los actores de diferentes sectores. Esto probablemente resultaría en un aumento de la participación y en la institucionalización de las distintas ideas promovidas por estos actores. En general, los resultados de la tesis sugieren que los países pueden desarrollar una arquitectura REDD+ legítima y justa sólo si evitan reproducir un proceso político dirigido exclusivamente por el gobierno. Los países donde REDD+ vaya a implementarse deberían diseñar nuevos arreglos institucionales para reconocer la diversidad de actores involucrados en actividades de uso de la tierra y su poder desigual en el diseño de la política, siendo sensibles a la diversidad de discursos de como diseñar e implementar todas las políticas y programas vinculadas a dicha implementación.

Contents

Tables.....	6
Figures	7
Acknowledgements.....	8
Acronyms.....	10
Chapter 1. Introduction	12
1.1. Research aim and objectives	13
1.2. Thesis structure	16
Chapter 2. Research context	19
2.1. Forests, deforestation and forest degradation.....	19
2.2. Forest tenure and governance.....	22
2.3. Forest conservation and management	24
2.4. Carbon offsetting markets and carbon forestry	25
2.5. Reducing emissions from deforestation and forest degradation	29
2.5.1. Financing REDD+	30
2.5.2. Benefit-sharing from REDD+	31
2.5.3. Environmental and social safeguards and non-carbon benefits	33
2.5.4. Monitoring, Reporting and Verification.....	35
2.5.5. Evolving REDD+ strategies in developing countries.....	36
2.5.6. Evolving REDD+ pilots: key findings and research gaps	37
2.6. Mexico's forestry sector.....	38
2.6.1. Deforestation and forest degradation trends.....	39
2.6.2. Forest tenure and property rights: the ejido system.....	39
2.6.3. Forest conservation and management programmes	42
2.7. The history of REDD+ in Mexico.....	45
2.7.1. The REDD+ readiness process	45
2.7.2. Emerging REDD+ pilots at regional and local levels	51
2.8. Summary	52
Chapter 3. Theoretical foundations.....	53
3.1. Governance for REDD+.....	53
3.1.1. Defining environmental governance	53
3.1.2. Four core criteria to analyse environmental governance.....	55
3.1.3. REDD+ as environmental governance	56

3.2. Analysing legitimacy in environmental governance and REDD+	58
3.2.1. Input and output legitimacy	58
3.2.2. Legitimacy in multi-stakeholder policy processes	60
3.2.3. Input legitimacy criteria and indicators	62
3.2.4. Output legitimacy criteria	67
3.3. Environmental discourses	67
3.3.1. Discourses, storylines, and discourse coalition	67
3.3.2. Environmental discourses	69
3.3.3. Discourses on deforestation, forest governance and REDD+	72
3.4. Equity in environmental governance	76
3.4.1. Framing equity	76
3.4.2. Equity in REDD+	78
3.4.3. Equity in REDD+ benefit-sharing	79
3.4.4. Determinants of equity in REDD+ benefit-sharing across scales	84
3.5. Summary	89
Chapter 4. Case study and methods	90
4.1. Case study communities	90
4.1.1. La Mancolona	91
4.1.2. Xmaben	93
4.2. Data collection	95
4.2.1. Semi-structured interviews	95
4.2.2. Focus groups	101
4.2.3. Participant observation at meetings and events	105
4.2.4. Literature and documents review	106
4.3. Data analysis	106
4.3.1. Qualitative content analysis	106
4.3.2. Stakeholder analysis	107
4.3.3. Discourse analysis	110
4.4. Ethical considerations	111
4.5. Summary	113
Chapter 5. Actors: Analysing stakeholders and the legitimacy of decision-making processes in REDD+ readiness	114
5.1. Mapping REDD+ actors in Mexico	114
5.1.1. Top-holders	117

5.1.2. Followers	119
5.1.3. Frontliners.....	120
5.1.4. Money patrons	122
5.1.5. Midfielders	123
5.1.6. Infielders.....	125
5.1.7. Information providers	127
5.1.8. Outfielders	129
5.2. Normative and organisational characteristics of multi-stakeholder processes in Mexico's REDD+ readiness.....	130
5.2.1. REDD+'s Technical Advisory Committee.....	130
5.2.2. REDD+'s state-based Technical Advisory Committees	131
5.2.3. ENAREDD+'s Working Group of the National Forestry Council	133
5.2.4. Information sharing between multi-stakeholders fora.....	133
5.3. The legitimacy of Mexico's REDD+ multi-stakeholders fora.....	135
5.3.1. The CTC-REDD+ as a legitimate decision-making forum	135
5.3.2. The CTC-REDD+ as an illegitimate decision-making forum.....	137
5.3.3. The legitimacy of the CTC-Campeche.....	140
5.4. Grounds for and current state of REDD+ readiness legitimacy.....	142
5.4.1. Impact of stakeholders asymmetries on REDD+ readiness legitimacy.....	142
5.4.2. Explaining actors' legitimacy perceptions	147
5.5. Summary	150
Chapter 6. Discourses: Analysing the key narratives and their prominence in REDD+ readiness.....	151
6.1. REDD+ discourse coalitions in Mexico.....	151
6.1.1. REDD+ rejectionists.....	152
6.1.2. REDD+ reformists.....	155
6.1.3. REDD+ advocates	158
6.2. The resemblance of Mexico's REDD+ discourses with global forest governance discourses	161
6.3. Discourse institutionalization in REDD+ readiness.....	167
6.3.1. Institutionalisation of REDD+ conceptual dimensions	168
6.3.2. Institutionalisation of REDD+ strategic dimensions.....	170
6.4. Interpreting the discursive dynamic of REDD+ readiness.....	176
6.4.1. REDD+ discourses overlaps and conflicts	176

6.4.2. Explaining different levels of discourse institutionalisation	180
6.5. Summary	182
Chapter 7. Benefit-sharing: Exploring local preferences on REDD+ benefits distribution	184
7.1. Benefit-sharing preferences in La Mancolona	184
7.1.1. Scenarios characteristics.....	184
7.1.2. Preferred scenarios	187
7.1.3. Preferences in REDD+ implementation	191
7.2. Benefit-sharing preferences in Xmaben.....	192
7.2.1. Scenarios characteristics.....	192
7.2.2. Preferred scenarios	195
7.2.3. Preferences in REDD+ implementation	200
7.3. Comparative analysis of benefit-sharing preferences	202
7.4. Learning about equity and benefit-sharing in REDD+	204
7.4.1. Factors influencing preferences on equity and benefit-sharing.....	204
7.4.2. Contrasting local preferences with government decisions on equity and benefit-sharing	209
7.5. Summary	213
Chapter 8. Conclusions	215
8.1. Theoretical contributions	215
8.2. Policy recommendations	219
8.3. Limitations and caveats.....	221
8.4. Further research.....	222
References.....	224
Appendix.....	250
A. Main sources of funding for REDD+ readiness in Mexico.....	250
B. Key characteristics of local case study sites: La Mancolona and Xmaben	253
C. List of research activities.....	256
D. National and regional level semi-structured interviews.....	264
E. Community level semi-structured interviews.....	268
F. Household level semi-structured interviews	270
G. General information of the focus group participants	274
H. Explanatory posters and photos of the focus groups.....	275
I. Form used to take down and analyse focus groups information.....	277

J. Photos of the attended meetings and events 278

Tables

Table 2.1: The Cancun social and environmental safeguards and their broad principles.....	33
Table 2.2: Principles to be taken into account when developing national Safeguards Information System.....	34
Table 2.3: ENAREDD+ strategic lines and related specific activities as defined in the Mexico's REDD+ Vision document (2010)	47
Table 3.1: Criteria and indicators of input legitimacy.....	66
Table 3.2: Dryzek's (2012) environmental discourse categories.....	70
Table 3.3: Relations between principles of distributive justice, benefit-sharing rationales and benefit-sharing approaches.....	83
Table 3.4: Determinants of equity in REDD+ benefit-sharing across scales.....	85
Table 4.1: Sections and key issues explored in semi-structured interviews at national and regional level.....	97
Table 4.2: Topics explored in key informants' interviews.....	99
Table 4.3: Topics explored in household interviews.....	100
Table 4.4: Focus group characteristics.....	104
Table 4.5: List of codes for Chapters Five and Six.....	107
Table 5.1: Mexico's REDD+ readiness Top-holders.....	117
Table 5.2: Mexico's REDD+ readiness Followers.....	119
Table 5.3: Mexico's REDD+ readiness Frontliners.....	120
Table 5.4: Mexico's REDD+ readiness Money patrons.....	122
Table 5.5: Mexico's REDD+ readiness Midfielders.....	124
Table 5.6: Mexico's REDD+ readiness Infielders.....	126
Table 5.7: Mexico's REDD+ readiness Information providers.....	128
Table 5.8: Mexico's REDD+ readiness Outfielders.....	130
Table 5.9: Summary of supporters' and detractors' perceptions on the CTC input legitimacy criteria.....	139
Table 5.10: Summary of the supporters' and detractors' perceptions on the CTC-Campeche input legitimacy criteria.....	141
Table 6.1: Description of the main REDD+ discourses in Mexico.....	164
Table 6.2: Institutionalisation of the storylines behind the correspondent discourse coalition	167
Table 7.1: REDD+ scenarios discussed in <i>La Mancolona</i>	184
Table 7.2: REDD+ scenarios discussed in <i>Xmaben</i>	193

Figures

Figure 2.1: Mexico’s REDD+ institutional architecture.....	50
Figure 4.1: Location of the case study communities La Mancolona and Xmaben, state of Campeche, Mexico.....	91
Figure 5.1: REDD+ stakeholders mapping: relevance, influence and interest.....	116
Figure 5.2: Information flow among the main multi-stakeholders fora in national and Campeche’s REDD+ readiness process.....	134
Figure 6.1: Composition (non-exhaustive) of the three REDD+ discourse coalitions in Mexico.....	152
Figure 6.2: Spider chart of the degree of institutionalisation of the most general storylines from the 12 key REDD+ dimensions.....	168
Figure 7.1: Focus group preferences for future REDD+ scenarios in <i>La Mancolona</i> ...	188
Figure 7.2: Focus group preferences for future REDD+ scenarios in <i>Xmaben</i>	196
Figure 7.3: Preferences’ comparison between the two communities.....	203

Acknowledgements

First of all, my deepest gratitude goes to my supervisors Dr. Esteve Corbera, Dr. Victoria Reyes-García and Dr. Luciana Porter-Bolland, whose knowledge and commitment inspired and motivated me. I came to grow both professionally and personally thanks to you. Esteve, thank you for your ideas, for understanding and support, for broad-mindedness and guidance throughout my research and for never losing faith in me. Viki, thank you for valuable advices and feedbacks and for always being a great source of inspiration and an example of discipline, and for teaching me that limits are there to be broken. Luciana, thank you for your valuable feedback and constructive recommendations, particularly for your insider's look on Mexico and for accompanying me during fieldwork.

I wish to express my appreciation to the Generalitat de Catalunya for granting me with an FI predoctoral scholarship, and to Fundació Autònoma Solidària-UAB and Open Society Foundations for additional financial support during my research. I am also thankful to ICTA's administrative team and, in particular to Marta who has directly contributed to my thesis.

In Mexico, I am indebted to Don Ramon and family Montoy Koh for opening their homes to me. I am grateful to my translators and field assistants, Manuela and Luis, for helping me during fieldwork, and for all unforgettable moments we spent in Mexico as colleagues and as friends; I guard you in my heart. My sincere thanks go to the members of the people of *La Mancolona* and *Xmaben* for always being so friendly and cooperative. I would also like to thank the staff of U'yool'che and people from Felipe Carrillo Puerto for introducing Mexico to me back in 2011. My special thanks go to Nestor and Modesto, *mis compadres*, and to *mi mama adoptiva* Doña Mary. I must also thank the informants at national and sub-national levels who were always most warmly welcoming and have shared their views, knowledge and experience on Mexico's forests and beyond, as well as to my hosts and friends in Mexico D.F.

I am grateful to my friend Dragana from Belgrade, for her unconditional friendship, her interest and valuable comments on my work; for her encouragement and care during the entire doctoral studies. Another special thanks goes to Filis as it is her "fault" that I did not fall in despair during writing-up. Also to other friends from Belgrade who deserve a

special mention for providing encouraging word, or simply for understanding my periods of silence and disappearance when they needed my presence the most - Milica, Mira, Ana, Neda, and Ceca, but also my group of *doctoresas* - Ljilja, Nada, Milkis and Jelena that have been able to understand the best the process I have been going through.

In Barcelona, my biggest gratitude goes to Milos, whose friendship has immeasurably enriched my life. I am also indebted to Isa, Marta, Gab, Milja, Javi and Tezza, among others that have been like brothers and sisters to me. While writing this thesis, I have also counted on the friendship of many friends from ICTA, above all Max and Alev. It was a great pleasure working side by side with numerous colleagues from three different offices during my PhD studies and particularly with the LASEG's crew.

Most importantly, I dedicate this thesis to my family. First of all to my parents for their love and to my brother for sharing good and bad, but also for his help with the visual representation of this thesis. I am also thankful to all members of my extended family that have surrounded me with love and encouragement throughout these years. Special thanks go to my grandmother for her patience and unconditional love, for providing me space and loving ambience, and for understanding and respecting my scientific ambitions.

Acronyms

CCMSS	<i>Consejo Mexicano de Silvicultura Sostenible</i> -The Mexican Civil Council for Sustainable Forestry
CBR	<i>Reserva de la Biosfera de Calakmul</i> - The Calakmul Biosphere Reserve
CDI	<i>Comisión Nacional para el Desarrollo de los Pueblos Indígenas</i> - The National Commission for Indigenous Development
CDM	Clean Development Mechanism
COMUNDERS	<i>Consejo Municipal para el Desarrollo Rural Sustentable</i> The Municipal Council for Sustainable Rural Development
CONAF	<i>Consejo Nacional Forestale</i> - The National Forest Council
CONAFOR	<i>Comisión Nacional Forestal</i> - The National Forest Commission
CONANP	<i>Comisión Nacional de Áreas Naturales Protegidas</i> The National Commission of Protected Areas
COP	Conference of the Parties
EC	The European Commission
ECOSUR	<i>El Colegio de la Frontera Sur</i> - The College of the South Border
EEREDD+	<i>Estrategia Estatal para REDD+</i> - State REDD+ strategies
ENAREDD+	<i>Estrategia Nacional para REDD+</i> - National REDD+ strategy
ER-PIN	The Emissions Reduction Project Idea Note
FAO	Food and Agriculture Organisation
FCPF	Forest Carbon Partnership Facility
FIP	Forest Investment Programme
FPIC	Free, prior and informed consent
GCF	The Governors' Climate and Forests Task Force
GEF	The Global Environment Facility
GHGs	Greenhouse gases
GT-ENAREDD+	<i>Grupo Especializado de Trabajo ENAREDD+</i> - The ENAREDD+ Working Group
JIRA	<i>Junta Intermunicipal de Medio Ambiente para la Gestión Integral de la Cuenca Baja del río Ayuquila</i> - The Inter-municipal Environmental Board for the Integrated Management of the Lower Basin of the Ayuquila River
LGDFS	<i>Ley General de Desarrollo Forestal Sustentable</i> - The General Law on Sustainable Forest Development
LGEEPA	<i>Ley General del Equilibrio Ecológico y la Protección al Ambiente</i> - The Law of Ecological Equilibrium and Environmental Protection
LGCC	<i>Ley General de Cambio Climático</i> - The General Climate Change Law
MA	The Millennium Ecosystem Assessment
MES	Markets for Ecosystem Services

MRV	Monitoring, reporting and verification
M-REDD+	Mexico REDD+ Alliance
NAMAs	Nationally Appropriate Mitigation Actions
NFMS	National Forest Monitoring System
PACMUN	<i>El Plan de Acción Climática Municipal</i> - The Municipal Climate Action Plans
PAMs	Policy, approaches and measures
PEACC	<i>Programa Estatales de Acción frente al Cambio Climático</i> - The State Climate Change Action Programs
PECC	<i>Programa Especial de Cambio Climático</i> - The National Climate Change Program
PES	Payment for Ecosystem Services
PROCEDE	<i>Programa de Certificación de Derechos Ejidales y Titulación de Solares Urbanos</i> - The Ejidal Rights Certification Programme
PSHA	<i>Programa de Pagos por Servicios Ambientales Hidrológicos</i> - The Programme of Payments for Hydrological Services
REDD+	Reducing Emissions from Deforestation and forest Degradation, plus promoting conservation, sustainable management of forests, and enhancement of forest carbon stocks
REDD+ SES	REDD+ Social and Environmental Standards
RedMocaf	<i>Red Mexicana de Organizaciones Campesinas Forestales</i> - The Mexican Campesino Forest Producers Network
SAGARPA	<i>Secretaría de Agricultura, Ganadería y Desarrollo Rural, Pesca y Alimentación</i> - The Ministry of Agriculture, Livestock, Rural Development, Fisheries and Food
SEMARNAT	<i>Secretaría de Medio Ambiente y Recursos Naturales</i> - The Ministry of Environment and Natural Resources
SIS	Safeguard Information System
SMAAS	<i>Secretaría de Medio Ambiente y Aprovechamiento Sustentable Gobierno del Estado de Campeche</i> - The Ministry of Environment and Sustainable Use, Campeche
SNS	Safeguard National System
TNC	The Nature Conservancy
UNAM	<i>Universidad Nacional Autónoma de México</i> - The National Autonomous University of Mexico
UNDP	The United Nations Program for Development
UNFCCC	United Nations Framework Convention on Climate Change
USAID	The United States Agency for International Development
WB	World Bank

Chapter 1. Introduction

Since the 13th Conference of the Parties of the United Nations Framework Convention on Climate Change (COP-13 of UNFCCC) held in 2007 in Bali, Reducing Emissions from Deforestation and forest Degradation plus promoting conservation, sustainable management of forests, and enhancement of forest carbon stocks (REDD+) has become a major international climate change mitigation policy initiative (Corbera and Schroeder, 2011; Angelsen et al., 2012). REDD+ occupies a central place in the current climate change policy agenda given that carbon emissions from land-use change, mainly as a result of deforestation in the tropics, are considered an important source of greenhouse gases that account for about 9-11% of total anthropogenic emissions (van der Werf et al., 2009; Le Quéré et al., 2009; Friedlingstein et al., 2010; Smith et al., 2014).

In a nutshell, REDD+ can be understood as a policy framework aimed at delivering economic incentives -through carbon markets or conventional financial aid- to developing countries in order to recognise and/or reward them for their efforts in reducing land-use based emissions against an agreed baseline or reference level, and provided that these efforts result from eligible activities (UNFCCC, 2010a; Doherty and Schroeder, 2011; Thompson et al., 2011; Angelsen et al., 2012; Minang et al., 2014). Besides being considered a cornerstone of current climate change mitigation efforts (Corbera and Schroeder, 2011; Angelsen, 2008, 2012), REDD+ has also been regarded as a key policy option to achieve environmental (e.g., biodiversity conservation and provision of carbon and other ecosystem services) and social (e.g., poverty reduction and rural development) goals, which makes of it, at least in theory, a “triple-win” policy mechanism (Angelsen, 2008; Lederer, 2012).

Despite the fact that the international guidelines for REDD+ implementation were formally completed only in June 2015, approximately 50 developing countries have already started to prepare for their anticipated participation in REDD+ (UN-REDD, 2015; FCPF, 2015). These countries are still in the *readiness* phase, the first of three phases in REDD+ design and implementation, and have been developing national strategies and creating new or reforming old tools and institutions in order to make preconditions for effective operationalization of REDD+ during the *implementation* phase. Any potential emission reductions resulting from implementing REDD+ policies

and project-based activities should be accounted for and rewarded by donors or carbon credit buyers in the *performance* phase (Davis et al., 2010; Bradley, 2011; UN-REDD, 2015; FCPF, 2015a).

In this thesis, REDD+ is understood and approached as an emerging form of environmental governance that expects to halt deforestation and forest degradation in developing countries, thus contributing to global climate change mitigation efforts (Corbera and Schroeder, 2011; Thomson et al., 2011; Lederer, 2012; de la Plaza Esteban, 2014). At the national level, REDD+ governance refers to the oversight of all institutional arrangements, policies and processes put in place to design and implement REDD+ activities (Corbera and Schroeder, 2011). The success of REDD+ governance design depends largely on national capacities, including conditions and circumstances in environmental policy and legal frameworks, tenure regimes, main drivers of land-use change, and social and economic dynamics, among others (Biermann et al., 2009, 2010; Vatn and Vedeld, 2011; Corbera and Schroeder, 2011). In particular, most developing countries involved in REDD+'s readiness phase face challenges in undertaking the necessary governance measures to ensure transparent and accountable processes in the design and implementation of the policy framework. The challenges include, for example, ensuring participation from the variety of stakeholders potentially affected by or involved in REDD+, or designing and implementing specific benefit-sharing mechanisms that allow such stakeholders to evenly benefit from REDD+ actions and incentives (Brown et al., 2008; Cotula and Mayers, 2009; Williams and Davis, 2012; Williams, 2013; Kashwan and Holahan, 2014).

1.1. Research aim and objectives

The broadest aim of this thesis is to investigate how REDD+ governance has been unfolding in Mexico during the readiness phase. In particular, this research uses the frameworks of legitimacy and equity to understand the social processes and power dynamics between REDD+ stakeholders, the institutional arrangements put in place, and the discourses mobilised in the process of designing the country's REDD+ strategy. The thesis also investigates two local case study communities' preferences regarding benefit-sharing from REDD+ and how such preferences are being taken into account in the official national REDD+ documents.

The analysis contained in this thesis is important given the lack of substantial independent empirical studies on the course of the REDD+ readiness process in Mexico. Namely, the only available documents on REDD+ in Mexico are the self-assessment of the REDD+ readiness process written by the government and consulting reports published by NGOs or researchers, but elaborated on request of the international donors. In addition, the existing literature reveals a strong bias towards REDD+ technical issues, and a lack of attention to REDD+ governance challenges. This enquiry is also important in the light of the growing importance of safeguards against possible negative social effects of REDD+, which call for ensuring a full and effective participation of all relevant stakeholders starting from the readiness phase, as well as the respect for the rights of indigenous peoples and local communities (UNFCCC, 2010a). This thesis therefore contributes to emerging global debates on REDD+ governance and to the understanding of different REDD+ stakeholders' interests, power and discourses, and of the effects that the latter have on the overall political legitimacy and equity of national REDD+ governance.

To address the objectives of the thesis, I use a set of qualitative research techniques following a multi-scale research design. The techniques used include semi-structured interviews with key stakeholders and participation in REDD+ related events at the national, regional and local levels, and focus groups at the local level. In addition, I also rely on the review of key official documents related to REDD+ in Mexico.

I consider Mexico an ideal case study country for scrutinizing key aspects of REDD+ governance for several reasons: 1) Mexico showed an early interest in REDD+, 2) the country has undertaken reforms of environmental laws for easing REDD+ implementation (UN-REDD, 2012), and 3) it has a long experience in the implementation of community-based forest management (Bray et al., 2006), voluntary carbon forestry projects (Corbera and Schroeder, 2011), and national programmes of payments for ecosystem services (Muñoz-Piña et al., 2008). This thesis also analyses the preferences of two local communities as regards the hypothetical implementation of REDD+ activities in their territories, in order to shed light on the social and economic factors mediating such preferences.

The thesis addresses three main research topics and questions:

1) Actors: Who are the REDD+ stakeholders in Mexico? How have they participated to date in the REDD+ readiness phase? And, what are their views regarding the legitimacy of the process?

In Chapter Five, I address these questions by identifying all participant REDD+ stakeholders in the readiness phase and by analysing their relevance, power to influence decision-making, and interest in REDD+ to date. I also examine the institutions through which the Mexican government has, so far, organized national REDD+ discussions and decision-making processes, and the level of legitimacy of these processes as perceived by their participants. I identify power asymmetries between participant stakeholders, as well as different perceptions on the legitimacy of the national REDD+ decision-making process organised through multi-stakeholders fora.

2) Discourses: Which are the principal discourse coalitions that have emerged around REDD+ in Mexico? And, to which extent the official national REDD+ policy documents incorporate the views and ideas promoted by such coalitions?

In Chapter Six, I address these questions by exploring the evolution of different REDD+ discourses and discourse coalitions based on stakeholders' knowledge, perceptions, interests and expectations on REDD+ and its effects at national and international levels. I also explore the level of discourse institutionalisation based on the extent to which coalitions' key storylines are represented, explicitly or implicitly, in official REDD+ policy documents. The discourse analysis sheds light on the evolution of the national REDD+ strategy text, identifies the most polarizing issues between discourses, and explains the reasons and factors that mediate differences in the level of discourse institutionalisation.

3) Benefit-sharing: Which are the perceptions and preferences of local people regarding fairness and benefit-sharing in the future implementation of REDD+ activities? Which social factors mediate such preferences? And, how are such preferences and factors being accounted for in the official national REDD+ policy documents?

In Chapter Seven, I address these questions by examining different local understandings of equity in REDD+. Specifically, I use data on local people' preferences over hypothetical scenarios for REDD+ implementation and benefit-sharing to analyse if and

how key social factors, including property rights, gender and social status, determine such preferences. I further examine if there are differences in the preferences of two case study communities and the basis for such differences. I also explore if local people's preferences are addressed in the official REDD+ policy documents. This chapter attempts to shed light on the multiple perspectives on fairness and benefit-sharing that exist at the local level. It also tries to elucidate the potential conflicts between national benefit-sharing mechanisms and local priorities, which would have important repercussions on future, on-the-ground implementation of REDD+ activities and the latter's realization of fair outcomes across governance scales.

1.2. Thesis structure

This thesis is divided into eight chapters, including this Introduction. Chapter Two introduces the research context and provides definitions for important concepts to understand what REDD+ actually is and what it might mean in practice. The concepts reviewed include: forests, deforestation and forest degradation, forest tenure and governance, forest conservation and management approaches, and carbon markets and forestry activities. Subsequently, Chapter Two focuses on the history of REDD+ as an international climate change mitigation framework and reviews the current state of the art regarding REDD+ design. The chapter illustrates how REDD+ evolved from being a market-based forest conservation and climate change mitigation mechanism to include both market and non-market sources of funding, as well as social and environmental objectives. It also reviews emerging evidence on how national REDD+ governance systems are evolving in different countries. Finally, Chapter Two reviews the history of the forestry sector and REDD+ in Mexico and justifies the need for an investigation of the readiness process in Mexico as one of the most advanced countries in terms of REDD+ readiness.

Chapter Three presents the theoretical framework that structures the research topics addressed in the thesis. The chapter defines REDD+ as a new form of environmental governance and introduces the four core criteria used to evaluate its success: effectiveness, efficiency, legitimacy and equity. It further focuses on the legitimacy criterion, distinguishing between input and output legitimacy, and suggests using the former as a key analytical lens to study institutional arrangements for REDD+

readiness, including decision-making processes. Chapter Three also introduces the notion of environmental discourses to explore stakeholders' understandings of REDD+ and their ability to influence related policy decisions. It summarises the most relevant literature analysing the environmental meta-discourses in the context of forest governance, including REDD+. The last section of the chapter reviews the concept of equity and justifies its relevance for the study of benefit-sharing in REDD+.

Chapter Four presents the methodology employed to operationalize the theoretical framework and to address the main topics of the research. This chapter is divided in three sections. The first section offers the descriptions of the chosen sites, the communities of *La Mancolona* and *Xmaben*, in the Mexican state of Campeche. The second and third sections of the chapter include details on data collection and data analysis. Data collection relied on qualitative research methods. First, to obtain information related to legitimacy of the REDD+ readiness process and stakeholders' discourses, I conducted semi-structured interviews at national and sub-national levels. Second, to gather data on local perceptions of REDD+ benefit-sharing strategies, I conducted interviews with key informants and households' representatives at the community level. Third, to understand the evolution of REDD+ in Mexico, I used document content analysis, complemented with information obtained through interviews. Fourth, to collect first-hand information on participation and decision-making procedures, I conducted participant observation in REDD+ related events. And finally, to discuss benefit-sharing scenarios at the community level, I used focus groups. The chapter ends describing the procedure of quantitative content, stakeholder and discourse analysis.

Chapter Five addresses the first group of questions focused on *Actors*. It identifies REDD+ stakeholders and their relevance, influence, and level of interest in the readiness process. The chapter further examines the normative and organisational characteristics of the main multi-stakeholder fora put in place as part of the country's REDD+ design process. The final section analyses how legitimate these fora are, according to their participants.

Chapter Six explores the second group of questions focusing on *Discourses*. It identifies the discourses mobilized by stakeholders during the REDD+ readiness process and the discourses' relative power to influence the national REDD+ design. It highlights the

storylines employed by different stakeholders to influence social debates around REDD+ and classifies them in three discourse coalitions that have been coalesced around those storylines. The chapter explores the resemblance of REDD+ discourses with the environmental meta-discourses identified in Chapter Three. In the last section of the chapter, I analyse the level of discourse institutionalisation in the main national REDD+ readiness documents.

Chapter Seven investigates the third group of questions related to *Benefit-sharing*. It identifies local people's preferences on equity and benefit-sharing for future REDD+ activities on-the-ground. Specifically, the chapter identifies which factors mediate individual preferences and explores the factors that explain contrasting views between the two studied communities. The chapter explores how local people's preferences fit within the national architecture for benefit-sharing as highlighted in the principal REDD+ readiness documents described in Chapter Six.

Chapter Eight wraps up all the empirical, theoretical, and policy contributions of the thesis. It provides a synthesis of the thesis findings and discusses the relevance and implications of such findings to broader debates on REDD+ theory and practice. The two last sections outline the limitation and caveats of the research and a series of questions for further investigation.

Chapter 2. Research context

This chapter introduces the concepts and definitions of forests, deforestation and forest degradation, forest tenure and governance, which are important to understand how REDD+ fits within the past and current trends and discourses of global forest governance. It also reviews different forest conservation and management approaches preceding REDD+, including carbon forestry activities, which might play a key role in REDD+ implementation. The chapter further focuses on the history of REDD+ as an international climate change mitigation mechanism, it reviews the current design of the international REDD+ framework and how it is unfolding to date in developing countries. The chapter also introduces Mexico's forestry sector, putting special emphasis on tenure issues and forest conservation and management approaches, since these are relevant for understanding development of Mexico's REDD+ national architecture and sub-national initiatives.

2.1. Forests, deforestation and forest degradation

Globally, forests cover about 4 billion hectares, the equivalent to 31% of the Earth's surface (FAO, 2015). However, the distribution of the world's forests is uneven. At the regional level, Europe (including the Russian Federation) (25%) and South America (21%) have the largest portion of forest cover, followed by North America (18%), Africa (16%) and Asia (15%), while Oceania (4%) and Central America and Caribbean (less than 1%) host the lowest percentage of world's forests (FAO, 2015; Keenan et al., 2015).

Forests are complex social-ecological systems and provide habitat to plants, fungi, bacteria, and animal species, including humans (SCBD, 2008; Agrawal et al., 2008). Forests provide humanity with tangible *forest goods*, e.g., timber, fuel wood and non-timber products such as fruits, bush meat and honey; and intangible *forest services*, e.g., clean air and water, biodiversity, carbon sequestration and storage, climate regulation, as well as spiritual and cultural services, among many others (MA, 2005; FAO, 2009).

The two most commonly used definitions of forest are the one adopted by the Food and Agriculture Organization (FAO): "land spanning more than 0.5 hectares, with trees higher than 5 meters and a canopy cover of more than 10 per cent or trees able to reach

these thresholds in situ” (FAO, 2010a, p. 209); and the one coined by the United Nations Framework Convention on Climate Change: “a minimum area of land of 0.05-1.0 hectares with tree crown cover (or equivalent stocking level) of more than 10-30 per cent with trees with the potential to reach a minimum height of 2-5 metres at maturity in situ” (UNFCCC, 2001, p. 58). Both definitions are based only on forest physical characteristics and comprise a wide variety of ecosystems, including *primary forests*- composed of native species that have never been burnt, cut or cultivated in human memory, *secondary forests*- naturally regenerating forests growing on naturally burnt land or land that was once cleared for farming or other purposes, and *plantations*- areas where native or introduced tree species have been planted or seeded for different purposes, such as timber production, regeneration (temporarily unstocked areas) or protection (e.g., forest roads, fire- and windbreaks and trees corridors) (FAO, 2006).

The UNFCCC’s forest definition has been criticised because it includes industrial tree monoculture plantations and it does not account for forest degradation, meaning that an old-growth forest that is heavily logged with substantial loss of ecosystem services, removal of biomass and carbon emissions, can still be counted as a forest (Sasaki and Putz, 2009). The same authors recommend the adoption of a new, stricter forest definition (minimum canopy height of 5 meters and forest cover of 40 %), which would exclude plantations and would enable considering for degraded forests. However, such a definition would also exclude some of natural sparse or low canopy vegetation existing forests, such as Brazil’s *cerrado*¹. Defining what constitutes or not a forest is important to define deforestation and forest degradation, and select measures that should be adopted to counteract such processes.

Deforestation refers to the direct human-induced conversion of forested land to non-forested land for agricultural, mining or infrastructure development purposes. *Forest degradation* refers to the gradual process of reduction in forest biomass, vegetation composition, and soil fertility, induced by human activities (e.g., thorough overgrazing, excessive logging, fuelwood collection, charcoal production, or fire usage) or by natural events (e.g., insect pests, storm and natural fires) (EU-REDD+, 2015). Deforestation and forest degradation have a negative impact on the amount and quality of forests

¹ “A type of plains community characterized by vegetation ranging from tropical broadleaf woodlands to scrublands, occurring in extensive areas of Brazil”, <http://dictionary.reference.com/browse/cerrado>, Accessed: 15/05/2015.

goods and services (IPCC, 2000; Caviglia-Harris, 2004; Humphreys, 2006; Lawrence and Vandecar, 2014).

The annual global deforestation rate experienced a slowing down trend from 7.3 million hectares in the 1990s to around 3 million hectares between 2010 and 2015 (FAO, 2015). Overall, there was a net decrease in global forest area of 3% between 1990 and 2015 (FAO, 2015). Over the last five years most deforestation occurred in the tropics, predominantly in South America, followed by Asia and Africa (FRA, 2015).

Pressure on forests is exercised through increased demographic and economic stressors (e.g., globalisation and market liberalisation) and the accompanying mounting demand for food (agricultural crops and livestock) and energy (oil crops, fossil fuel extraction and mining) (Lambin et al., 2003). Other significant drivers of deforestation are infrastructure and urban expansion (Hosonuma et al., 2012), as well as legal and illegal clearcut logging for timber, pulp and paper industries (Laurance, 2015). The drivers, causes and actors of deforestation are contextually determined, but globally, the actors behind include large-scale farmers, cattle ranchers, shifting cultivators, logging enterprises, and agribusiness, as well as mining and infrastructure development industries, among others (Angelsen and Kaimowitz, 1999; Alston et al., 1995; Watson et al., 1997; Achard et al., 2007; Hassan et al., 2005; Zhao et al., 2006; Houghton, 2007; Angelsen et al., 2012; Hosonuma et al., 2012).

Addressing deforestation does not automatically lead to reduce forest degradation (FAO, 2006; Murdiyarso et al., 2008; Hosonuma et al., 2012). Forest degradation is not associated with a change in land use, but it occurs through ineffective forest management giving way to selective logging, over-collection of fuelwood and non-timber forest products, overgrazing of understory by livestock, and uncontrolled forest fires (GOFC-GOLD, 2008; Skutsch et al., 2009; Hosonuma et al., 2012). Given its minimal effects to the canopy cover, forest degradation is hard to spot with satellite images, but it can have a significant impact on the carbon stock reservoirs in dead wood and litter (DeFries et al., 2007). However, there are still no scientifically agreed assessment criteria and methodologies to measure forest degradation (Puppim de Oliveira et al., 2013), while apart from selective logging, little analysis has been made regarding its impacts on the forests carbon stocks (Murdiyarso et al., 2008).

The world's temperate regions forests and some tropical countries have experienced a net increase in tree cover through spontaneous regeneration on abandoned lands or through deliberative tree planting activities (Lambin and Meyfroidt, 2011; IPCC, 2013; FRA, 2015). The phenomenon of long-term changes from net deforestation to net forest increase at larger geographical scales (state, country or region) and related to the overarching socio-economic trends (economic development, industrialization and urbanization), is defined as *forest transition* (Mather, 1992; Rudel et al., 2005). The forest cover increases can occur through two types of processes of planting, seeding and/or human-induced promotion of natural seed sources on degraded lands, which have not been forested for at least a 50-year period, i.e., *afforestation*; and on areas previously forested until cleared for agriculture or other purposes, i.e., *reforestation* (UNFCCC, 2001, p. 58). Forest transitions have important implications for carbon budgets (Kuemmerle et al., 2015), because in this process relatively carbon-rich secondary forests substitute relatively carbon-poor agricultural or other lands (Rudel et al., 2005).

2.2. Forest tenure and governance

Land tenure is the legally or customarily defined social relationship between individuals, communities, organisations or the state with respect to land. Land tenure is thus an institution that allocates rights over land and resources across different actors and, in doing so, it determines the relationships of access to, use of, management and ownership of such land and resources (Corbera et al., 2011). Land tenure, therefore, determines who can use what resources for how long, and under what conditions (FAO, 2002).

There are four categories of tenure regimes depending on the nature of underlying property rights: *open access* (land rights are not well-defined or socially acknowledged), *public* (land administered by the state or designated for use by local communities), *private* (industrial private or non-industrial private land), and *common property* (land owned by local and indigenous communities) (Corbera et al., 2011; Blaser et al., 2011). Generally, tenure systems can be divided in *formal* (de jure), explicitly recognised in statutory law, and *informal* (de facto), rights that exist in reality, customary rules or practices (Schlager and Ostrom, 1992; FAO, 2002).

Forest tenure is thus a concept that goes beyond forest ownership, and includes complex bundles of rights over forest resources (i.e., rights of access, withdrawal, management, exclusion and alienation) (Ostrom and Schlager, 1996 in Corbera et al., 2011). In most developing countries, forest tenure remains contested and insecure, with particular tension existing between formal and informal right holders or between the state and those who aim to get their customary rights recognised and/or formalised (FAO, 2002; Corbera et al., 2011). Forests can be governed through different institutional arrangements: centralized (*command-and-control*, top-down by the different levels of government), decentralized (by individuals and communities at the local level), or quasi-private/private (private individuals, private or state owned commercial companies, not-for-profit bodies) (Dudley and Philips, 2006; Guthiga and Mburu, 2006).

Centralised forest governance has been criticised for interfering with customary property regimes, leaving the forest dependent communities disenfranchised or with very limited rights over forests. Since the mid-1980s, however, there has been a marked trend towards the decentralisation of forest governance, especially in developing countries (Ribot et al., 2006; Agrawal et al., 2008). Decentralisation ranges from *deconcentration* of forest management powers from centralized government agencies to their sub-national agencies, to *forest devolution* when some or the whole “bundles of rights” are transferred from central governments to local communities (Agrawal and Ribot, 1999; Ribot, 2002; Evans et al., 2008; Larson et al., 2010a). An example of the later are extractive reserves in Brazil, where the government owns the land, while local communities are guaranteed with usufruct rights to collect rubber and Brazil nut (Fearnside, 2003 in Duchelle et al., 2011).

Despite a widely reported increase in forest management effectiveness following decentralization in many developing countries (e.g., Larson, 2005; Molnar et al., 2007; Ellis and Porter-Bolland, 2008; Chhatre and Agrawal, 2009; Nelson and Chomitz, 2011; Persha et al., 2011; Porter-Bolland et al., 2012), some studies suggest that around 75% of the world’s forests are still formally state-owned and governed through centralized institutional arrangements (White and Martin, 2002; Humphreys, 2006; Sunderlin et al., 2008; FAO, 2010a; Blaser et al., 2011).

2.3. Forest conservation and management

Forests have been used for many purposes and under a large variety of management regimes such as for timber and non-timber products, for biodiversity conservation, for reforestation to stabilize soil erosion, or to sequester atmospheric CO₂ for climate change mitigation purposes (Dudley and Philips, 2006; Peskett et al., 2010; Putz and Romero, 2014). Conserving tropical forest biodiversity has become a key issue of global environmental policy, a goal that is mostly pursued through the establishment of *protected areas*² under the premise that a natural area can only be preserved by completely excluding it from the presence of people and their activities (UNEP-WCMC, 2004; Guthiga and Mburu, 2006; Mulder and Coppolillo, 2005; Adams and Hutton, 2007). Protected areas have been criticised for failing to recognise the important role the forests play in local economies and in cultural, religious, spiritual and customary practices (Mulder and Coppolillo, 2005), for denying local people's rights and not rarely forcing their relocation (Colchester, 2003; Brockington and Igoe, 2006; Humphreys, 2006; Cernea and Schmidt-Soltau, 2006; West et al., 2006; Coad et al., 2008; Agrawal and Redford, 2009; Lasgorceix and Kothari, 2009).

In the light of these criticisms, and during the 1980s, a new conservation paradigm emerged as *community-based conservation* (CBC) (Guthiga and Mburu, 2006). CBC is often referred to as participatory conservation, since it promotes the sustainable management of forests and landscapes through the devolution of forest and land resources to local people (Barrow and Murphree, 2001; Guthiga and Mburu, 2005; Wood, 2008). One of the most common examples of community-based conservation refers to *Integrated Conservation and Development Projects* (ICDP). ICDP consist of involving communities in local development projects, such as tourism, non-timber forest products processing, and sustainable value-added enterprises, which can also result in positive environmental outcomes (Ferraro and Simpson, 2002). However, ICDPs have suffered from a lack of local participation (Neumann, 1997; Chapin, 2004; Engels et al., 2008), and have been reported to ironically, supporting environmentally damaging activities, with researchers questioning their real ability to deliver either conservation or development benefits (Kremen et al., 1994; Wells et al., 1998;

² Protected area stands as a joint term for the variety of conservation units, such as national parks, nature reserves or wildlife sanctuaries (Mulder and Coppolillo, 2005). According to FAO (2010), 12.9% of the global terrestrial area is in some form of officially recognised protected area.

Newmark and Hough, 2000; Chapin, 2004; Christensen, 2004; McShane and Wells, 2004; Wells, 2003; Engels et al., 2008; Blom et al., 2010).

The lessons from ICDPs influenced the evolution of forest management and conservation policy approaches towards new approaches based on the provision of direct economic incentives to local communities by domestic and international actors (Ferraro, 2001; Ferraro and Kiss, 2002). The most recent and studied example of these new approaches are *payments for ecosystem services* (PES), which have been generally defined as “a *voluntary* transaction, where a *well-defined ES* [ecosystem service] (or a land-use likely to secure the service) is being “bought” by (minimum one) *ES buyer* from a (minimum one) *ES provider*, if and only if the ES provider secures ES provision (*conditionality*)” (Wunder, 2005, p. 3). The most frequently included ecosystem services -“the benefits that people obtain from ecosystems” (MA, 2003, p. 53)- in PES schemes are carbon sequestration and storage, biodiversity and watershed protection, and landscape beauty.

Most PES schemes implemented in developing countries diverge from Wunder’s definition and represent “contractual” transactions, in which the buyer, typically governments, is different from the ecosystem service user, typically industries (Engel et al., 2008). Even though many authors have argued that PES can have positive impacts on poverty (Landell-Mills and Porras, 2002; Pagiola et al., 2002), PES were theoretically thought to improve the efficiency of natural resource management (Pagiola et al., 2005). There is growing evidence that PES schemes implemented in developing countries have mostly resulted in discrimination against poor smallholders and those without clear land tenure rights (Miranda et al., 2003; Grieg-Gran et al., 2005; Zbinden and Lee, 2005; Kosoy et al., 2007; Corbera et al., 2007; Muradian et al., 2010), therefore failing to simultaneously secure the provision of ecosystem services and poverty reduction (Samii et al., 2014; Calvet-Mir et al., 2015).

2.4. Carbon offsetting markets and carbon forestry

Carbon offsetting markets can be considered a type of *Market for Ecosystem Services* (*MES*) through which polluters offset the greenhouse gas (GHG) emissions derived from their activities by investing in emission reduction projects elsewhere, normally in

the global South (Duraiappah, 2006; Gomez-Baggethun et al., 2010)³. *Carbon credits*, or *carbon offsets*, are transferable units expressed in *carbon dioxide equivalent* (CO₂e) based on a measured amount of carbon reduced, avoided, or sequestered to compensate for emissions occurring elsewhere (WRI, 2010). *Carbon forestry* is a general term employed in academic literature to refer to climate change mitigation activities aimed at increasing and commercialising the amount of carbon sequestered through afforestation, reforestation and forest conservation projects (FAO, 2001; Pandey, 2002; Corbera, 2005; FAO, 2009). The origins of carbon offsetting markets are to be found in international efforts to control CO₂ emissions under the United Nations Framework Convention on Climate Change and the Kyoto Protocol.

The UNFCCC was established in 1992 and ratified in 1994, and it aims to “stabilize greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system” (Article 2 of the UNFCCC, 1992). In order to do so, the UNFCCC envisioned the idea of allowing countries to implement policies and measures jointly with other parties and, during the first Conference of the Parties held in 1995, established the concept of joint implementation. The UNFCCC allowed for the development of a pilot phase of Activities Implemented Jointly (AIJ), through which developed countries were encouraged to invest in emission reduction projects including carbon forestry in developing countries in exchange of voluntary carbon offsets (UNFCCC, 1995). However, in 2006 out of 157 AIJ projects, only 20 were carbon forestry projects (UNFCCC, 2006)⁴.

In 1997, the UNFCCC adopted the Kyoto Protocol, which established legally binding targets for GHGs reductions by industrialised countries, so called Annex I parties⁵, at the international level (UNFCCC, 1997). The Kyoto Protocol obliged some industrialised countries (i.e., those included in Annex B of the Protocol) to reduce their - REDD commitment period (2008-2012) (UNFCCC, 1997; Labatt and White, 2007; Hamilton et al., 2009).

³ There are MES for other type of offsets such as water quality or biodiversity, e.g., mitigation banking in the United States or bio-banking in New South Wales, Australia.

⁴ Document FCCC/SBSTA/2006/8 Activities implemented jointly under the pilot phase. Seventh synthesis report, <http://unfccc.int/resource/docs/2006/sbsta/eng/08.pdf>, Accessed: 06/11/15.

⁵ “Annex I Parties include the industrialised countries that were members of the OECD (Organisation for Economic Co-operation and Development) in 1992, plus countries with economies in transition (the EIT Parties), including the Russian Federation, the Baltic States, and several Central and Eastern European States” (UNFCCC, 1997).

Since the adoption of the Kyoto Protocol, several *compliance carbon markets* based on the principle of cap-and-trade have been established. The European Union Emissions Trading Scheme (EU ETS) was established in 2003 and it remains today the largest carbon market in the world, covering around 45% of the overall EU emissions and involving the 31 countries and more than 11,000 installations (EU, 2013). Other cap-and-trade compliance carbon markets that operate or are planned to operate independently of the Kyoto Protocol have been established in non-EU countries and include: the Switzerland ETS, the California Cap-and-Trade Program and the Regional Greenhouse Gas Initiative in United States (US), the Alberta Greenhouse Gas Reduction Program and the Québec Cap-and-Trade System in Canada, the Kazakhstan ETS, the Australia Carbon Pricing Mechanism, the New Zealand ETS, the Japan ETSs, the China ETSs, and the Republic of Korea ETS (World Bank, 2014).

Annex I countries could pursue their mitigation goals through domestic activities but also through what became known as “flexible mechanisms”, namely *emission trading*, *Joint Implementation (JI)*, and *the Clean Development Mechanism (CDM)*. Through emissions trading, also known as cap-and-trade trading, industrialised countries emitting more than a given target could opt to buy emission allowances rights from other industrialised countries that reduced their emissions below their target, e.g., European Union Allowances (EUAs) in the case of the EU ETS. Through JI, any Annex B country could invest in emission reduction projects in another Annex B country, as an alternative to reducing emissions domestically. In doing so, countries would lower the costs of complying with their emission targets by investing in GHGs reductions in an Annex B country, where reductions were theoretically cheaper (Pearce, 2000). In contrast to AIJ, JI projects can be claimed against countries obligations under the Kyoto Protocol through *emission reduction units (ERUs)*.

The CDM, in turn, allowed industrialised countries with a GHGs reduction commitment to invest in projects reducing emissions in developing countries as an alternative to more expensive emission reductions in their own countries. Any carbon offsets generated through these mechanisms could be used for developed countries’ compliance with the Kyoto Protocol targets. Offsets created through the compliant market are called *certified emissions reductions (CERs)* (Corbera, 2005). The discussion on CDM rules was pervaded by disputes on the inclusion of carbon forestry activities (Corbera, 2005) and resulted in a 2003 decision that only allowed carbon offsets from afforestation and

reforestation activities to be traded through the CDM market, and in limited⁶ amounts. The CDM's complex rules and procedures and the non-acceptance of carbon forestry credits by the EU ETS has limited the number of CDM forestry projects implemented in the global South, i.e., 71 projects that represent 0.8% share of the total number of CDM projects (UNEP, 2015).

A *voluntary carbon market* has developed in parallel to compliance markets for ERUs and CERs, allowing for actors from unregulated sectors of the Kyoto Protocol's Annex B countries or non-Kyoto countries to participate in emission reduction activities on a voluntary basis, with the resulting offsets known as *voluntary emissions reductions* (VERs) (Kollmuss et al., 2008). Forestry projects have been more prevalent in voluntary carbon markets where some of the above mentioned constraints have not constituted a barrier for implementation (Bayon et al., 2006; Angelsen et al., 2012). Consequently, in 2014, offsets from forestry and land-use projects accounted for more than half of the entire carbon credit volume transacted through the voluntary carbon market (Hamrick and Goldstain, 2015).

The carbon standards are established by the different organisations to measure and verify emission reductions from carbon offsetting projects. The Gold Standard is an international carbon offsets standard that exists in compliance and voluntary market version, where former was developed as a part of the CDM, while the later allows for non-CDM projects (Adams, 2008; Hamrick and Goldstain, 2015). In 2014, the voluntary market was dominated by the Verified Carbon Standard in combination with the Climate, Community, and Biodiversity standard focused on additional social benefits, while the smaller shares were covered by Plan Vivo standard for community forestry and land-use projects, followed by the American Carbon Registry and the Climate Action Reserve (Hamrick and Goldstain, 2015).

⁶ One per cent times five of an Annex I country's 1990 emissions.

2.5. Reducing emissions from deforestation and forest degradation

The idea of Reducing Emissions from Deforestation and Forest Degradation (REDD) was first discussed at the COP-11 in 2005, when the Coalition of Rainforest Nations led by Papua New Guinea and Costa Rica requested opening a discussion on the idea of an international mechanism for reducing emissions from deforestation⁷. In 2007, at COP-13 held in Bali, the idea of REDD was widened to include the conservation, sustainable management of forests, and enhancement of forest carbon stocks, thus becoming REDD+⁸ (UNFCCC, 2007, 2010).

To access REDD+ finance in implementation and performance phases, each developing country pursuing REDD+ readiness process should follow the rules and guidance from the “Warsaw Framework for REDD+”, a document also known as the REDD+ Rulebook (UNFCCC, 2013; Climate Law and Policy, 2014). The Rulebook refers to issues such as: i) results-based finance to progress the full implementation of the REDD+ activities; ii) institutional arrangements to support the coordination of the implementation of REDD+ activities; iii) national forest monitoring systems (NFMS) to enable assessment of different types of forests in the country; iv) social and environmental safeguards against the negative effect of REDD+ on people and ecosystems, and provision of non-carbon benefits or the social, environmental and governance benefits that result from REDD+ readiness and implementation; v) forest reference (emission) levels (REL/RL) to serve as the baseline against which reductions in emissions and increase in stocks will be measured; vi) the measurement, reporting and verification (MRV) of carbon emissions reductions and increases in removals by carbon sinks resulting from REDD+ activities; and vii) drivers of deforestation and forest degradation (UNFCCC, 2013).

Procedures regarding safeguards, status of non-carbon benefits, and use and share of non-market based approaches to fund REDD+, which should complete the overall framework for REDD+ implementation, should be formally adopted at the forthcoming COP-21 in December 2015. REDD+ is likely to become a key pillar in the foreseeable global climate change agreement to enter into force after 2020. Since REDD+ is the

⁷ Document FCCC/CP/2005/Misc.1, <http://unfccc.int/resource/docs/2005/cop11/eng/misc01.pdf>, Accessed: 06/11/2015.

⁸ REDD was first referred to as REDD-plus (REDD+) in the 2010 Cancun Agreements (COP-16).

central object of analytical enquiry in this dissertation, the following sections address in more detail the main features of the anticipated REDD+ framework.

2.5.1. Financing REDD+

Discussions on how to finance REDD+ efforts in host countries have advanced slowly since COP-13 in 2007. At COP-15 in 2009, developed countries committed to provide resources for mitigation and adaptation actions in developing countries, what is known as “fast-start finance” (UNFCCC, 2010a). To date, REDD+ finance has been mostly provided by two main multilateral readiness platforms launched in 2008, namely, the United Nations REDD Programme (UN-REDD)⁹ and the Forest Carbon Partnership Facility (FCPF), housed at the World Bank. These platforms provide technical expertise and financial resources to 47 and 21 countries that are currently pursuing REDD+ strategies (Luttrell, 2013; FCPF, 2015a; UN-REDD, 2015). Furthermore, the World Bank’s Forest Investment Programme (FIP) has provided funding for scaling up projects and investments identified through national REDD+ strategies in countries like Mexico, Indonesia, Brazil and Peru (FIP, 2015).

Several regional funds, such as the Congo Basin Forest Fund, the Amazon Fund, and the Indonesia Climate Change Trust Fund, have also been established to fund REDD+ readiness and pilot activities in some regions. However, between 2010 and 2012, the largest share of REDD+ readiness finance (approximately 80%) was delivered through bilateral agreements with developed countries, with Norway¹⁰ being the largest financial supporter, followed by Germany, Japan, the United Kingdom and the US (Watson et al., 2014). In addition, carbon credits from many REDD+ pilot projects have been sold through the voluntary market (Angelsen et al., 2012). In order to move from the readiness phase to the actual implementation of REDD+ activities, the FCPF put in place a specific carbon fund in 2011 to support pilot results-based REDD+ payments on a large-scale in 11 developing countries¹¹ that have achieved considerable progress in their REDD+ readiness stage (FCPF, 2015b).

⁹ Established in collaboration between FAO, UNEP and UNDP.

¹⁰ Norway concluded US\$1 billion agreements with Brazil (2009) and Indonesia (2010) (Angelsen et al., 2012).

¹¹ Chile, Costa Rica, Democratic Republic of Congo, Ghana, Guatemala, Indonesia, Mexico, Nepal, Peru, Republic of Congo, Vietnam.

The main disagreement between UNFCCC parties as regards REDD+ finance concerns the use or not of carbon trading as a key funding source during implementation. Some countries, such as Bolivia¹², Sudan, Tanzania, India, and Brazil are against allowing developed countries to offset their mitigation commitments through REDD+ -based on formally traded carbon credits¹³ (REDD monitor, 2013; UNFCCC, 2014). In turn, another group composed of developed countries such as Norway, Australia, the US and the EU and developing countries like Papua New Guinea, Guyana, Ghana and Mexico consider that public funding alone will be insufficient to support REDD+ and suggest adopting a flexible approach that combines different sources of REDD+ funding, including international carbon markets. According to the decisions made at the UNFCCC meeting held in Bonn in June 2015, the REDD+ mechanism adopts a mixed approach to finance, including both public and private, markets-based finance and non-market funds, such as climate funds and multilateral and bilateral assistance (UNFCCC, 2015)¹⁴.

2.5.2. Benefit-sharing from REDD+

The way in which international and national REDD+ funding might trickle-down to land-use actors, or might be invested in different land-use programmes, will depend strictly on the institutional architecture for benefit-sharing designed by each host country and it is considered one of the most important REDD+ design issues. Vatn and Angelsen (2009) provide four mutually non-exclusive options for national REDD+ benefit-sharing architecture: i) *project-based*, i.e., international payments are directly channelled to local projects (e.g., CDM, voluntary market or donor funding); ii) a *separate national fund*, i.e., a fund outside the national administration governed by a board of trustees from different sectors (e.g., the National Trust Fund in Tanzania); iii) a *national fund*, i.e., a fund controlled by the national administration and an independent board who allocates resources (e.g., the Amazon Fund in Brazil); and iv) *state budget*, i.e., resources are channelled directly via national fiscal administrations (e.g., the proposal by Indonesia's Ministry of Finance).

¹² Bolivia proposes an alternative non-market based mechanism called Joint Mitigation and Adaptation (JMA).

¹³ Document FCCC/SBSTA/2014/MISC.3, <http://unfccc.int/resource/docs/2014/sbsta/eng/misc03.pdf>, Accessed: 06/11/15.

¹⁴ Document FCCC/SBSTA/2015/L.5, Draft conclusions proposed by the Chair, p. 2, <http://unfccc.int/resource/docs/2015/sbsta/eng/l05.pdf>, Accessed: 06/11/15.

Given the complexity of REDD+ governance and variety of scales and actors involved in its functioning, each of these approaches could have positive and negative implications regarding the likely legitimacy, effectiveness, efficiency and equity of REDD+ activities on the ground. For example, the project-based approach might be seen as legitimate by private carbon buyers and donors, but it would experience major risk of leakage and non-permanence, high transaction costs and elite capture at various levels. The separate fund approach might guarantee higher levels of equity given that it would compensate losers from REDD+ activities directly, and it would be better in avoiding leakage, but it would still bare the risk of non-permanence. The national fund model would provide more stable and long-term REDD+ funding, but it would potentially result in unfair benefit-sharing outcomes. The state budget approach would better control country carbon leakage, but it would bare risk of elite capture at all levels (Vatn and Anglesen, 2009; Vatn and Vedeld, 2011, 2013). There is no decisive argument that can be given in favour of one single REDD+ approach. The final choice depends on the national circumstances including the existing institutional arrangements, the political culture, capacities and legal frameworks, and the type of policies and measures selected to be promoted with REDD+, among others, with corruption representing the common risk in all approaches (Vatn and Vedeld, 2011).

Currently, the countries' REDD+ benefit-sharing frameworks are being laid out in national strategies but none has been implemented so far (Balderas Torres and Skutsch, 2012; Alemagi et al., 2014). Such frameworks are specific to country context, and largely dependent on the type of actors involved in REDD+ activities, the level of clarity and ownership of carbon rights, the amount of potential REDD+ benefits, as well as the already-existing policy programmes that transfer benefits to land-use actors, including for example, PES programmes (e.g., Vietnam, Brazil, Costa Rica) (Government of Vietnam, 2012; Pham et al., 2013; Persson et al., 2012), community-based forest management (e.g., Nepal) (Bushley, 2014), or forest concessions (e.g., Indonesia and the DRC) (Pham et al., 2013; Aquino and Guay, 2013).

2.5.3. Environmental and social safeguards and non-carbon benefits

The UNFCCC REDD+ safeguards were adopted at COP-16 as part of the Cancun Agreements¹⁵. Safeguards encompass seven broad principles that REDD+ activities should be consistent with: transparency, participation, respect for indigenous and local communities' rights, biodiversity and ecosystem services protection, assuring carbon permanence, and preventing leakage. Table 2.1 reproduces the full text of the Cancun REDD+ safeguards.

Table 2.1: The Cancun social and environmental safeguards and their broad principles

The REDD+ safeguard	Main principle
a) Actions complement or are consistent with the objectives of national forest programs and relevant international conventions and agreements	Complementarity
b) Transparent and effective national forest governance structures taking into account national legislation and sovereignty	Transparency
c) Respect for the knowledge and rights of indigenous peoples and members of local communities, by taking into account relevant international obligations, national circumstances and laws, and noting that the United Nations General Assembly has adopted the United Nations Declaration on the Rights of Indigenous Peoples	Respect of local people rights
d) The full and effective participation of relevant stakeholders, in particular indigenous peoples and local communities, in REDD+ actions	Participation
e) That actions are consistent with the conservation of natural forests and biological diversity, ensuring that REDD+ actions are not used for the conversion of natural forests, but are instead used to incentivize the protection and conservation of natural forests and their ecosystem services, and to enhance other social and environmental benefits	Biodiversity conservation
f) Actions to address the risks of reversals	Permanence
g) Actions to reduce displacement of emission	Leakage

Source: UNFCCC, 2010a.

¹⁵ Document FCCC/CP/2010/7/Add.1, Decision 1/CP.16, Appendix I, Part.2, <http://unfccc.int/resource/docs/2010/cop16/eng/07a01.pdf>, Accessed: 06/11/2015.

Safeguards have been a contested issue in negotiations around the REDD+ framework because they might determine how seriously will REDD+ implementation account for potential negative social and environmental outcomes. In 2011, a decision by the COP-17 clearly stated that REDD+ finance for implementation will be contingent on careful reporting environmental and social safeguards, which has to involve, in turn, the development of national Safeguards Information Systems (SIS) (UNFCCC, 2011)¹⁶. Later on, in 2014, another decision highlighted that the development of such systems at national levels should be transparent, built on previous country experience, respect national circumstances and international agreements, and include gender considerations (UN-REDD+, 2014). The guiding principles to be taken into account when organising a national SIS are presented in Table 2.2.

Table 2.2: Principles to be taken into account when developing national Safeguards Information System

a) Be consistent with the guidance identified in Cancun Agreements safeguard decisions
b) Provide transparent and consistent information that is accessible by all relevant stakeholders and updated on a regular basis
c) Be transparent and flexible to allow for improvements over time
d) Provide information on how all of the safeguards referred to in appendix I to decision 1/CP.16 are being addressed and respected
e) Be country-driven and implemented at the national level
f) Build upon existing systems, as appropriate

Source: UNFCCC, 2011.

More recently, at COP-20 in 2014, a number of participants requested the development of further guidance on how to develop the national SIS, particularly on timing and frequency of safeguards reporting. They also asked for further guidance to ensure participation of women, and indigenous and local communities in the collection, compilation, and provision of information for the national SIS. However, as of today, a draft decision of the COP¹⁷ highlights that countries are “strongly encouraged” to provide a summary report on how each of the safeguards has been implemented and respected in comprehensive, consistent, transparent, and effective ways, and in

¹⁶ Document FCCC/CP/2011/9/Add.2, Decision 12/CP.17, p. 16, <http://unfccc.int/resource/docs/2011/cop17/eng/09a02.pdf>, Accessed: 06/11/2015.

¹⁷ Document FCCC/SBSTA/2015/L.5/Add.1, Draft decision -/CP.21, p. 2, <http://unfccc.int/resource/docs/2015/sbsta/eng/l05a01.pdf>, Accessed: 06/11/2015.

accordance to national circumstances. NGOs have already criticised this proposed text for not providing guidelines on preparation of the report summary, and because it does not urge for a broader participatory approach (CIEL, 2015).

Further related discussions at COP-20 were on whether to guarantee and attract specific payments for the provision of non-carbon benefits, including the social, environmental and governance benefits resulting from REDD+ readiness and implementation. Most parties agreed that if REDD+ carbon benefits are to be sustainable, non-carbon benefits should be considered an integral part of REDD+ safeguards (and not only a collateral issue), but some called for the voluntary report of non-carbon benefits in the context of SIS. Most participants considered that these benefits should be determined at the country level, as opposed to being defined and valued internationally by the UNFCCC (Elias et al., 2014). The latest draft decision on this issue¹⁸ supports the creation of methodologies that quantify non-carbon benefits, but does not make them mandatory to receive REDD+ support (Zwick, 2015; CIEL, 2015).

2.5.4. Monitoring, Reporting and Verification

In order to receive REDD+ payments, each developing country should develop a robust Monitoring, Reporting and Verification (MRV) system. This system should measure the country's performance in terms of forest related emissions and removals and the provision of non-carbon benefits, e.g., protection of watersheds, biodiversity and rights of local and indigenous forest communities. The national MRV system should therefore provide critical data for determining the effectiveness of REDD+ and -consequently- for allocating REDD+ benefits and responsibilities between countries (UNFCCC, 2013; Sikor, 2013). According to the REDD+ Rulebook, the MRV guidelines for REDD+ should be consistent with previous existing guidance for nationally appropriate mitigation actions (NAMAs)¹⁹, and should be integrated into a broader National Forest Monitoring System (NFMS). MRV should use the most accurate available data, transparently and consistently over time, and annual emissions from forests should be measured against the established reference emission level and/or reference level as key benchmarks (Climate Focus, 2011; EDF Talks Climate, 2011).

¹⁸ Document FCCC/SBSTA/2015/L.5, Draft conclusions proposed by the Chair, p. 2, <http://unfccc.int/resource/docs/2015/sbsta/eng/l05.pdf>. Accessed: 06/11/15.

¹⁹ NAMAs - Nationally Appropriate Mitigation Actions: the policies and actions that developing countries voluntarily agree to take to reduce their greenhouse gas emissions.

There is still no official agreement under UNFCCC on how to set reference levels. However, the most accepted suggestion is that countries should use a combination of historical deforestation (as a proxy for future forest loss using the “business-as-usual”) and national circumstances. Discussions are on-going around what “national circumstances” should actually include (Angelsen et al., 2012; Angelsen et al., 2013; Sandker et al., 2015). It is also agreed that reference levels should be consistent with the country’s GHGs inventories, should be submitted on a voluntary basis, and should be subject to technical assessments, as well as periodically reviewed and updated (UNFCCC, 2012). Developing countries should also monitor and report on domestic leakage using the Intergovernmental Panel on Climate Change’s available guidelines. Furthermore, host countries should estimate emissions, removals and forest area change by combining remote sensing and ground-based carbon inventory. Countries are also encouraged to explore synergies between NFMS and Safeguards Information Systems. Sub-national reference levels, and therefore sub-national MRV systems, can also be developed by host countries as interim measures toward a full national approach (UNFCCC, 2012). A team of two experts from developed and developing countries and appointed at the UNFCCC level should oversee the quality of reference levels and MRV systems in host countries (UNFCCC, 2013).

2.5.5. Evolving REDD+ strategies in developing countries

As it was noted earlier, around 50 developing countries from the African, Asia-Pacific, and Latin American regions are actively engaged in REDD+ preparation (UN-REDD, 2015; FCPF, 2015). In a review of REDD+ readiness in seven developing countries, including Bolivia, Brazil, Cameroon, Indonesia, Peru, Nepal and Vietnam, Angelsen et al. (2012) noticed that the main challenges these countries are facing in REDD+ design include: i) unsecure sources of funding for preparation and future implementation; ii) unclear tenure regimes; iii) institutional/scale issues; iv) the development of a solid MRV system; and v) the implementation of safeguards.

The course of national REDD+ development is influenced by the inexistence of an international climate agreement that would support a regulatory framework for a global compliant and strictly capped carbon market that could guarantee the long-term viability of performance-based REDD+ funding (Sunderlin et al., 2014a). Furthermore, although developing and setting up a solid national carbon and particularly MRV system depends

on the existence of clear land tenure systems (Jagger et al., 2014), national efforts to reform tenure so as to ease the implementation of REDD+ tend to be limited (Angelsen et al., 2012). Tenure reforms initiatives at the national scale, such as Terra Legal in Brazil and the One Map Initiative in Indonesia, are hindered by the lack of information, capacities and competing interests among actors, which translate into time- and money-consuming processes for reaching compromises and passing new laws (Larson, 2011 in Angelsen et al., 2012).

Endorsing a sub-national approach as an interim measure toward full national REDD+ implementation (UNFCCC, 2010b)²⁰, REDD+ is in many countries taking the shape of a nested institutional system, i.e., a system of subnational institutions and activities (e.g., REDD+ pilots), vertically integrated into a national REDD+ institutional and accounting framework (Pedroni et al., 2007; Angelsen et al., 2008). The nested approach allows for simultaneous financing and development of a national-level institutional architecture and local projects (Sunderlin and Sills, 2012).

2.5.6. Evolving REDD+ pilots: key findings and research gaps

The adoption of the nested approach for REDD+ implementation has encouraged the development of hundreds of sub-national REDD+ interventions in developing countries, even in the absence of fully implemented national REDD+ institutions (Pedroni et al., 2009; Herold and Skutsch, 2011). Most of these interventions have not sold any carbon credits (only a few in voluntary markets) but represent an important source of experience of REDD+ implementation on the ground and an important source of information for slow-moving national REDD+ initiatives (Angelsen et al., 2012).

Pilots have been implemented by NGOs, the private sector and local governments (Peters-Stanley et al., 2012; Sunderlin et al., 2014a; Jagger et al., 2014) at either project scale (e.g., Much Kanan Kaax, Mexico encompassing only one village) or jurisdictional scales -administrative units or eco-regions-, such as the Central Kalimantan Province in Indonesia (Angelsen et al., 2012). These types of projects promote a wide range of interventions depending on the country and the local context. These involve establishing permanent plots for carbon monitoring, reporting and verification, and training local people in fire management, community forests certification, agroforestry, or joint forest

²⁰ Document FCCC/CP/2010/7/Add.1, pp. 12-13, <http://unfccc.int/resource/docs/2010/cop16/eng/07a01.pdf>, Accessed: 06/11/2015.

management (Sills et al., 2014). Up-front finance for pilots' design has usually come from NGOs, private foundations and banks, bilateral and multilateral development aid organizations, but also from national REDD+ readiness funds.

A recent CIFOR's Global Comparative Study (2014) of 23 subnational REDD+ initiatives in six countries found that REDD+ pilots may be repeating some of the mistakes of previously unsuccessful ICDPs, and have faced critical challenges in implementation, including unclear tenure regimes and unstable funding channels (Sunderlin et al., 2014a). A study of social impact of a REDD+ pilot implemented by international NGOs in nine communities in Nepal suggest that the local community members lacked knowledge of REDD+ and therefore motivation to participate in the project. In addition, the project has delinked local people from their forest by limiting the use of forest products, and has inequitably distributed benefits among households (Poudel, 2015). The evidence from the two REDD+ pilots financing restoration of degraded forest in Brazil suggests that it has vilified traditional forest use practices, while failing to address large-scale deforestation drivers (Kill, 2015). Similarly, the legal and illegal logging continued to be the main deforestation driver in the Central Kalimantan region despite of the implemented REDD+ pilot initiative (EIA, 2014).

2.6. Mexico's forestry sector

Mexico is the country chosen for this investigation due to its long-standing commitment to REDD+, and its well-developed system of protected areas, community-based forest management and conservation initiatives and, more recently, PES. Mexico is the second largest economy in Latin America. It is an upper middle-income country, with a GDP of US\$1.261 trillion in 2013 (World Bank, 2015). It is a biodiverse country, with 30% of its land covered by various forest types (García-Barrios et al., 2009; CONAFOR, 2010a). Mexican forests are also home to approximately 12 million people, many of which are members of indigenous groups (INEGI, 2010 in Porter-Bolland et al., 2013). The forestry sector, therefore, represents a vital part of the rural society and economy in the country (Huppe, 2008; Porter-Bolland et al., 2013).

2.6.1. Deforestation and forest degradation trends

Between 1976 and 2000, Mexico was one of the countries with the highest annual deforestation rates in the world (Bray and Klepeis, 2005). Deforestation during this period was caused in great part by the expansion of the agricultural frontier in tropical regions, while degradation caused by illegal timber and wood extraction was dominant in the tropical highlands (Galvan, 2008; Galvan et al., 2008 in García-Barrios et al., 2009). According to the FAO (2010), between 1990 and 2010 the annual deforestation rate in Mexico was 0.39%, which resulted in a 7.8% loss of its forest cover (approximately 5.5 million ha).

The country's deforestation drivers vary from one region to another. For example, in the Purépecha region, in the state of Michoacán, the main cause of deforestation during the last two decades has been the expansion of avocado plantations (Guerrero et al., 2008; Garibay and Bocco, 2007 in García-Barrios et al., 2009); in the Mayan region of the state of Quintana Roo, deforestation has been caused by the expansion of the agricultural frontier (Bray et al., 2004; Roy Chowdhury, 2006); in the region of *La Montaña*, in the state of Campeche, deforestation has been driven by the expansion of cattle ranching activities (Porter-Bolland et al., 2007). Recent studies in the Yucatán Peninsula demonstrate that the annual deforestation rate during the period 2000-2012 was about 0.72%, resulting in a loss of 80,600 ha of forests mostly caused by a combination of agricultural expansion, cattle ranching, tourism, and urban development (TNC, 2015 in Greenpeace, 2015).

2.6.2. Forest tenure and property rights: the ejido system

Mexico is unique when it comes to land (and forest) tenure. Approximately 70% of the country's forests are resource commons in the hands of agrarian communities or *ejidos* (FAO, 2010b; Corbera et al., 2011; Cronkleton, 2011). The remaining 30% of the country's forests are private (26%) or public (4%) (De Ita, 2008 and FAO, 2010b in Corbera et al., 2011). *Private land* is owned by non-state legal entities such as individuals, families, companies or NGOs, including small landholders and large landholders with less or more than 5 ha, respectively (De Ita, 2008). *Public land* is owned by federal, state and municipal public agencies (e.g., national protected areas or forest concessions). Some of the public land is *vacant*, or without a specific designated

use. Vacant land might have still been used for different subsistence or commercial activities by variety of actors (UN-HABITAT, 2005).

The current land tenure system in Mexico is the response to claims made by landless peasants during the Mexican Revolution in the 1910s. These claims were reflected in Article 27 of the 1917 Mexican Constitution, which notes that the nation -an original owner of all lands and waters- would restore old (agrarian communities) or grant new (*ejidos*) customary rights to rural communities and groups of families (but not individuals) in order to meet their land and development needs (Assies, 2008; Corbera et al., 2011; García-Barrios et al., 2009; Porter-Bolland et al., 2013).

Agrarian communities are commonly referred to as indigenous communities (García-Barrios et al., 2009), given that most of them consist of indigenous people who have a historical continuity in a region and share “cultural patterns, social institutions and a legal system” (Martínez Cobo, 1987, p. 29). The rights held by agrarian communities include common rights over forests and pastures that are held by community members, or *comuneros*. These rights include a “bundles of rights” over farming plots, but exclude alienation rights, i.e., the land ultimately belongs to the state and communities hold no rights to sell it. Local institutions include a council of authorities renewed periodically and a communal assembly of all *comuneros* - mostly men and occasionally women. The communal assembly represents the maximum authority in governing community life, including forest access and use regulations. The assembly elects a president, a treasurer and a secretary every three years, and these individuals have the responsibility to deal with administrative affairs, mediate in conflicts, and represent the community in front of the state (Corbera et al., 2011).

Ejidos, in turn, were constituted when a group of landless families claimed new rights over a territory in which they lived before or they had migrated to (Corbera et al., 2011). Each member of an *ejido*, or *ejidatario*, holds rights to use and manage the *ejido* lands. However, the ultimate ownership over land remains with the state, so *ejidos* hold no rights to rent or sell land (UN-HABITAT, 2005). Most *ejidos* have portions of their land managed in common (mostly forests and sometimes pastures) while the rest has been usually divided between the founding families for farming and/or livestock grazing purposes. In most *ejidos*, *ejidatarios* have to work such parcelled lands to keep and be able to transfer the correspondent rights. Besides, each *ejidatario* can transfer their

rights to only one descendant - normally the eldest son. As is the case of agrarian communities, the *ejido* assembly also stands as the maximum authority of local social governance (Corbera et al., 2011).

Although the Agrarian Law specifies that *ejidatarios* can be men or women, only two out of ten *ejidatarios* in Mexico are women (*ejidatarias*) (UN-HABITAT, 2005). *Ejidatarias* mostly obtain their land rights from their fathers or husbands through inheritance or assignment, but usually when there are no male successors. Women's land rights are considered transitory, as women inheritors are seen as a link to transmit land rights to next male successors (UN-HABITAT, 2005). *Avecindados*, are the sons of *ejidatarios* or *comuneros* that have not inherited rights, or newcomers mostly those that have married into the family and therefore granted access to farm land through rental, and might or not have access to the pasture and forest commons (Corbera et al., 2011; Porter-Bolland et al., 2013; Balderas Torres and Skutsch, 2014).

Changes to Article 27 made in 1992 formally concluded the nation's constitutional obligation to distribute land among rural people in Mexico (Corbera et al., 2011). These changes led to amendments in the country's Agrarian Law, which allowed for the partial privatisation of communities and *ejidos'* lands. For example, *ejidatarios* are now allowed to become private owners of their land parcels and formally rent and sell such rights to third parties, a practice that had been taken place informally for decades. As regards the pastures and forests held in common, the reform of the Agrarian Law establishes a series of procedural conditions that have to be met by the assembly before land can be considered private (*dominio pleno*) - a precondition for selling land to third parties. Such procedures have *de facto* limited the privatisation of the commons to date (López-Nogales and López-Nogales, 1999; Leigh Taylor, 2005 in Corbera et al., 2011).

The federal government launched the Ejidal Rights Certification Programme (PROCEDE) (1993-2006) to facilitate the above-mentioned registry of *comuneros* and *ejidatarios'* parcels of land and to help resolving boundary conflicts (Corbera et al., 2011). Programme advocates argue that PROCEDE was the epitome of the country's long-standing commitment for the redistribution of property rights and the strengthening of land tenure (UN-HABITAT, 2005; Robles and Peskett, 2011). Its detractors argue that PROCEDE has been a first step towards the wholesale conversion of communal land to a fully private ownership regime (Cornelius and Myhre, 1998 in

Barns, 2014). However, almost all (99.77%) of more than four million farmers from over the 30,000 communities and *ejidos* in Mexico that joined PROCEDE did not further parcelled or privatized the remaining commons (Corbera et al., 2011).

2.6.3. Forest conservation and management programmes

Before the development of community-based forest management (CFM) enterprises, Mexico had many industrial logging concessions on community lands (Bray et al., 2006, 2010). The commercial use of timber at an industrial scale began in the mid-twentieth century with the government imposing 25 to 50 years logging forest concessions on *ejidos* and communities' lands (Gerez Fernandez, 2007; Merino-Pérez and Segura-Warnholtz, 2005; Corbera et al., 2011; Porter-Bolland et al., 2013). In most cases, the concessionaries extracted more timber than was agreed, paying only a small stumpage to local forest owners who were also subject to heavy restrictions on forest use (Merino-Pérez and Segura-Warnholtz, 2005; Corbera et al., 2011).

In the 1970s, local people, supported by civil society organisations, asked the government to refuse any requests for concessions' renovation (Bray et al., 2006). In parallel, the Forest Development Department²¹ supported local communities to develop CFM enterprises and to engage in the commercial production of timber without intermediaries (Bray et al., 2006; Porter-Bolland et al., 2013). Finally, the 1986 Forestry Law banned concessions (Bray et al. 2006; Merino-Pérez and Segura-Warnholtz, 2005; Corbera et al., 2011). However, in late 1980s and early 1990s, the promotion of CFM in Mexico did not continue as successfully as in its early years due to government's disinvestment in the forestry sector, the increasing neoliberalisation of Mexico's economy, and the expansion of protected areas as the main forest policy (Porter-Bolland et al., 2013).

Since the establishment of the Ministry of Environment²² in 1994, national forest policy has focused on lowering extractive pressure on natural forests and large investments have been made in reforestation and private commercial forest plantations, as well as in the establishment of protected areas (Porter-Bolland et al., 2013). Protected areas have been criticised for unclear environmental gains and negative social impact, resulting

²¹ Dirección General de Desarrollo Forestal (DGDF) (1974-1986).

²² The Ministry of Environment, Natural Resources and Fisheries, La Secretaría de Medio Ambiente, Recursos Naturales y Pesca (SEMARNAP) (1994-2000).

more often than not in conflict with local communities (García-Frapolli et al., 2009; Merino-Pérez and Hernández-Apolinar, 2004 and Durán-Medina et al., 2005 in Porter-Bolland et al., 2013).

In the 2000s, CFM again received more government support as demanded by rural organizations. For example, in 2001 and 2003 the National Forestry Commission (CONAFOR) and the Ministry of Environment and Natural Resources (SEMARNAT) established, with the support of the World Bank, the Indigenous and Community Biodiversity Conservation Project (COINBIO) and the Programme for Conservation and Sustainable Forest Management (PROCYMAF), respectively (Bray and Merino-Pérez, 2004; Bray et al., 2006). These programmes resulted in an increase in the number of self-initiated CFM enterprises and in the area under certified forest management, but later on they became increasingly underfunded in comparison to new emerging climate change responsive policies, such as reforestation and PES (Porter-Bolland et al., 2013).

Since the early 2000s, CONAFOR and SEMARNAT increasingly supported the idea of using direct payments to encourage forest conservation (Hall, 2012). The National Forestry Plan (2001-2006), for example, was the first policy document to explicitly acknowledge the idea that markets and payments for ecosystem or environmental services could be established to support forest conservation and sustainable management. Subsequently, an amendment of Article 223 of the Federal Rights Law in 2002 allowed that a certain share of the sum collected from the taxes regulating the use, development and operation of state-owned waters could be directed to the development of a national PES programme (Hall, 2012). Additionally, the concept of PES was articulated in the 2003 General Law for Sustainable Forest Development and, in 2003, CONAFOR established the Mexican Forestry Fund, a main financial instrument to support the implementation of PES programmes.

That same year CONAFOR launched the federal programme of Payments for Hydrological Services (PSAH). It was aimed at ensuring the conservation of forests in critical and over-exploited basins and aquifers throughout the country, economically rewarding forest owners over a five-year period (Kosoy et al., 2007; Muñoz-Piña et al., 2008; FAO, 2013). Payments were made per hectare per year, with higher payments being allocated to cloud forests (US\$40/ha) and lower to other forest types (US\$30/ha).

Individuals are allowed to participate with up to 200 ha, and communities from 20 to 3,000 ha or more, depending on community size (Alix-Garcia et al., 2012).

In 2004, the government established another PES programme with three components: one dedicated to support the development of forestry projects under the Kyoto Protocol's Clean Development Mechanism, which only lasted three years; another focusing on the conservation of highly biodiverse forests, which continues as of today, and a third one, also still on-going, aiming at increasing tree cover in agricultural systems. Between 2003 and 2011, CONAFOR funded 5,967 PES applications, so forests targeted under the programme covered an area of around 3.2 million hectares (CONAFOR, 2011a).

In parallel to the development of national PES programmes, Mexico has hosted a number of small-scale PES programmes and projects developed on the initiative of government, private companies, NGOs and certified through different standards. For example, the *Scolet Té* project in the state of Chiapas has been selling carbon offsets in voluntary carbon markets since 1997, involving farmers and communities in reforestation, agro-forestry and forest conservation activities (Nelson and de Jong, 2003; Corbera et al., 2007; Hendrickson and Corbera, 2015); the hydrological services programme established in the municipality of Coatepec back in 1998 has served as the pilot project to develop PSAH national scheme (Manson, 2004; McAfee and Shapiro, 2010); and the governmental programme targeted at protecting the winter habitat of monarch butterflies had also been paying landowners to reduce from logging since 2000 (Honey-Rosés et al., 2011). Some other examples include initiatives to pay for hydrological ecosystem services in the mountains of Coahuila and Veracruz, and for scenic beauty of the Oaxacan coastline (CONAFOR, 2011a). As the next section illustrates, new local initiatives developed as REDD+ pilot projects have recently appeared while the country has been progressing in its design of the national REDD+ strategy (ENAREDD+).

2.7. The history of REDD+ in Mexico

2.7.1. The REDD+ readiness process

In 2008 CONAFOR elaborated the Readiness Plan Information Note (R-PIN), which can be considered as the official starting point of Mexico's REDD+ readiness phase. This made of Mexico the first country in the world to join the World Bank's Forest Carbon Partnership Facility (FCPF, 2008). The R-PIN intended to be a preliminary document compiling background information on land-use patterns and deforestation drivers, as well as existing stakeholder consultation processes and institutional arrangements directed toward addressing deforestation and forest degradation (FCPF, 2008).

Two years later Mexico submitted to the FCPF the Readiness Preparation Proposal (R-PP), containing a more detailed strategy for realising REDD+ activities at the national level, including a proposal about how the emerging REDD+ initiatives at different geographical levels would be coordinated and brought together under a joint financial and operational framework within existing national forest policy programmes (CONAFOR, 2010a). The R-PP also stated that the REDD+ strategy would occupy the central position in the Special Programme on Climate Change (PECC) (2014-2018), a strategic policy document that describes the government's plans to reduce GHGs emissions to 30% by 2020, and 50% by 2050, with respect to the business-as-usual scenario (PECC, 2014).

The PECC was developed by the Inter-ministerial Commission on Climate Change (CICC), which was established by the government in 2005 as a means to coordinate different actors and social sectors relevant to climate policy. In 2009, this commission created the working group for REDD+, known as GT-REDD+, which involves government's forestry, environment, agriculture, and social development agencies. Almost in parallel, the Inter-ministerial Commission for Sustainable Rural Development (CIDRS), established in 2005 by the Ministry of Agriculture and Fisheries (SAGARPA) to coordinate different land-use sector policies, created the Working Group for Territorial Projects to monitor REDD+ *early actions* (ATREDD+) (CONAFOR, 2011b).

The first multi-stakeholder forum established by CONAFOR to discuss REDD+ design issues was the national Technical Advisory Committee for REDD+ (CTC-REDD+, hereafter CTC). The committee was established in 2010 and played a formal advisory role to the GT-REDD+. A year later, CONAFOR also established three sub-national advisory committees to identify REDD+ priorities and foster participation in REDD+ policy development in priority regions to host early actions, including the states of Oaxaca, Chiapas, Yucatán, Campeche, Quintana Roo and Jalisco (CONAFOR, 2015b). The working group on ENAREDD+ (GT-ENAREDD+) established by the National Forest Council (CONAF) in 2013 is another consultative forum for multi-stakeholder discussions on REDD+.

The REDD+ readiness process in Mexico had a first intermediate product - *the Mexico's REDD+ Vision document* - presented to the UNFCCC in 2010 at the 16th Conference of the Parties held in Cancun, Mexico. This document is considered the basis for the country's ENAREDD+: it identified sustainable rural development as the key pillar of the future strategy and set goals for zero net emissions from land-use change and important reductions in degradation rates by 2020 (CONAFOR, 2010b). It also defined five strategic lines for REDD+ design and implementation: i) institutional arrangements and public policies; ii) financing mechanisms; iii) monitoring, reporting and verification systems; iv) communication, participation and transparency; and v) environmental and social safeguards (CONAFOR, 2010b) (Table 2.3). Finally, this document suggested that the development of ENAREDD+ should be completed in two phases: i) strategy design and definition of baselines for impact assessment (originally due for the first half of 2012, but as of February 2015 still on-going), and ii) strategy implementation (planned for 2012-2020), including interim impact assessments (planned for 2017-2022) (CONAFOR, 2010b).

Following the strategic lines set in *the Mexico's REDD+ Vision document*, CONAFOR produced the *Elements for design of ENAREDD+* in 2011. This document set the milestones for 2020 and noted that the short-term success of REDD+ implementation would first be assessed by evaluating REDD+'s institutional, technical, and political arrangements and not by measuring carbon emission reductions. The ENAREDD+ drafts produced between 2011 and 2014, as well as two versions of a communication strategy for the ENAREDD+ (2012, 2014), followed.

Table 2.3: ENAREDD+ strategic lines and related specific activities as defined in the Mexico's REDD+ Vision document (2010)

ENAREDD+ strategic lines	Activities
i) Institutional arrangements and public policies	<ul style="list-style-type: none"> • Promotion of alignment of forestry with agriculture, infrastructure, energy and tourism sectors • Coordination of activities at sub-national and national level
ii) Financing mechanisms	<ul style="list-style-type: none"> • Optimization and coordination of sources of financing at international and national scale • Development of mechanism for fair distribution of financial benefits
iii) Monitoring, reporting and verification system (MRV)	<ul style="list-style-type: none"> • Development of national MRV in accordance with international model and flexible enough to incorporate subnational activities and account for leakage
iv) Communication, participation and transparency	<ul style="list-style-type: none"> • Participation and inclusion of stakeholders in the design and implementation of REDD+, with special attention to local communities • Inclusion of principles of equity, transparency and legality, sovereignty over the land, and free, prior and informed consent
v) Environmental and social safeguards	<ul style="list-style-type: none"> • Promotion and maximization of environmental and social co-benefits, including biodiversity conservation and ecosystem services maintenance, as well as improvements of well-being and rights of local communities

Source: CONAFOR, 2010b.

According to the ENAREDD+ drafts, REDD+ in Mexico should be regarded as an opportunity to reduce deforestation and forest degradation through the promotion of sustainable rural development and should not operate as a programme or single policy instrument, but as a set of instruments involving various land-use sectors (CONAFOR, 2011b, 2012a, 2012b, 2013a, 2014a, 2014b). Mexico's REDD+ activities should be informed by a landscape approach, i.e., conservation activities, agriculture, reforestation, agroforestry, and sustainable forest management, implemented within a territorial unit, such as biological corridors or hydrological basins. Such an approach should in turn be pursued with the support of the relevant technical organisations and initiatives already existing at local and regional levels, such as the Inter-municipal Environmental Board for the Integrated Management of the Lower Basin of the

Ayuquila River (JIRA) in the state of Jalisco or the Mesoamerican Biological Corridor²³ in the Yucatán Peninsula.

In 2013 CONAFOR developed the *Mexico's Emission Reductions Initiative Idea Note* (ER-PIN) as part of the requirements under the FCPF Carbon Fund. The ER-PIN provided details on benefit-sharing accruing from REDD+ activities already under implementation in early action states (CONAFOR, 2013b). It also included details on how to calculate the reference level and monitor carbon balance; assess the permanence risks; meet environmental and social safeguards; and design a registry to avoid the double counting of emission reductions (FCPF, 2013).

Mexico was the first country to develop legal provisions and to reform its environmental laws to ease REDD+ implementation. It reformed the General Law for Environmental Equilibrium and Protection in 2011 and the General Law for Sustainable Forest Development in 2012, to include specific definitions of the terms 'deforestation', 'degradation' and 'environmental services'; to identify the owners of environmental services; to highlight the need to include environmental and social safeguards in policies and legal instruments designed to promote and regulate environmental services, including REDD+ activities; and to link the national forest inventory to the evolving MRV system for REDD+ (UN-REDD, 2012). Furthermore, the General Climate Change Law was amended in 2012 to recognise the official role of state authorities in implementing sub-national REDD+ programmes. More specifically, such law instructed the creation of the Climate Change Fund to attract private, public, national and international funds for the development of climate change adaptation and mitigation actions, including REDD+. Figure 2.1 below shows the complexity of Mexico's REDD+ institutional architecture.

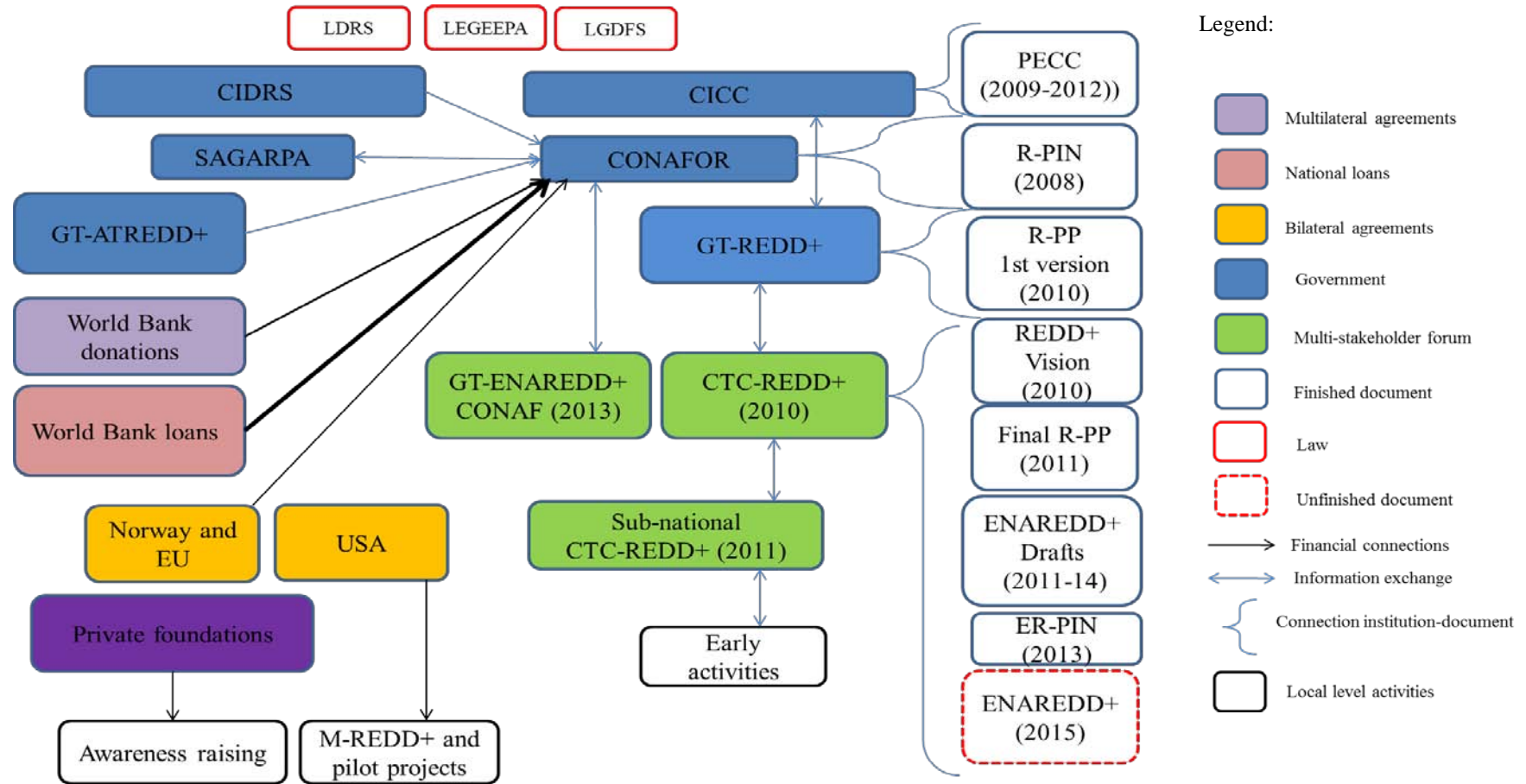
Various parties have pledged a total of US\$868 million to support REDD+ development in the country. So far, it has only received US\$51 million (6% of the total amount pledged) from a variety of sources including multilateral and bilateral organisations, private foundations, and the country's national budget. The largest share of received funds (US\$40.07 million) has been provided in form loans by the multilateral donors, predominantly the World Bank, and to a lesser degree from the Global Environmental

²³ An international initiative for promotion of both forest conservation and sustainable development of local peoples in the Mesoamerica region (CONABIO, 2015).

Facility. The second largest share (US\$9 million) has arrived from bilateral donors, principally from the Government of Norway, the United States Agency for International Development (USAID), the European Union and the French and Spanish Development Agencies. Other organisations, such as the Ford Foundation, the Christensen Fund, Oxfam International, Climate Works and CFH Foundation have contributed with 4% of REDD+ readiness funds (US\$2 million). Finally, CONAFOR has provided 10% of the funds so far (US\$2.36 million) (Muñoz-Piña and Ortega Flores, 2013).

The largest share (54.5%) of the remaining funds (US\$817 million) that should in theory be received in coming years should be delivered by the World Bank and the Inter-American Development Bank in the form of loans, as well as from FCPF donations. The second largest share (40.5%) should arrive from CONAFOR and the third (4.7%) from bilateral aid organisations, including USAID, the Government of Norway and the EU. Private donors, including Oxfam International and the Moore Foundation might deliver the rest (Muñoz-Piña and Ortega Flores, 2013) (see also Appendix A).

Figure 2.1: Mexico's REDD+ institutional architecture



Source: own elaboration.

2.7.2. Emerging REDD+ pilots at regional and local levels

The federal government through CONAFOR and its forest conservation and management programmes has already been implementing REDD+ early actions. The aim of such actions is to explore and test different institutional arrangements and financial mechanisms for future REDD+ implementation in a variety of environmental, social, and economic contexts in the country, and to ensure capacity building and alignment of public policy in sustainable forest management and rural development (CONAFOR, 2010b). Early actions cannot be considered pilot programmes or projects, as they do not count with full carbon accounting, or as demonstration projects, because they do not cover all the necessary components of credible REDD+ activities, such as measuring, reporting, and verification, participation of indigenous people and local communities or benefit-sharing mechanisms (Sills et al., 2009).

In 2010, CONAFOR launched the Special Programme for Conservation, Restoration and Sustainable Use of the Lacandon Forest in the state of Chiapas, on the premise that any resulting carbon offsets would be sold to the Government of California. To this end, the state of Chiapas signed an agreement with California's Governors Climate and Forest Task Force (GCF)²⁴. However, the early implementation of the programme was riddled with conflicts and controversies over tenure and carbon rights in the Lacandon forest. The agreement with California was cancelled in 2013, but the programme has been implemented in other parts of the state, with the support of national and international NGOs (López, 2013).

Other REDD+ pilots are at different stages of implementation throughout the states of Mexico, Oaxaca, as well as in Quintana Roo and Campeche in the Yucatán peninsula. In these regions, national NGOs, including the *Consejo Civil Mexicano para la Silvicultura Sostenible*, PRONATURA A.C. and U'yool'che A.C., sometimes with the support of international organisations such as the M-REDD+ Alliance²⁵, promote projects focused on developing a baseline against which to monitor changes in carbon stocks, and to improve current practices in agriculture, forest management and

²⁴ GCF is a multi-jurisdictional collaborative effort established between 26 states and provinces from Brazil, Indonesia, Mexico, Nigeria, Peru, Spain and the US. Besides Chiapas, the government of Mexican state of Campeche, Jalisco, Tabasco and Quintana Roo also signed the agreement with GCF (GCF, 2015).

²⁵ A consortium of international and Mexican conservation organizations and research institutes leading the "Mexico's REDD+ project" (M-REDD+).

restoration to halt deforestation and forest degradation (U'yool'che, 2011; CCMSS, 2011; PRONATURA, 2015).

2.8. Summary

Over the last ten years REDD+ has evolved from being a market-based mechanism, built on the concept of financially compensated emission reductions resulting from forest conservation and reduced degradation, to currently encompass financial support from (mostly voluntary to date) carbon markets and non-market sources for the development of also other activities, such as sustainable forest management and reforestation activities, while accounting for other social and environmental objectives. In order to understand what REDD+ currently represents, this chapter has briefly introduced what forests are, the state of the world's deforestation and its causes, and it has reviewed the principles and outcomes of key forest conservation approaches preceding REDD+ and that might play a key role in REDD+ implementation. The chapter has paid specific attention to the history of this new international climate change mitigation framework and it has explained how it is unfolding worldwide, and specifically in Mexico.

Chapter 3. Theoretical foundations

This chapter presents the theoretical foundations of this thesis. It is divided into four sections. The first section introduces REDD+ as a new and evolving international mechanism for land-use based climate change mitigation that constitutes also an international project of environmental governance. It defines environmental governance and the four core criteria used to evaluate its success: effectiveness, efficiency, legitimacy and equity. The second section explicitly focuses on legitimacy, a key analytical lens used in Chapter Five to study decision-making processes under REDD+ readiness. After introducing the distinction between input and output legitimacy, the section focuses on the former and develops a list of criteria and indicators for its analysis. The third section introduces the notion of environmental discourse and discourse analysis, which are used in Chapter Six to explore stakeholders' own understandings of REDD+ and their ability to influence related policy decisions. The section also reviews the most relevant literature analysing environmental discourses, paying specific attention to forest governance and REDD+ related discourses. The final section explains the concept of equity. It introduces the procedural, contextual and distributional domains of equity and focuses on the use of procedural equity as a suitable criterion to analyse the fairness of future benefit-sharing under REDD+, both at national and local levels, a topic which is empirically analysed in Chapter Seven.

3.1. Governance for REDD+

3.1.1. Defining environmental governance

The Commission on Global Governance (1995, p. 2) defines governance as:

“the sum of the many ways individuals and institutions, public and private, manage their common affairs. It is a continuing process through which conflicting or diverse interests may be accommodated and cooperative action may be taken. It includes formal institutions and regimes empowered to enforce compliance, as well as informal arrangements that people and institutions either have agreed to or perceive to be in their interest” (Burger and Mayer 2003, p. 50).

In short, governance refers to a collective effort to decide and agree on a particular goal and to subsequently steer society towards such goal, by shaping social values and actions through policies (Vallejo and Hauselmann, 2004; Vatn and Vedeld, 2011). Governance is decentralised, open to self-organization and self-regulation, and less hierarchical than traditional government-driven policy-making (Rosenau, 1995; Young, 2000; Biermann et al., 2009). A governance perspective to environmental affairs acknowledges that the government should share some of its power and responsibilities in the policy-making process with non-governmental actors (Biermann and Pattberg, 2008; Biermann et al., 2009; Noor, 2010; Roberge et al., 2011). Thus, governance is a *multi-stakeholder*, *multi-sector*, and *multi-level* process because it includes a variety of stakeholders from different sectors in society, who potentially hold different values, interests, and worldviews, and who interact at and across different administrative and geographical levels (Burger and Mayer, 2003).

Stakeholders are actors who will be affected by (primary stakeholders) or can influence (secondary stakeholders) decision-making processes involved in steering society towards a concrete goal (Mayers, 2005). Stakeholders can be individuals but more commonly are public or private organizations, such as international organisations, governments, NGOs, businesses and local communities (Vatn and Vedeld, 2011). Stakeholders differ in their capacities and resources, including political (influence-authority), financial (money), cognitive (information), and moral (legitimacy) (Dingwerth and Pattberg, 2009). A central concept in understanding governance is authority, or the power held by stakeholders to facilitate and/or constrain the agency of others (Tamm Hallström and Boström, 2010).

The last few decades have seen the emergence of institutions born from multi-stakeholder governance in a variety of policy areas such as health (World Health Organisation- WHO), or food production (Food and Agriculture Organization- FAO) (Pattberg, 2005). Similarly, an official call for governance of complex and cross-scale environmental problems, such as climate change or deforestation and forest degradation, emerged with the concept of sustainable development and guidelines and actions for strengthening of social participation enlisted in Agenda 21 of the Rio Declaration (UNCED, 1992); followed by the Aarhus convention on public participation in decision-making, and access to information and environmental justice (European Commission, 1998); the eight Millennium Development Goals to be

accomplished until 2015, including achievement of environmental sustainability (UN, 2000); the European Commission's Malmo Declaration on e-government between citizens and governments (European Commission, 2009); and the most recent Rio+20 summit (UN, 2012) (Vallejo and Hauselmann, 2004; Lemos and Agrawal, 2006; Warner, 2006; Multipart, 2008; Bäckstrand, 2013).

Environmental governance can be thus understood as a set of regulatory processes, mechanisms and organizations through which stakeholders influence actions and outcomes to achieve a particular environmental goal, by changing environment-related incentives, knowledge, institutions, decision-making and actors' behaviours (Lemos and Agrawal, 2006). Environmental governance integrates actors-networks, rule-making systems, and a great number of formal and informal institutions operating at or across various levels of social organization, in a continuing process of formulating and implementing environmental policies (Biermann et al., 2009; Chhotray and Stoker, 2009; Noor, 2010). Environmental governance has been established to bridge the gap between decision makers (e.g., government) and those implementing and being affected by such decisions, but often absent from the decision-making process (e.g., local communities) (Holmes and Scoones, 2000; Hiraldo and Tanner, 2011).

Environmental governance can take various forms, depending on which stakeholders participate in the process and what are their political and economic relations. For example, environmental governance can be articulated through international networks of experts, public-private partnerships (e.g., the Forest Stewardship Council- FSC²⁶ and the international Marine Stewardship Council- MSC²⁷), national consultative councils (e.g., agricultural and rural management councils in Democratic Republic of the Congo), or local participatory structures (Lemos and Agrawal, 2006; Cornwall, 2008; Waldman, 2008; Biermann et al., 2009; Funder, 2010; Speer, 2012; Badibanga, 2013).

3.1.2. Four core criteria to analyse environmental governance

Effectiveness, efficiency, legitimacy and equity are core evaluative criteria of environmental policy-making (Adger et al., 2003; Adger et al., 2005). I argue that they can also be employed in the analysis of environmental governance. *Effectiveness* refers

²⁶ FSC promotes the responsible management of the world's forests through standards setting and timber and non-timber forest certification (FSC, 2015).

²⁷ MSC focuses its efforts in the certification and eco-labelling of sustainable seafood (MSC, 2015).

to the ability of a governance or policy process to accomplish its goals through laws, policies and programmes, while *efficiency* refers to the ability to reach those goals at the lowest possible cost (Vatn and Vedeld, 2011). *Legitimacy* concerns the acceptability of authorities and institutional arrangements for environmental governance, as well as of environmental laws, policies and programmes by the relevant stakeholders (Vatn and Vedeld, 2011; Tyler, 2006 in Bouma and Ansink, 2013; Bernstein, 2005 in Lederer, 2011). It therefore encompasses the legitimacy of the *process* itself, and the legitimacy of its *outcomes* (Hemmati, 2002), the so-called input and output dimensions of legitimacy (Bäckstrand, 2006).

Equity, in turn, considers whether environmental governance addresses inequalities among actors in decision-making (*procedural equity*), in the distribution of costs and benefits associated to governance processes (*distributive equity*), and in other injustices of pre-existing social and political conditions (*contextual equity*) (McDermott et al., 2012). As the economic, social, and environmental pillars of sustainable development, these four criteria are interrelated and contested, so they should simultaneously be taken into account in environmental policy and governance design, implementation and evaluation (Adger et al., 2003; Vallejo and Hauselmann, 2004).

3.1.3. REDD+ as environmental governance

REDD+ can be considered a project of environmental governance because it is intended to align the views of multiple stakeholders on how the problem of deforestation and forest degradation in developing countries should be framed and addressed (Corbera and Schroeder, 2011; Thompson et al., 2011; Lederer, 2012; de la Plaza Esteban et al., 2014). By offering solutions to certain technical, design and procedural issues (such as emissions reference levels, the attribution of carbon rights to one or multiple parties, and benefit-sharing mechanisms), REDD+ is implicitly promoting and legitimising certain tools, actors and forms of knowledge while side-lining others (Thompson et al., 2011).

Given REDD+'s climate mitigation goal and its other additional objectives (see Chapter Two, Section 2.5), REDD+ governance should involve a variety of actors with vested interests in land-use and land-use change. Such actors range from individual landowners and local communities, to national and international governments, NGOs, private logging companies, and industries interested in offsetting their carbon emissions (Vatn

and Vedeld, 2011; Thompson et al., 2011). The inclusion of multiple actors, particularly those traditionally under-represented in environmental policy-making, provides an opportunity to share and mediate across different interests and knowledge, which should in turn help address REDD+ technical, design and procedural issues (Angelsen et al., 2009; Cronkleton et al., 2011; Doherty and Schroeder, 2011; Thompson et al., 2011; Ribot and Larson, 2012).

As noted in the previous chapter, REDD+'s foundational principles can be found in the UNFCCC's negotiations, which involve international governments, as well as a variety of stakeholders who lobby for particular decisions outside the formal UNFCCC arena (Long, 2013). Emission reductions from REDD+ activities are to be accounted at national scales (UNFCCC, 2010b) and the extent to which non-state actors will be involved in REDD+ would depend, in turn, on the country's governance processes operationalised through national governments (Lyster, 2011; UN-REDD, 2012). In this regard, REDD+ can be understood as an exercise of multi-layered governance as it requires the involvement and coordination of distinct levels of governance across different social and political jurisdictions (Long, 2013; Lederer, 2012; Vignola et al., 2012; Corbera and Schroeder, 2011; Thompson et al., 2011).

National REDD+ governance refers to all institutional arrangements, policies and processes at different levels in a country, including both those previously existing and those newly created by the REDD+ readiness process itself (Biermann et al., 2009, 2010; Vatn and Vedeld, 2011; Corbera and Schroeder, 2011). The national REDD+ governance structure thus includes: i) planning and decision-making processes (e.g., REDD+ readiness multi-stakeholder initiatives); ii) policy, legal, institutional and regulatory frameworks (e.g., land-use and land-use change policies, environmental and forestry laws, regulations, and bureaucratic procedures, as well as REDD+ funding architecture); and iii) institutional arrangements for implementation, enforcement and compliance (e.g., REDD+ benefit-sharing and monitoring, reporting and verification systems) (Vatn and Angelsen, 2009; Costenbader, 2011).

In this context, it becomes paramount to investigate how well the four core criteria of environmental governance perform in relation to REDD+, as well as to identify potential trade-offs across such criteria (Adger et al., 2003; Lederer, 2011). *Effectiveness* relates to whether REDD+ targets the drivers of deforestation and reduces

deforestation, as well as whether it avoids leakage (i.e., emissions reduced in one area or country being released in another as a consequence of the activity) and helps to ensure additionality (i.e., more carbon have been stored and emissions reduced compared to the situation without the intervention) and permanence of carbon stocks for a long period of time (Vatn and Vedeld, 2011). *Efficiency* relates to the ability of REDD+ governance to deliver cost-efficient results, including both the direct costs of reducing deforestation and the transaction costs associated with decision-making, setting and operating the MRV system, and delivering benefits, among others (Vatn and Vedeld, 2011). *Legitimacy* relates to how different groups are included in REDD+ readiness and implementation activities, how accountable stakeholders are to one another, and how acceptable REDD+ decisions can be to the various stakeholders (Vatn and Vedeld, 2011). Finally, *equity* refers to REDD+ effects on the distribution of decision-making power and costs and benefits accruing from REDD+ development and implementation across different stakeholders that operate in pre-existing social and political contexts (McDermott et al., 2012).

This thesis takes a case study approach to analyse the legitimacy of the decision-making processes involved in Mexico's REDD+ readiness phase, as well as the perceived fairness of its envisioned rules and forthcoming implementation. I acknowledge that in evaluating a process of evolving REDD+ governance, issues of legitimacy and equity cannot be separated from those of effectiveness and efficiency. Therefore, the last two criteria will be brought into discussion in order to explain current and potential trade-offs between these four criteria. In the following sections, I describe theoretical concepts that are used to develop the empirical analysis. I specifically focus on legitimacy in decision-making (which corresponds to the analysis presented in Chapter Five), discourse analysis (Chapter Six), and equity in benefit-sharing (Chapter Seven).

3.2. Analysing legitimacy in environmental governance and REDD+

3.2.1. Input and output legitimacy

The legitimacy of environmental governance largely depends on the will of governments to share their power in managing environmental problems with other social actors (Vallejo and Hauselmann, 2004). A process of environmental governance could be considered legitimate if all relevant actors were recognized in decision-

making, and if they would consent the decisions taken and their subsequent implementation (Paavola, 2003; Adger et al., 2003; Bäckstrand, 2006; Angelsen et al., 2009; Thompson et al., 2011).

Drawing on Scharpf (1999), Bäckstrand (2006) distinguishes between input and output legitimacy to separate procedural from outcome-based considerations. Input legitimacy concerns the extent to which actors are recognised, invited and included in decision-making processes, and organised to develop and steer the governance process. It also refers to whether representation and meaningful participation takes place and whether transparency and accountability are respected, thus resulting in increased trust among participants (Bäckstrand, 2006; Vatn and Vedeld, 2013). Output legitimacy relates to the level of actors' acceptance of adopted decisions and their subsequent (effective or ineffective) outcomes. The acceptance of decisions strongly relates to the question of authority, i.e., to which extent decisions are willingly endorsed and implemented by participant actors (Burger and Mayer, 2003; Bäckstrand, 2006; Parkinson, 2006; Vatn, 2011).

Input and output legitimacy are interconnected and interdependent (Boedeltje and Cornips, 2004; Bäckstrand, 2006). Low input legitimacy compromises output legitimacy, as for example in situations in which participation is not meaningful and it does not impact decisions (Paavola, 2007). In turn, output legitimacy is fostered by transparent and accountable decision-making processes. Output legitimacy also guarantees better mutual understanding and social learning among stakeholders (Beisheim and Dingwerth, 2008; Cadman and Maraseni, 2011).

Legitimacy can be understood using a *normative* or a *sociological* approach (Buchanan and Keohane, 2006; Bäckstrand, 2013). In the normative approach, the legitimacy of a governance process is evaluated based on information on whether: i) the process is conformed to some previously set of legitimacy standards (e.g., law); ii) the justification of rule-making authority is well founded; and iii) the adopted actions succeed in reaching governance goals (Boedeltje and Cornips, 2004; Bäckstrand, 2013). In the sociological approach (i.e., perceived legitimacy), participants grant legitimacy to a given governance process based on their acceptance and justification of the institutions, procedures or authority, as well as on their satisfaction with the content of governance policies and the obtained result (Cashore, 2002; Steffek, 2003; Steffek and Hahn, 2010;

Buchanan and Keohane, 2006; Bäckstrand, 2013). Achieving sociological legitimacy is considered more important for the success of environmental governance than achieving normative legitimacy, because when participants consider the decision-making process legitimate and are satisfied with the policy content, they also implement and comply with it more effectively (Bäckstrand, 2013).

Concerned actors might use different logics to legitimate or not a governance process. Some of these logics include the *pragmatic logic*, i.e., self-interest and economic benefits, the *moral logic*, i.e., the moral suasion to perceive governance process as “the right thing to do”, or the *cognitive logic*, i.e., the fact that certain types of governance have become an accepted and understandable practice (Cashore, 2002). Furthermore, actors might weight input and output legitimacy differently (Boström and Tamm Hallström, 2013; Symons, 2011; Bäckstrand, 2013). Therefore, the degree to which different actors perceive institutions and stakeholders in environmental governance and its outcomes as legitimate or illegitimate depends on different personal or organisational interpretations and demands for legitimacy (Boström and Tamm Hallström, 2013).

This thesis employs a sociological approach to study input legitimacy in Mexico’s REDD+ readiness process, which has been organised through several multi-stakeholder processes at various scales. In particular, it pays attention on the role and the level of institutionalisation of multi-stakeholder processes within the REDD+ readiness process. The thesis further explores the different logic used by REDD+ stakeholders to legitimize (or not) such process. The criteria that actors use to weight the process input legitimacy will be introduced in the following section.

3.2.2. Legitimacy in multi-stakeholder policy processes

The previous section emphasised that multi-stakeholder processes are a constitutive element of governance geared toward enhancing its input and output legitimacy (Yosie and Herbst, 1998; Rowe and Frewer, 2000; van den Hove, 2000; Warner, 2006; Tamm Hallström and Boström 2010; Multipart, 2008). Some authors argue that such multi-stakeholder processes should help balance “bottom-up” and “top-down” policy approaches, for example, responding to local communities’ needs and demands while also helping in the design of national level institutions (Noor, 2010). However, the inclusion of divergent views and perspectives on a particular environmental governance process may be time- and resource- consuming, which -ironically- might compromise

governance efficiency and effectiveness (Yosie and Herbst, 1998; Angelson et al., 2009).

Furthermore, some have critically argued that the multi-stakeholder nature of environmental governance could deepen inequalities by providing advantage to the already privileged actors while increasing exclusion and marginalisation of the already disadvantaged (Edwards and Wollenberg, 2001 and Warner, 2007 in Noor, 2010; Hartman, 1998 in Boedeltje and Cornips, 2004). In addition, the inclusion of a wide range of actors, representing diverse interests and views, engaged in different discourses and in transparent and deliberative process, may lead to discrepancies resulting in resource-consuming processes and ultimately compromising the process of reaching consensus in the context of multi-stakeholders process (Holmes and Scoones, 2000; Bernstein, 2005; Angelson et al., 2009; Lövbrand, 2009).

Additionally, multi-stakeholder processes are often determined by context and differ in their normative and organisational structure. Based on their role in policy-making, multi-stakeholder processes can be grouped in: i) *decisional*, i.e., stakeholders directly participate in making (and implementing) policy decisions; ii) *consultative or advisory*, i.e., stakeholders provide comments or give input on policy choices made by government and have no impact on final decisions; and iii) *informational*, i.e., stakeholders provide general perspectives or information on the issue (Yosie and Herbst, 1998).

In theory, any individual or group in society could be a *convener* or actor initiating the multi-stakeholder process. Conveners may or may not consult other participants on setting and designing the process's agenda and internal regulations, including decision-making procedures (Hemmati, 2002). The processes at hand can have different levels of institutionalisation, e.g., governing bodies, executive committees, coordinating and working groups, as well as decentralised organisational structures such as national and sub-national fora (Hemmati, 2002; Noor, 2010). Decision-making procedures should ideally rely upon participants' *consensus*, which would help in incorporating all points of views in an agreement, while *voting* should ideally be introduced only to bring about a conclusion when it is not possible to reach consensus (Hemmati, 2002).

Researchers agree on the importance of ensuring meaningful participation by local communities and indigenous people in multi-stakeholder REDD+ processes (Bushley,

2010; Thompson et al., 2011; Hufty et al., 2011). This has been particularly true in the context of REDD+ design, as during UNFCCC negotiation process the emerging self-organised indigenous and local communities alliances are being consulted and invited to provide input by international governments, but their power in framing and designing REDD+ remains rather indirect and weak (Schroeder, 2010). Consequently, REDD+ concepts have been predominantly defined by research institutions related to natural sciences and economics (Hiraldo and Tanner, 2011; Osborne et al., 2014).

The future success of REDD+, at least from an input legitimacy point of view, hinges on national governments' ability to establish the right incentives to attract non-state actors to participate, and on their willingness to recognise different views and address uneven power relations. Only by establishing the right incentives, national governments would balance the legitimacy of both REDD+ decision-making and implementation processes (Vatn and Vedeld, 2011). National governments should follow a set of relevant conventions, norms and laws that define the rules for the interaction of actors at national levels (Vatn and Vedeld, 2011). Furthermore, governments should take into account relevant international obligations such as the Cancun Agreement's (2010) social safeguards that officially recognises and indicates the importance of full and effective participation, and respect for the knowledge and rights of indigenous peoples and local communities in REDD+.

Social safeguards and multi-stakeholder processes have been promoted as part of the social standards through REDD+ Social and Environmental Standards (REDD+ SES) (FCMC, 2013), or Social and Environmental Principles and Criteria (UN-REDD, 2012). Also, many developing countries have organized open dialogue spaces to involve stakeholders in the REDD+ readiness discussion (Burger and Mayer, 2003; Adger et al., 2003), such as REDD+ roundtables in Peru (Che Piu and García, 2011), the provincial REDD+ working group in Indonesia (UN-REDD, 2011), and the Technical Advisory Committee for REDD+ in Mexico (Corbera and Schroeder, 2011).

3.2.3. Input legitimacy criteria and indicators

I now turn to explain a number of criteria and related qualitative and quantitative indicators that are useful to assess the degree of legitimacy of a REDD+ governance process, and particularly to analyse the national cross-scale multi-stakeholder processes (Table 3.1).

First, the legitimacy of any environmental decision-making process is based on the *recognition* of stakeholders' diversity (Paavola, 2004). The convener should recognise and identify actors with vested interests in REDD+, i.e., stakeholders, and invite them to take part in the decision-making process. Some scholars argue that a lack of stakeholders' recognition is related to political and institutional hierarchies and that social characteristics, such as class, ethnicity, gender, cultural and institutional exclusion or prior injustice by social oppression, influence the legitimacy of decision-making processes and therefore outcome distribution (Young, 1990; Fraser, 1997). The legitimacy of the process therefore depends on the convener's willingness and ability to include and allow other stakeholders to have some degree of influence on decisions (Yosie and Herbst, 1998; Hemmati, 2002; Vallejo and Hauselmann, 2004). When all recognised actors are brought to the discussion, a decision-making process can be considered inclusive (Parkinson, 2006), thus being *inclusiveness* the second criterion to assess input legitimacy.

Several indicators can help assess the degree of recognition and inclusiveness of a decision-making process. For example, if some actors are recognised but not invited to participate in REDD+ readiness, these could be considered as deliberately excluded (Hemmati, 2002). The inclusiveness of the process depends in turn on its normative characteristics. Namely, the process could be opened to all actors (non-restrictive) or limited to only certain stakeholders groups (restrictive) (Hemmati, 2002). Another indicator of the inclusiveness is actors' motivation to participate (Yosie and Herbst, 1998). Actors may face a variety of motivational difficulties (Parkinson, 2006), such as lack of information on REDD+, lack of time and money to follow the process, disbelief in fairness and benefits from the process, distrust in convener (Warner, 2006), or simply lack of interest, as the issue of deforestation and forest degradation might not be perceived as important in some social, economic and cultural contexts (Ghai and Vivian, 1992; Yosie and Herbst, 1998; Owens and Driffill, 2008; Mathbor, 2008). Thus, certain actors may purposefully stay out or be self-excluded, while some others may decide to quit the process along the way, for example when the process fails to accomplish their expectations, a reaction that is known as stakeholder burnout (Yosie and Herbst, 1998). People should be able to voluntarily decide if they want to participate (Hemmati, 2002; Parkinson, 2006), as well as to develop a sense of ownership of the process (Beisheim and Dingwerth, 2008).

Inclusiveness can be further fostered by targeting social actors less likely to engage on their own, such as women, or economically disadvantaged or unorganised groups. Engagement can be encouraged in passive (e.g., promoting the issues by providing information on it) or active (e.g., providing capacity building and financial support) ways (Yosie and Herbst, 1998; Hemmati, 2002; Fung, 2006; Owens and Driffill, 2008). Therefore it is not only important to include a variety of perspectives in a stakeholder dialogue, but also to include marginal perspectives, i.e., perspectives that are not often heard in the dominant discussion and that could be adhered by some stakeholders (Cuppen, 2012).

The third main criterion to assess input legitimacy in governance processes is *representativeness*, or the balanced representation of various stakeholder groups in terms of social characteristics including race, gender, age, religion, ethnicity, expertise (Hemmati, 2002; Bäckstrand, 2006), as well as affiliation to a given discourse coalition (Dryzek and Niemeyer, 2008). Such balance strongly depends on how participants are selected. For example, a non-restrictive process may suffer from a lack of involvement of traditionally unrepresented groups, as these groups typically face structural barriers to participate (Hemmati, 2002; Boedeltje and Cornips, 2004).

Representativeness should not be equated with *representation*, and the fourth input legitimacy criterion, which relates to the degree to which actors participating in the process represent the social characteristics, interests and views of the larger population they belong to (Young, 2000). Representation is at the basis of representative democracy and it is particularly important in case of larger stakeholders groups, including local communities. Namely, not all members of local communities can be physically present in a given participatory forum, including a parliament. However, they can have their voices heard through representatives (Parkinson, 2006). Representatives should be democratically elected or appointed and they should be accountable to supporters (Hemmati, 2002; Parkinson, 2006). Representatives' personal characteristics, including level of competence, communication skills, positive attitudes toward understanding others, and commitment to the process are also indicators of high levels of decision-making process representation (Boedeltje and Cornips, 2004; Parkinson, 2006; Beisheim and Dingwerth, 2008). Granting the legitimacy to a governance or policy process also depends on the supporters' approval of claims made by representatives in their name (Parkinson 2003 and Saward, 2003 in Parkinson, 2006).

The fifth main criterion to analyse input legitimacy in governance is *transparency*. A multi-stakeholder process is considered transparent if there is open communication among all actors and if all decisions and the reasoning behind them are well documented, easily and timely accessible, and presented in a language understood by all (Hemmati, 2002; Jarvis and Sovacool, 2011). If all actors in the process are assigned clear rights and responsibilities for their decisions and actions, the process could also be considered accountable (Jarvis and Sovacool, 2011), thus being *accountability* the sixth criterion to assess input legitimacy. When all actors act transparently and according to their rights and responsibilities, none of the stakeholder groups, in principle, could dominate the process, which would in turn increase the level of actors' trust and agreement (Beisheim and Dingwerth, 2008; Vatn and Vedeld, 2011).

The seventh criterion to analyse input legitimacy in governance is *meaningful participation*. High level of meaningful participation should involve respect for the principle of fairness or reciprocity, i.e., that different communicative styles, knowledge and experiences are seen as equal and receive the same opportunity to be heard and influence the outcome of the process (Boedeltje and Cornips, 2004; Parkinson, 2006). Such different knowledge systems include scientific research results and local communities' worldviews, for example. Furthermore, it is important that decision-making procedures are accepted and understood by participants themselves (Yosie and Herbst, 1998; Hemmati, 2002).

Before engaging in decision-making, however, the process should guarantee that the eighth and last criterion, *deliberation*, is fulfilled, i.e., all ideas are put forward, discussions are exhausted, and certain levels of understanding between stakeholders are reached (Hemmati, 2002; Fung, 2006; Parkinson, 2006). Deliberation between participants is an important source of legitimacy, provided it satisfies the criterion of fairness and it includes carefully selected competent representatives who are open to others' opinions (Boedeltje and Cornips, 2004).

Table 3.1: Criteria and indicators of input legitimacy

Criteria	Indicators
<i>Recognition</i>	<ul style="list-style-type: none"> • Stakeholders recognised and invited • Political and institutional hierarchies, discrimination based on social characteristics, and social oppression
<i>Inclusiveness</i>	<ul style="list-style-type: none"> • Deliberately excluded actors • Motivational difficulties, self-excluded actors and stakeholder burnout • Passive and active targeting
<i>Representativeness</i>	<ul style="list-style-type: none"> • Balance of different stakeholder groups
<i>Representation</i>	<ul style="list-style-type: none"> • Representatives characteristics and accountability
<i>Transparency</i>	<ul style="list-style-type: none"> • Open feedback communication • Language barriers and access divide
<i>Accountability</i>	<ul style="list-style-type: none"> • Clear roles and responsibilities • Dominant actor • Level of trust
<i>Meaningful participation</i>	<ul style="list-style-type: none"> • Participation level • Decision-making procedures • Fairness and reciprocity
<i>Deliberation</i>	<ul style="list-style-type: none"> • Discussion exhaustion • Level of understanding between stakeholders

Source: own elaboration.

Different actors might value input legitimacy criteria differently depending on their interest in the process (Beisheim and Dingwerth, 2008), and they could have different reasons for granting legitimacy (Huckel, 2005). For these reasons, Parkinson (2006) and Boedeltje and Cornips (2004) claim that there is no perfectly legitimate governance process: legitimacy's criteria cannot be accomplished all at once. Legitimacy is therefore a dynamic state that must constantly be created and recreated among participants (Parkinson, 2006; Boström and Tamm Hallström, 2013). In addition, higher levels of process' legitimacy should not necessarily translate in settling divergent perspectives on what should REDD+ design and implementation be about and how to

address the existing technical, design and procedural issues underpinning the emerging REDD+ governance, i.e., output legitimacy.

3.2.4. Output legitimacy criteria

In the context of REDD+ readiness, output legitimacy refers to the extent to which the general idea of REDD+ is contested or accepted by relevant stakeholders. It also refers to the future success of policies and measures promoted by the national REDD+ framework to target the drivers of deforestation and deliver on reduced deforestation. Thus, output legitimacy does not mean that all participants' preferences are equally translated into the policy and/or action decision resulting from governance processes (Boedeltje and Cornips, 2004). Actors might or might not develop a sense of ownership of the decisions and outputs resulting from the governance process (Hemmati, 2002). Because REDD+ is still in the making in Mexico, this thesis has not particularly studied output legitimacy as such, although indirect insights on the topic are provided in Chapter Six, when different REDD+ discourses and their institutionalisation in national REDD+ policy are analysed.

3.3. Environmental discourses

3.3.1. Discourses, storylines, and discourse coalition

Having shown that the perception of both input and output legitimacy of REDD+ readiness process might be influenced by different personal or organisational reasons, this section now turns to present (environmental) discourse analysis as a useful analytical tool for interrogating different ways in which stakeholders frame REDD+ issues and the justifications they use to support calls for REDD+ legitimacy (Section 3.2) and equity (Section 3.4).

John Dryzek generally defines a discourse as a “shared way of apprehending the world” (1997, p. 9). A seemingly influential scholar, Maarten Hajer (2006), defines more specifically a discourse as an “argumentative structure in documents and other written or spoken statements as well as the practice through which these utterances are made” (p. 66). This author considers a discourse an ensemble “of ideas, concepts and categorizations that are produced, reproduced and transformed in a particular set of practice and through which meaning is given to physical and social realities” (Hajer,

1995, p. 44). Discourses explain how we conceive or speak about certain physical or social phenomena. Through language, we “not simply describe, but create the world” (Hajer, 1993, p. 44). In the environmental realm, discourses frame how we conceive a given environmental problem, e.g., the pollution of a river, deforestation, or global climate change, or a specific set of related policies. Discourses’ meanings may be shared by small or large groups of people, at local, national, or international levels (Adger et al., 2001). Discourses are important because they are related to the process of knowledge formation around a given phenomenon (Nielsen, 2013).

Discourses are constituted by storylines and rhetorical devices, such as metaphors, through which the given problem and its solution are presented (Hajer, 1993). *Storylines* are “a generative sort of narratives that allow actors to draw upon various discursive categories to give meaning to specific physical or social phenomenon” (Hajer, 1995, p. 56). *Metaphors* are two or three key word phrases used in storylines that symbolise the discourse, e.g., the idea of “green deserts”, or the “win-win-win” rhetoric (Dryzek, 1997). A group of actors who share the usage of particular storylines over particular timeframes is known as a *discourse coalition* (Hajer, 1993). The same storylines can be related to more than one discourse (Zannakis, 2009), while the number of discourses in any given classification can vary depending on how these storylines are grouped. In general, the task of discourse analysis is to group storylines into a few and coherent discourses (Nielsen, 2013).

Discourses are embedded in social structures and consequently they speak to and about power. Different discourses favour different understandings of reality, which may privilege the *status quo* of specific actors. For example, discourses might favour certain solutions that correspond to a specific way of understanding a problem, so the problem-solving process results less controversial or costly for powerful actors. In doing so, discourses may constrain the validity of other approaches (Litfin, 1994 in Nielsen, 2013). In fact, for some scholars, governance and policy-making can be understood as “a struggle for discourse hegemony in which actors try to secure support for their definitions of reality” (Hajer, 1995, p. 9; Thompson and Rayner, 1988 in Nielsen, 2013). Hajer (1995) suggests that a discourse becomes *dominant* when it drives people’s thinking and discussions by forcing people with other discourses to use its terminology and its understating of the phenomenon at hand (see also Adger et al., 2001). A

discourse becomes *hegemonic* when it gets *institutionalised*, i.e., it is fully translated into policy decisions (Hajer, 1995).

3.3.2. Environmental discourses

An environmental discourse is a shared way of apprehending how complex environmental problems “interlace with moral questions about human livelihood” and the possible solutions to such problems (Dryzek, 1997, p. 3). It is important to analyse environmental discourses as they might translate into environmental policy (Han, 2013). In the past three decades, many academics have used discourse analysis to study environmental policy and governance (Lifitin, 1994; Szarka, 2004; Arts and Buizer, 2009; Gustafsson, 2012; Ariza-Montobbio and Farrell, 2012; Usher, 2013; Tyrrell and Clark, 2014).

In his seminal work “The politics of Environmental Discourse”, Hajer (1995) demonstrates that discourse analysis can be used to explain how social practices shape language, which in turn, shapes environmental discourses. Language can also be used to analyse power relations within environmental governance and related policy processes. Using the example of acid rain debates in Great Britain and the Netherlands, Hajer identifies the emergence and increasing importance of ecological modernization as a new concept in environmental politics that calls for the modernization of the economy and for the stimulation of technological innovations through environmental policy.

Following Hajer, Dryzek contributes further to our understanding of global environmental discourses in his book "The Politics of the Earth" (2012), where he describes different environmental discourses according to overarching categories. He distinguishes between two dimensions: one discerning whether a given discourse deviates or not from the pursuit of economic growth as a means of securing progress and sustainability (reformist versus radical discourses), and another one considering whether the discourse aims to redefine the prevalent social, economic and political framework (prosaic versus imaginative discourses). The combination of the above (reformist vs. radical / prosaic vs. imaginative) derives into four main discourse categories: *problem solving*, *sustainability*, *limits and survival*, and *green radicalism*. These categories in turn, are further divided into different environmental discourses, as described below (Table 3.2).

Table 3.2: Dryzek’s (2012) environmental discourse categories

Environmental discourse dimensions	Reformists		Radical	
Prosaic	Problem solving		Limits and survival	
	<i>Administrative rationalism</i>	Expert driven reforms	<i>Survivalism</i>	The Earth’s limited resource and sink capacity
	<i>Democratic pragmatism</i>	People driven reforms		
	<i>Economic rationalism</i>	Market driven reforms	<i>The Promethean or Industrialism</i>	Indefinite economy grow
Imaginative	Sustainability		Green Radicalism	
	<i>Sustainable development</i>	Environmentally benign economic growth	<i>Green consciousness</i>	Changes in individual behaviour
	<i>Ecological modernization</i>	Technological change and environmentally friendly products and services	<i>Green politics</i>	Change the role of institutions in public policy

Source: Dryzek (2012).

The first discourse category, *problem solving*, includes reformists and prosaic discourses, that is, discourses aiming to reform the prevalent environmental agenda. However, as discourses differ from one another in who should lead and control environmental reforms, three subcategories are recognized: advocates of *administrative rationalism* think experts should be in charge of environmental reforms; advocates of *democratic pragmatism* believe people should be in charge of reforms; and advocates of *economic rationalism* think that reforms should be undertaken by the private sector (Dryzek, 2012).

The second discourse category, *sustainability*, includes discourses that are reformist and imaginative, aiming at promoting sustainability more holistically. Within this category

the *sustainable development* discourse calls for re-examining the overconsumption of scarce resources to make economic growth environmentally benign, while the *ecological modernization* discourse calls for an environmentally sound political economy that promotes technological change and aims to persuade business to invest in environmentally friendly products and services (Dryzek, 2012).

The third discourse category, *limits and survivalism*, includes discourses that are radical and prosaic. This category involves two somewhat contradictory discursive approaches. *Survivalism* denounces the pursuit of infinite economic growth given the Earth's limited resource and sink capacity and advocates for challenging the business-driven *status quo* by increasing the role of the State and scientific evidence in market development and policy. In contrast, the *Promethean* discourse, or *industrialism*, sustains that the economy can grow infinitely based on the ability of technology to overcome environmental problems, and that policy should facilitate the conditions for continuous growth (Dryzek, 2012).

Finally, the fourth discourse category, *green radicalism*, includes radical and imaginative discourses that do not dissociate humans from nature. The *green consciousness* discourse calls for changes in individual behaviour to minimize impacts on nature, while the *green politics* discourse seeks to change the role of institutions in public policy in order to foster a more balanced relation between humans and the rest of the biosphere (Dryzek, 2012).

Inspired by Dryzek, other academics have carved up their theories regarding global environmental discourses. For example, in their book "Paths to a Green World: The Political Economy of the Global Environment," Clapp and Dauvergne (2005) distinguish four environmental discourses based on the relation between the global environmental crisis and globalization. The first discourse, so-called *market-liberal*, conceives economic growth to be essential for human welfare and sustainable development. It understands globalization as a positive force and considers that environmental problems arise from poverty, market failures and poor government policies. Advocates of this discourse believe in humans' ability to cope with environmental problems through scientific and technological discoveries. The *institutionalist* discourse considers that strong institutions and effective laws are central for the protection of the environment and human wellbeing. Advocates of this discourse

think that a lack of inter-state cooperation drives environmental problems and promote global agreements in a process of controlled globalization. The *bio-environmentalism* discourse considers environmental sustainability incompatible with economic and population growth because natural resources and the Earth's sink capacity are limited. Changes in human behaviour are seen as the sole solution to environmental problems. And the *social green discourse* is characterized by portraying environment and society as two inseparable domains. Advocates of the social green discourse think that globalization is further accelerating social and environmental injustice and, as bio-environmentalists, point to the physical limits of growth, although they underplay the role of overpopulation in environmental degradation. Social greens advocate for changes in the current governance of the global economic system and for respect of indigenous knowledge and cultural diversity (Clapp and Dauvergne, 2005).

Given the focus of this thesis, in the following section I turn to explore in more detail the literature analysing deforestation, forest governance and REDD+ discourses. This literature will be later used to identify the main REDD+ storylines in Mexico, to define discourses and discourse coalitions, and to situate and discuss such discourses in the context of international forest governance. I contend that the REDD+ readiness phase is a suitable process during which it is possible to observe distinct REDD+ storylines and discourses "in the making", since different actors bring into the correspondent policy process their priorities regarding, for example, the extent to which the REDD+ national plan should address issues such as climate change mitigation, biodiversity protection, and poverty reduction; or the extent to which different social actors should participate in the design and future implementation of the programme. In the readiness phase, these emerging discourses compete to determine the future of REDD+ design and implementation (Di Gregorio et al., 2014).

3.3.3. Discourses on deforestation, forest governance and REDD+

People understand and conceive a forest ecosystem in many different ways. For example, a forest can be considered a home and source of livelihood, a carbon sink, or a biodiversity hotspot. Actors can also diverge as regards the underlying causes of deforestation. For example, Adger et al. (2001) argue that there are two main discourses

regarding global deforestation drivers: *managerial* and *populist*²⁸. The managerial discourse is dominant in international and national policy and considers over-population and agricultural conversion in developing countries, particularly slash and burn agriculture, as the main causes of deforestation. In contrast, the populist discourse represents small local producers as victims rather than as agents of deforestation, while defending that the real culprits of deforestation are logging and other companies from the global North who, driven by consumption and demand patterns, pursue the exploitation of the global South's natural resources (Adger et al., 2001). These two discourses have been identified in national forest governance discussions in China (Zackey, 2006), Madagascar (Klein, 2006), and India (Nagothu, 2001), for example.

Actors can also differ in their views regarding how forests should be governed and which policies and/or actions should be implemented to achieve governance goals. Thus, some actors advocate for improving the welfare of forest people, others for biodiversity conservation, and still others promote the role of forests in climate change mitigation (Nielsen, 2013). Since the early 1980s, when deforestation was officially recognised as a global environmental problem (Humphreys, 2006), many international and national efforts have been developed to halt and revert deforestation focusing on the aforementioned governance goals and promoting different mechanisms to reach those goals (e.g., economic incentives). Such efforts include the creation of protected areas, sustainable forest management, community-based conservation, integrated conservation and development projects, forest product certification, and payments for ecosystem services, including carbon forestry activities (Wunder, 2005; Humphreys, 2006)²⁹. As noted in Chapters One and Two, the UNFCCC REDD+ framework represents yet another of these approaches designed to protect forests to reduce emissions and achieve climate change mitigation, biodiversity conservation and poverty alleviation (IPCC, 2007; UNFCCC, 2007). The global idea of REDD+ does not constitute a unified discourse, but rather a range of complementing and/or competing discourses that have been influenced by global environmental discourses.

In the late 2000s, discourse analysis became increasingly popular among forests governance scholars. This resulted in many different authors using a variety of

²⁸ The same discourses are identified for biodiversity, desertification and climate change issue (see Adger et al., 2001).

²⁹ See Section 2.3 for the explanation of some of these forest conservation approaches.

approaches with respect to the scale, assumptions and the foci of studies (Leipold, 2014). I have selected the REDD+ discourse classifications by Hiraldo and Tanner (2011) and Nielsen and Thomson (2013), as well as the Bäckstrand and Lövbrand's (2006) classification of discourses in carbon forestry CDM projects, given that such mechanism precedes REDD+ in its attempt to address deforestation, poverty and climate change mitigation in a cost-effective manner (Boyd, 2009). I have grouped them below in four REDD+ archetypes or meta-discourses (Arts et al., 2010), based on their shared principles about forests, deforestation and REDD+: i) sustainable development; ii) governance; iii) social justice; and iv) biodiversity conservation.

The meta-discourse I call “REDD+ and sustainable development” includes *ecological modernisation* (Bäckstrand and Lövbrand, 2006), *market-liberal* (Hiraldo and Tanner, 2011) and *individualists* narratives (Nielsen and Thomson, 2013). These three narratives share the idea that forests are carbon stocks that can be managed to mitigate climate change at low cost (Bäckstrand and Lövbrand, 2006). For these three narratives, “market failures” are considered the root cause of deforestation and they thus advocate for the correction of such failures, for example through carbon trading (Hiraldo and Tanner, 2011). REDD+ can thus become a cost-effective climate mitigation option because markets are the most efficient and fairest benefits’ distributors (Hiraldo and Tanner, 2011; Nielsen and Thomson, 2013). The representatives of these discourses consider the private sector of utmost importance in REDD+ (Nielsen and Thomson, 2013). The *ecological modernisation* discourse has a strong and weak variation, depending on whether it calls or not for the transformation of existing economic and power relations (Bäckstrand and Lövbrand, 2006).

The meta-discourse of “REDD+ governance” encompasses *green governmentality* (Bäckstrand and Lövbrand, 2006), *institutionalists* (Hiraldo and Tanner, 2011), and *hierarchical* (Nielsen and Thomson, 2013) discourses. The representatives of these discourses also see forests as sinks and reservoirs of carbon (Bäckstrand and Lövbrand, 2006) but argue that global deforestation is caused by lack of policy planning (Nielsen and Thomson, 2013). Therefore, advocates of this meta-discourse promote strong governments and institutions and better intergovernmental cooperation grounded on scientific expertise to halt deforestation, as well as the improvement of market conditions for forest products (Hiraldo and Tanner, 2011; Nielsen and Thomson, 2013). In their view, REDD+ can effectively halt deforestation and provide social welfare in

addition to climate change mitigation, i.e., be a triple win mechanism. Representatives of these discourses consider that both, funds and markets for REDD+, should be mobilised for such purposes (Nielsen and Thomson, 2013). The reflexive version of *green governmentality* recognizes, to some extent, the importance of democratic decision-making and of local knowledge as an alternative to scientific knowledge (Bäckstrand and Lövbrand, 2006).

The meta-discourse of “REDD+ and social justice” includes *civic environmentalism* (Bäckstrand and Lövbrand, 2006), *social green* (Hiraldo and Tanner, 2011), and *egalitarian* discourses (Nielsen and Thomson, 2013). The actors supporting these three discourses consider forests as sources of biological diversity, livelihood and cultural values (Bäckstrand and Lövbrand, 2006). The unsustainable patterns of consumption in the North are identified as the key driver of global deforestation (Nielsen and Thomson, 2013). Additionally, forest communities are considered key forest stewards (Hiraldo and Tanner, 2011). The three discourses in this meta-narrative acknowledge that REDD+ involves trade-offs between economic, ecological, and social outcomes that could only be prevented by including environmental and social safeguards. However, some advocates of social green and egalitarian discourses also consider REDD+ as a misleading solution to climate mitigation as it diverts the climate change agenda away from significantly reducing emissions elsewhere (Nielsen and Thomson, 2013; Hiraldo and Tanner, 2011). *Civic environmentalism* has two variations: its reformist variation supports increased civil society participation for cooperation with state and markets, to guarantee that market-based mechanisms generate incentives to halt environmental degradation and assure an equitable distribution of resources; its radical variation highlights that uneven power relations underlie environmental problems and calls for political transformational change (Bäckstrand and Lövbrand, 2006).

The meta-discourse of “REDD+ and biodiversity conservation” only encompasses the *bio-environmentalist* narrative (Hiraldo and Tanner, 2011). *Bio-environmentalists* consider forests an important source of biodiversity and other ecosystem services and call for degrowth and population control to stop forests and biodiversity loss. Some of the representatives of this discourse also support the use of carbon markets in protecting biodiversity (Hiraldo and Tanner, 2011). Nielsen and Thomson (2013) also identify a narrative that they label as the *fatalists*, which cannot be classified in any of the

previous four archetypes. Its advocates consider that nothing can be done to stop deforestation and, therefore, chose to stay out of the REDD+ debate.

3.4. Equity in environmental governance

3.4.1. Framing equity

As noted earlier, equity can be defined as a fair share of the relevant costs and benefits of a given process, as well as the equal opportunity of participating in decision-making processes based on actors' rights and entitlements (Borrini-Feyerabend, 2008). Equity is determined by the specific situation and may change over time; it is context-specific. For example, what is considered equitable might depend on social contexts and cultural norms and values, or it can be decided in stakeholders' negotiations (Mahanty et al., 2006; Walzer, 1983 in Corbera, 2005). Analysis and evaluations of equity conditions, processes and outcomes in the context of different policies and projects implementation could help plan for future interventions (McDermott et al., 2011). The latter can, in turn, have different explicit or implicit equity goals ranging from *doing no harm*, to taking proactive steps to *increase* or *maximise* equity, to *not taking equity into consideration* (McDermott and Schreckenber, 2009; McDermott et al., 2011).

Equity can be analysed from i) a geographical perspective, including equity considerations at different scales, such as *global* (among the global South and the global North), *national*, *community*, *household*, and *individual*; ii) an economic perspective (across actors in a value chain); and iii) a temporal perspective, including *intra- and inter- generational* scales (within one generation, and among present and future generations) (McDermott et al., 2011). The scholarly literature also distinguishes between three different analytical domains to understand fairness in a given policy or project: procedural, contextual and distributional equity.

Procedural equity, or equity in process, refers to the extent to which participants and stakeholders accept the way in which the policy or project resources have been discussed and allocated through decision-making, and the eventual disputes negotiated and resolved (Brown and Corbera, 2003). Procedural equity overlaps with the concept of input legitimacy (as defined in Section 3.2) and encompasses stakeholders' recognition, inclusion and participation in negotiation, and fairness in distribution of

power among those stakeholders in political processes (Fraser, 1997; Paavola, 2003; Brown and Corbera, 2003; McDermott et al., 2013).

Contextual equity, or equity in access, takes into account the pre-existing social and political conditions, including power, capabilities and access, under which people engage in decision-making and benefit-sharing procedures (Brown and Corbera, 2003; Di Gregorio et al., 2013). The levels of power, capabilities and access are usually mediated by person's social characteristics such a gender, race, class, ethnicity, land endowment, or level of education, among others (Pini and Leach, 2011).

Distributive equity, or equity in outcome, refers to the sharing of policy outcomes and impacts (including costs, risks and benefits) resulting from policy implementation across different stakeholders (Brown and Corbera, 2003; Mahanty et al., 2009; Luttrell et al., 2013; McDermott et al., 2013). Both procedural and contextual equity are preconditions for achieving distributive equity (McDermott et al., 2012).

Equity can thus be understood as a complex, multifaceted and contentious concept, potentially interpreted in different ways by different actors (Skutsch, 2013; Sen, 2009 in Di Gregorio et al., 2013). These actors can promote distinct normative principles of social justice to rationalise calls for equity, which are then likely to result in different policy solutions (Sen, 2009 in Di Gregorio et al., 2013). These principles can include: i) the “*merit-based*” principle, according to which rewards should be proportional to individual contribution; ii) the “*needs-based*” principle, according to which rewards should be proportional to individual needs based on socio-economic criteria, while ensuring that the disadvantaged are favoured; iii) the “*egalitarian*” principle, according to which there should be equal distribution to all participants, also known as equality; and iv) the “*libertarian*” principle, according to which distribution should be done according to property rights (Mohammed, 2011; McDermott et al., 2011).

Although equity and justice are concepts that have been frequently and often interchangeably used to evaluate the socio-political dimensions of environmental governance, I use the former to explore distributional aspects of REDD+ throughout the thesis. I acknowledge that justice is a broader concept than equity, encompassing distribution, participation and recognition dimensions (Schlosberg, 2004), but I already cover the analysis of the second dimension -and to some extent also of the third- through the lens of legitimacy. Furthermore, it has been noted that whereas evaluations

of distributive justice in REDD+ can be a priori based on the assumption that participation in REDD+ is beneficial to people, people might experience more justice if they do not participate (Sikor, 2013). As a result, equity has been more commonly used than justice in academic literature and political negotiations about REDD+ (e.g., Corbera et al., 2007; Pascual et al., 2010; McDermott et al., 2013; Gebara, 2013; Poudel et al., 2015; Yang et al., 2015), which further justifies my choice and enables me to contribute to this body of evolving literature.

3.4.2. Equity in REDD+

As an incentive-based international climate change mitigation mechanism, REDD+ has the primary objective of reducing carbon emissions at the lowest possible cost, so equity has not been an integral part of REDD+ original design (Ribot and Larson, 2012; Di Gregorio et al., 2013). However, with an increasing attention put on the social outcomes of REDD+ in host countries engaged in the readiness processes and future implementation, equity has become a central issue in REDD+ design and implementation. Such interest has been further propelled as it has become evident that equity issues might affect REDD+ effectiveness (Peskett and Brodnig, 2011; Di Gregorio et al., 2013). Furthermore, the presumed potential for REDD+ to result in equitable procedures and outcomes has been challenged on the grounds of the North-South political economy divide and climate justice (McDermott et al., 2013). On the one hand, REDD+ has been criticized for further exacerbating inequities between developed and developing countries. REDD+, it has been argued, allows developed countries to offset their emissions through carbon markets despite their historical responsibility for causing climate change (Okereke and Dooley, 2010; Peskett and Brodnig, 2011; Cabello and Gilbertson, 2011). On the other hand, the fact that developing countries are demanding financial help from developed countries to mitigate deforestation could be interpreted as an opportunity for achieving global climate equity (Di Gregorio et al., 2013).

The three different analytical domains of equity presented above (procedural, contextual and distributional) can be applied to evaluate REDD+. *Procedural equity in REDD+* includes equal participation of all relevant stakeholders at international, national and local levels in REDD+ readiness and implementation. Procedural equity in REDD+ also includes notions of national sovereignty over the development of policies and

programmes contained in the national REDD+ strategy and its implementation. *Contextual equity in REDD+* includes issues of recognition of tenure and other rights, as well as the recognition of knowledge and institutions of indigenous and local communities, and equal rights regardless of social conditions to participate and benefit from REDD+. *Distributive equity in REDD+* includes issues of fairness of benefit-sharing mechanism across REDD+ stakeholders, and enhancement of social and environmental benefits (Di Gregorio et al., 2013). In other words, distributive equity in REDD+ should guarantee that there is no disparity in benefit-sharing across stakeholders.

Given the focus of Chapter Seven, which explores distributional equity issues in a hypothetical REDD+ implementation context, the next section explores in more detail the literature analysing equity in REDD+ benefit-sharing. I acknowledge that equity in benefit-sharing depends on procedural equity, namely on who participates in decisions about who should benefit and how (Di Gregorio et al., 2013; Gebara, 2013). The level of procedural equity in REDD+ readiness is addressed in Chapter Five, using input legitimacy as an analytical lens -and as introduced in Section 3.2.1. In addition, Chapter Six pays attention to the justification that actors use in their discourses (see Section 3.3) to promote legitimacy and equity in REDD+ decision-making and benefit-sharing. Contextual equity is a precondition for both procedural and distributional equity and therefore cuts across the three empirical chapters.

3.4.3. Equity in REDD+ benefit-sharing

REDD+ *benefit-sharing* refers to an act of sharing REDD+ benefits across a range of primary and secondary stakeholders (Mwayafu and Kimbowa, 2011). Over time, REDD+ benefit-sharing has evolved from being focused only on the distribution of (potential) REDD+ benefits to encompassing requirements for social justice related to procedural and distributional equity (Pham et al., 2013; Wynberg and Hauck, 2014). In turn, REDD+ *benefit-sharing mechanisms* refer to a variety of institutional means, governance structures and instruments created through the policy approaches and measures that should be developed by each REDD+ country to ensure the distribution of REDD+ benefits at both national and local levels (UNFCCC, 2007; Eliasch, 2008; Peskett et al., 2008; Luttrell et al., 2013; Gebara, 2013; Pham et al., 2013). Deciding on benefit-sharing mechanisms has become a central issue in REDD+ design, since such

mechanisms might determine who may benefit or bear the costs of any potential actions to reduce emissions from deforestation in host countries (Peskest, 2011; Luttrell et al., 2013).

There are several issues that need to be considered when discussing benefit-sharing. For example, benefits from REDD+ can be shared vertically, across geographical scales (e.g., between national and local governments), or horizontally, within the same geographical scale (e.g., within and across communities and households) (Lindhjem et al., 2010; UNREDD, 2011; Pham et al., 2013). Furthermore, REDD+ benefits could be monetary or non-monetary, as well as direct or indirect (Costenbader, 2011). Monetary benefits include direct financial gains such as cash carbon-revenues, as well as indirect benefits, such as employment. In turn, direct non-monetary benefits include infrastructure, food, and clothing, as well as benefits that accrue from increased availability of forest products and ecosystem services, such as water and soil quality protection, biodiversity and local climate regulation (Luttrell et al., 2013). Indirect non-monetary benefits from REDD+ refer to aspects such as improved forest governance, capacity building, training and skills, alternative livelihoods and income-earning opportunities, clarification of property rights and law enforcement (Costenbader, 2011; Luttrell et al., 2013). Moreover, both direct and indirect, monetary and non-monetary benefits could be *individual*- directed to each REDD+ participant separately, *collective*-disbursed to communal funds (McDermott and Schreckenber, 2009), or *hybrid*- a combination of the previous two (Foli and Dumenu, 2013).

Both monetary and non-monetary benefits are often referred to as *incentives*. Benefits disbursed to cover foregone revenues are known as *compensations* (Peskest et al., 2008; Gebara, 2010), while *REDD+ rents* would be the net benefits derived (Peskest, 2011). Gebara (2010) also recognises another type of benefits, known as *interventions*, which are the specific policies and measures aiming to regularise land tenure and/or to create the necessary institutional arrangements and monitoring systems and similar legal, administrative and technical benefits to guarantee REDD+ effectiveness.

It is important to differentiate between *gross* and *net* REDD+ benefits, where net benefits represent gross benefits minus the relevant costs accruing from REDD+ implementation. These costs include i) *transaction* and *implementation costs* or expenses of setting up and implementing REDD+ policies and projects; and ii)

opportunity costs or foregone agricultural and timber revenues because of implementation of REDD+ actions (Pham et al., 2013; Luttrell et al., 2013).

All types of REDD+ benefits can, in principle, be delivered through *upfront* benefit-sharing mechanisms to cover initial investments and opportunity costs and induce people to forgo forest disruptive land-use activities and enable REDD+ implementation (Frost and Bond, 2006 in Mohammed, 2011; Hite, 2015). However, they can also be *dispensed over time* to guarantee the continuation of actions (Gebara, 2010; Pham et al., 2013), or disbursed *ex-post* after results have been achieved (Combes-Motel et al., 2009). It has been argued that a combination of these three approaches might be more effective in keeping participants involved in long-term REDD+ activities (Hite, 2015).

The development of benefit-sharing mechanisms falls within the readiness phase of REDD+, while the actual disbursement of benefits, and particularly of results-based payments, should occur in the implementation and performance phases. However, some REDD+ benefits, such as clarifying land tenure rights, might be delivered during the readiness phase (Hite, 2015).

REDD+ benefit-sharing can also be based on *inputs* (e.g., forest management tasks performed or pledged on the assumption that they will lead to the desired results, or amount of labour or financial investments spent or the land size dedicated to REDD+ activities); *outputs* (e.g., rewarding actual results such as quantified emissions reduction or hectares of forest conserved); be proportional to *opportunity costs* (Mohammed, 2011; McDermott et al., 2011; Skutsch et al., 2011; Hite, 2015); or be a *hybrid* approach combining the previous three approaches (Hite, 2015).

Due to the number and complexity of the above-mentioned issues, the design of benefit-sharing mechanisms has been identified as one of the main challenges facing REDD+ implementation (Ghazoul et al., 2010; Costenbader, 2011; Angelsen et al., 2012). This explains why many developing countries emphasise designing effective, efficient and equitable mechanisms for delivering REDD+ benefits as an important output of the readiness phase (Pham et al., 2012; Di Gregorio et al., 2013; Hou, 2013).

REDD+ benefit-sharing mechanisms will be considered effective if they ensure that those who contributed to emission reductions or carbon sequestration, receive benefits and are properly incentivised to continue doing so (Davis et al., 2012 in Hou, 2013).

They will be considered equitable if the way in which such benefits are shared is generally perceived as fair by a large majority of stakeholders (Davis et al., 2012 in Hou, 2013). Finally, REDD+ benefit-sharing mechanisms will be considered efficient if each unit of input results in the maximum benefits and if those benefits are delivered in a reasonable time frame (Davis et al., 2012 in Hou, 2013).

Trade-offs between these three objectives might be, however, unavoidable. For example, in order to achieve effectiveness, REDD+ activities in some countries might reward the large and wealthy emitters of carbon for reducing their illegal deforestation and forest degradation behaviour. This would result in increased inequity, as REDD+ would be perceived as unfair by actors who had been conserving forests in the past, thus undermining the framework's legitimacy (Sunderlin et al., 2008, in Griffiths, 2008; Bond et al., 2009; Gebara, 2010; Luttrell et al., 2013). Hou (2013) argues that an equitable approach to REDD+ might ensure higher effectiveness and efficiency if it reduces the transaction costs and risks associated with REDD+ investments.

Luttrell et al. (2013) suggest the existence of six potential main benefit-sharing rationales: i) the "*emission reductions*" rationale, according to which benefits should go to actors achieving emission reductions; ii) the "*stewardship*" rationale, according to which benefits should be assigned to low-emitting forest stewards; iii) the "*cost compensation*" rationale, according to which benefits should go to those incurring implementation, transaction, and opportunity costs; iv) the "*facilitation*" rationale, according to which benefits should go to effective facilitators of REDD+ implementation; v) the "*pro-poor*" rationale, according to which benefits should go to the poorest; and vi) the "*legal rights*" or "*carbon rights*" rationale, according to which benefits should go to actors with legal rights (both statutory and customary), including property rights over the sequestered carbon, as well as the right to benefit from selling carbon credits (which might be different from the former).

The emission reduction, stewardship, facilitation and cost compensation rationales fall under the "merit-based" principles of distributive justice, as rewards are proportional to individual contributions in the form of 1) quantified emission reductions, 2) land dedicated to conservation, and 3) financial investments or cost incurred or foregone revenues, respectively (Mohammed, 2011; McDermott et al., 2011; Luttrell et al., 2013). The stewardship rationale is also partly based on the "egalitarian" and "need"

principles, as it promotes an equal distribution of benefits among actors, regardless of the level of service provision, and aims at rewarding marginalised forest groups (Luttrell et al., 2013) (Table 3.3).

Table 3.3: Relations between principles of distributive justice, benefit-sharing rationales and benefit-sharing approaches

Distributive justice principles (Mohammed, 2011 and McDermott et al., 2011)	Benefit-sharing rationales (Luttrell et al., 2013)	Benefit-sharing approaches (Skutsch et al., 2011)
Merit-based	Emission reductions	Outputs-based
	Stewardship	Input-based
	Facilitation	
	Cost compensation	Based on opportunity costs
Needs-based	Pro-poor, Stewardship	
Egalitarian	Stewardship	
Libertarian	Legal rights	

Source: own elaboration from the sources indicated in the Table.

It has been argued that the cost-compensation rationale has been promoted in most REDD+ pilot projects to date, with benefit distribution being based on the compensation of opportunity costs (Peskest, 2011). However, according to Luttrell et al. (2013), the legal rights rationale, informed by a “libertarian” understanding of justice, has been prevalent in national REDD+ debates on benefit-sharing. This rationale would imply that poor forest stewards without legally recognised land rights could not claim REDD+ benefits in countries where forests are owned by governments and private actors, such as Brazil and Indonesia. The “libertarian” principle, however, has a different connotation in countries where local communities hold certain rights over land and forests, such as Mexico and Tanzania (McDermott and Schreckenber, 2009), where forest stewards could claim rights over forest carbon and get entitled to related performance-based REDD+ benefits.

The advocates of “pro-poor” benefit-sharing in REDD+ consider that the latter should provide pathways out of poverty through additional income, land tenure security and rights, and livelihood improvements, as well as by reducing the pressure for halting

deforestation (Peskest et al., 2008; Wollenberg and Springate-Baginski, 2009; Skutsch et al., 2011; Evans et al., 2014). Otherwise, if REDD+ covers only the opportunity costs of foregone revenues from activities that include deforestation such as logging or agriculture, it would end up as “poverty reproducer” (Wollenberg and Springate-Baginski, 2009 in Evans et al., 2014). In the same vein, Peskest et al. (2008) suggest that context-specific links between poverty and deforestation must be considered when designing and implementing REDD+. McDermott et al. (2011), however, argue that poverty alleviation and advancing equity should be seen as two distinct goals as -under certain circumstances- the same intervention could exacerbate inequities while lowering the overall poverty level. Poor and marginalised community members must first be recognized so that interventions can avoid harming their interests and target them as beneficiaries (McDermott and Schreckenber, 2009).

Overall, I argue that selecting the rationale for national REDD+ benefit-sharing might strongly depend on procedural equity, i.e., whether the rules for benefit-sharing are defined by stakeholders in a meaningful and inclusive decision-making process, or whether they are defined by stakeholders using some externally derived and predetermined criteria (Mohammed, 2011). If all affected actors have access and count with adequate resources to participate in fair decision-making processes, equitable benefit-sharing mechanisms could be in principle expected (McDermott et al., 2011; Luttrell et al., 2013). Nonetheless, I also acknowledge that this dual realisation might not be possible unless *transformative strategies* to tackle contextual equity conditions are adopted and sought by policy-makers and NGOs, including, but not exclusively, the recognition of informal and customary rights (Di Gregorio et al., 2013). The adoption (or not) of these strategies and the potential tensions between procedural, contextual and distributive equity in REDD+ are addressed in Chapters Five and Six, and discussed in Chapter Eight.

3.4.4. Determinants of equity in REDD+ benefit-sharing across scales

Designated participants and particularly affected stakeholders at all geographical levels (from global, national, community, household, to individual) should have a voice in determining what is fair with regards to any external intervention affecting their lives, such as REDD+ (McDermott et al., 2013). Determinants of equity in REDD+ benefit-sharing therefore include a set of technical and procedural issues that might impact upon

the design and resulting fairness of benefit-sharing mechanisms from the international to the local level (Table 3.4). Some determinants are specific to one geographical scale, while some others cut across scales. REDD+ benefit-sharing mechanisms and the extent to which such mechanisms involve equitable procedures and result in fair outcomes depend on the set of rules defined by UNFCCC international negotiations, by country-specific REDD+ strategies (Parker, 2009; Peskett et al., 2008; Peskett and Brodnig, 2011), and by decision-making institutions at the local level (Gebara, 2013).

The question of who should benefit from REDD+ at the international level has been inextricably linked with REDD+ activities' *scope* (Peskett and Brodnig, 2011; Skutsch, 2013). A critique to the original scope of REDD+, which included only avoided deforestation as an eligible activity, resulted -as noted in Chapter Two, Section 2.5- in the subsequent inclusion of sustainable management of forests, forest carbon stocks enhancement, and forest conservation activities. This made a greater number of countries eligible to participate in REDD+ (Peskett and Brodnig, 2011; Skutsch, 2013). As noted in Section 2.5.2, REDD+ implementation might encompass a variety of policy, programmes and projects related to land and forest management, such as programmes based on command and control (e.g., enlargement of protected area), PES (Pagiola, 2004; Bond et al., 2009), or community-based conservation logic (Guthiga and Mburu, 2006), that could prioritise certain individuals and social groups over others, therefore influencing equity in REDD+ benefit-sharing (Corbera et al., 2007; Phelps et al., 2010; Bolin and Tassa, 2012; Mustalahti et al., 2012; Peskett and Brodnig, 2011; Milne and Adams, 2012; Skutsch, 2013).

Table 3.4: Determinants of equity in REDD+ benefit-sharing across scales

Determinant	Impact on equity	Potential options identified
Scope of eligible activities	Depends on this determinant whether some countries and regions with land-uses other than forestry, and individuals other than forest owners, will be eligible and allowed to participate in REDD+	<ul style="list-style-type: none"> • Only forestry activities • Other land uses (e.g., agriculture, agroforestry, fallow management, silvopastoral activities)
Design of policy, programmes and projects	Depends on this determinant which individuals and social groups will be prioritised over the others to	<ul style="list-style-type: none"> • State-dominated command and control approach, • Community-based conservation

	participate in and benefit from REDD+	<p>approach,</p> <ul style="list-style-type: none"> • Private forest concession, • State/Private PES schemes
Sources of funding	Depends on this determinant whether REDD+ benefits-sharing will be organised on input or output base, resulting in that some actors being rewarded more than the others and based on their performance or characteristics	<ul style="list-style-type: none"> • Markets, • Public and private funds, • Mixture of previous two
Carbon rights	Depends on this determinant who will be entitled to any potential economic benefits from REDD+	<ul style="list-style-type: none"> • Public, private, or common property, • Ownership of all or part of forest carbon components (stocks and capacities)
Scale of activities implementation	Depends on this determinant how much REDD+ benefits will actors at each of the scales receive and it is related to the issue of collective responsibility	<ul style="list-style-type: none"> • National, • Sub-national, • Nested approach, • Landscape/Project approach
Targeting	Depends on this determinant whether one community or individual, based on its characteristic or location, will be eligible to and benefits from REDD+ or not	<ul style="list-style-type: none"> • Land endowment, location, land tenure, livelihood strategies, and level of forest dependence, age, gender, race, and ethnicity
Type of benefits	Depends on this determinant which groups within the community (only participants or non-participants also) will benefit from REDD+	<ul style="list-style-type: none"> • Monetary/Non-monetary, • Direct/Indirect, • Collective/Individual

Source: own elaboration from the sources indicated in the section.

The sources of REDD+ funding including markets, public and private funds, or a mixture of them, will also have an impact on the distribution of benefits (Luttrell et al., 2013). Market finance is more likely to reward actors who reduce emissions directly based on their performance (Luttrell et al., 2013). However, output-based payments

require greater upfront investments, which might limit the participation of the poorest actors (Lee and Mahanty, 2008 in Skutsch et al., 2011). Fund-based finance, in turn, could allow a more flexible approach to benefit-sharing based on input-based payments (Luttrell et al., 2013), demonstrating a greater potential to enhance equity in REDD+ benefit-sharing (Brown and Peskett, 2008; Peskett, 2011; Skutsch et al., 2011).

At the national level, the main debate about benefit-sharing in REDD+ revolves around how benefits coming from the international level can or should be distributed between national governments and other actors through “the REDD+ value chain” (Peskett and Brodnig, 2011). Clear *carbon rights* should ensure that national governments do not pocket REDD+ funds in detriment of local people or other stakeholders (Peskett, 2011; Corbera et al., 2011; Suzuki, 2011; Lawlor et al., 2009; Cotula and Mayers, 2009 in Skutsch, 2012). According to some authors, carbon rights, including the right to exploit the financial benefits of forest carbon, may be determined based on existing property rights over forests. Nevertheless, the relation between forests and resource tenure is sometimes not straightforward and could be difficult to identify who is entitled to benefit from REDD+ (Corbera et al., 2007).

To further complicate the issue, property rights embrace a “bundle of rights”, ranging from rights of access and usufruct rights, to right to manage and earn income from resources, to rights to transfer acquired rights to other parties (Ostrom and Schlager, 1996 in Corbera et al., 2011; McKean, 2000 and Segal and Whinston, 2013 in Luttrell et al., 2013). The actors might hold one, several, or the whole “bundles of rights” (Ostrom and Schlager, 1996 in Corbera et al., 2011). The implication of this complexity is that forest stewards, even if they legally own forest, might not necessarily own the *carbon sequestered* and *stored* in forests’ soil, trees or below ground biomass (Corbera et al., 2007), nor the *carbon sequestration potential*, i.e., the rights to promote forest management that enhance emissions reduction or carbon removals (Corbera et al., 2007; Takacs, 2009; Peskett, 2011). Even when land and forests rights are initially clear, the *nationalisation* of carbon rights could still occur in some countries³⁰ (Peskett and Brodnig, 2011).

³⁰ Nationalisation means that the government retains the rights to all financial benefits from REDD+. Some countries, such as Tanzania, have implicitly stated that carbon rights will lie with the state but that benefit-sharing systems will be devised to ensure that resources are transferred to those involved in REDD+ implementation (Peskett and Brodnig, 2011).

The scale at which REDD+ activities are designed and implemented, national or sub-national, might also have a direct impact on the distribution of benefits. In principle, the national approach could guarantee a more equitable distribution through a government-led centralised benefit-sharing system but it could also entail a higher risk of elite capture at higher administrative levels (Peskest, 2011). The sub-national approach, in turn, could allow for wider participation and for more REDD+ benefits to trickle down to local stakeholders, particularly through specific projects, but might also be subject to corruption (Angelsen et al., 2008; Skutsch, 2013). The nested approach to REDD+ benefit-sharing combines a national and a project approach (IUCN, 2009). If decision-making processes at different levels of governance are independent yet overlapping, REDD+ approach can be considered as polycentric (Jagger et al., 2014). It is argued that a polycentric approach to REDD+ would help balancing the interests of multiple claimants for financial incentives (Nagendra and Ostrom, 2010) and is likely to generate fairer REDD+ outcomes (Duchelle et al., 2013).

It is worth noting that the participation of the typically excluded social sectors, communities, groups, or individuals in policy decision-making and benefit-sharing could be hindered by limited land endowments, location in relation to the priority areas, unclear or unstable land tenure, livelihood strategies, high level of forest dependence, gender, caste, class, race, ethnicity and place of origin (Pagiola et al., 2005; Arriagada et al., 2009; Agarwal, 1997a in McDermott and Schreckenberg, 2009). In this regard, and in order to enhance equity in REDD+, some national and sub-national plans and strategies promote policy approaches and measures that include criteria for *targeting* marginalised social groups (Mohammed, 2011; Peskest and Brodnig, 2011) to define what are the preferred REDD+ benefits and what is the fairest way to receive them (Gebara, 2010).

For example, the amount of benefits received from REDD+ might depend on the size of landholdings, where REDD+ transaction and (perhaps) opportunity costs, are inversely proportional to landholding size. Therefore, large landholders could potentially bear less costs and receive more benefits from implementing REDD+ than small landholders (Mohammed, 2011). Instead, if REDD+ benefits are directly invested in community infrastructure, e.g., schools or hospitals, they could benefit all community members including non-participants (both deliberate and ineligible) (Mohammed, 2011). Investments in community infrastructure can also reduce transaction costs, strengthen

social capital, and prevent risk of *elite capture*- or the accumulation of large portions of the benefits by powerful groups in the community (Platteau and Gaspart, 2004; McDermott and Schreckenberg, 2009). However, elite capture can still occur if the decision on which infrastructure to build is not predetermined in the programme or project rules, but depends on a locally based process dominated by the local elite (Mohammed, 2011).

Monetary benefits are easier to divide among beneficiaries and allow a more flexible use. Non-monetary benefits are harder to divide, particularly if they are intangible such as land tenure legalisation, or access to forest products (Mohammed, 2011), but could be more useful in communities where cash is rarely used (Heyman and Ariely, 2004 in Mohammed, 2011). Non-monetary benefits could also be preferred by household members that lack property rights or hold lower decision-making power, such as women or young people, as it would diminish the risk of one person monopolising and mispending the money on unproductive consumption (Mohammed, 2011). Some local communities or their members may prefer indirect monetary benefits, such as the creation of new jobs (e.g., labour intensive agriculture or forest monitoring activities) (McDermott and Schreckenberg, 2009).

3.5. Summary

This chapter has introduced the concepts of legitimacy, environmental discourses and equity, which are mobilized to analyse the process of REDD+ governance and national policy design in Mexico. Drawing on those concepts, the thesis expects to advance our understanding of how emerging REDD+ decision-making institutions perform from a legitimacy perspective, how different discourses compete to determine the future implementation of REDD+, and how institutions for future REDD+ benefit-sharing take into account equity principles across implementation levels and administrative scales.

Chapter 4. Case study and methods

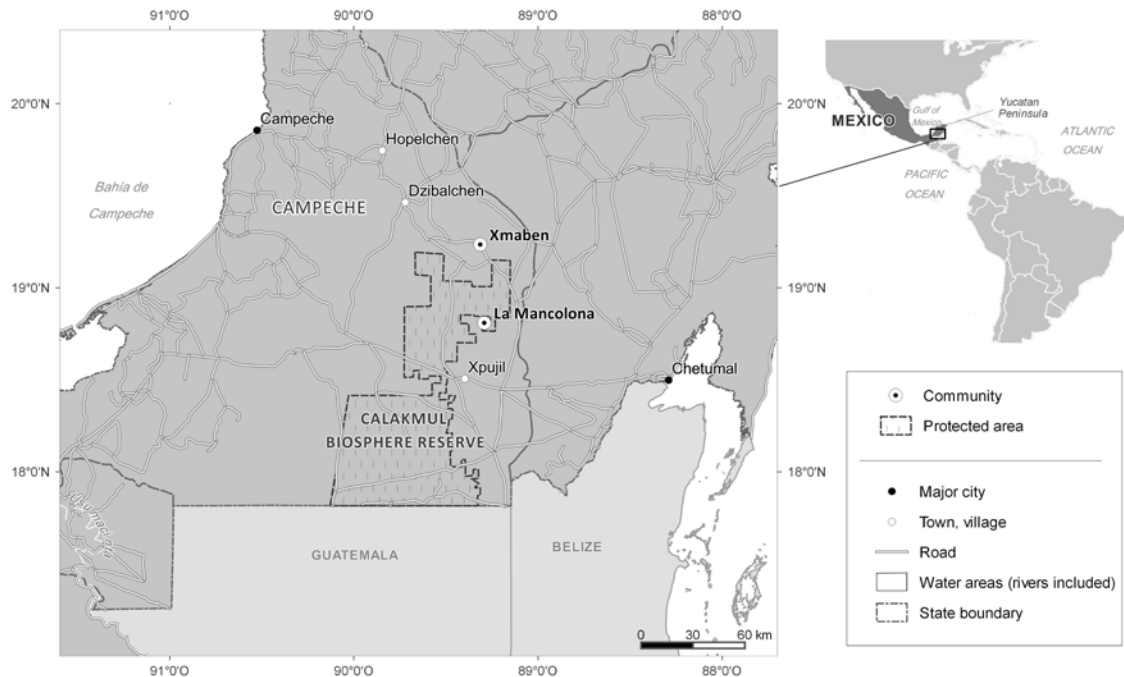
This chapter introduces the methodology employed to operationalize the theoretical framework of this thesis presented in the previous chapter. This chapter has four sections. The first section is a description of the two case study communities. The sections two and three present the data collection methods and analysis procedures, respectively. Finally, section four discusses some ethical considerations related to the research process.

4.1. Case study communities

The communities of *La Mancolona* and *Xmaben* were purposely selected to investigate the equity and benefit-sharing implications of REDD+ implementation. They are located in the state of Campeche (Figure 4.1), which is a priority region for REDD+ early actions. In the past they have been involved in conservation activities and have received economic rewards in return to ecosystem service provision (Reyes-García et al., 2013; Méndez-López et al., 2014; Méndez-López et al., 2015), which indirectly suggested they had knowledge and experience in developing incentive-based conservation activities. Representatives of these communities had previously participated in REDD+ related events organised at state level, including the few sessions of CTC-Campeche, and other REDD+ and carbon forestry events organised by academics, the government and NGOs. The communities were also selected because I had available data and reliable local contacts from a previous study (CONSERVCOM)³¹. Furthermore, the two communities had a different tenure configuration that, a priori, could provide valuable insights on the extent to which property rights can influence preferences for REDD+ implementation. Appendix B includes additional information of the two studied communities that complement the sub-sections following below.

³¹ http://ddd.uab.cat/pub/butcoodesfas/butcoodesfas_a2011m9/index.html

Figure 4.1: Location of the case study communities La Mancolona and Xmaben, state of Campeche, Mexico



Source: own elaboration with cartographic data of the National Commission for Knowledge and Use of Biodiversity (CONABIO) and GADM (Global Administrative Areas database) and DCW (Digital Chart of the World).

4.1.1. La Mancolona

La Mancolona is located in the Calakmul Biosphere Reserve's (CBR) buffer zone. The community is inhabited by 485 people living in approximately 90 households and experiencing high levels of marginalisation (CONAPO, 2010). People from *La Mancolona* are Maya migrants from Chiapas. Their mother tongue is Tzeltal, but Spanish is learned at school. The inhabitants of *La Mancolona* were relocated twice before they settled in the current location in 1992. During both relocations they were forced to abandon their homes for the establishment of protected areas, namely the Montes Azules Biosphere Reserve (1980) and the Calakmul Biosphere Reserve (1989). Although the community was officially named as *La Unión Veinte de Junio*, after the date in which community members first claimed their land rights, it is more commonly referred to as *La Mancolona*, which was the name of an old camp of rubber gum collectors in the area where they first settled before they were relocated the second time (CONSERVCOM, 2010).

Due to the changes in the Constitutional Article 27 in 1992, when relocated to their current location, the community could not be granted with the status of an *ejido*, but with individual property titles instead (CONSERVCOM, 2010). The community includes an area of 2,700 ha owned by 60 individuals (20 women) with around 50 ha each. Other adult community members without land rights are known as *pobladores*. *Pobladores* can obtain a notarised authorisation by the landowner, which allows them to legally use their land and get registered to receive support from the government's agricultural and other development programmes. In 2006, 38 people (*pobladores* and landowners) started a process to gain additional land titles over a share of vacant forests located north of the village, which they had used for agriculture since 2002.

Despite being a village of individual smallholders, for certain decisions *La Mancolona* has an organization that resembles an *ejido* (CONSERVCOM, 2010). The communal authorities include the *comisario*, the secretary, and the treasurer, as well as three local community members who work as local policemen. The community assembly is the most important local authority and it is constituted of all adult community members, both women and men, with and without land rights. The assembly adopts decisions by simple majority. The community does not have an internal regulation document, but uses the compendium of minutes from the assembly sessions and a list of penalties issued by the municipal authorities. Community infrastructure located in the urban area is available to all village inhabitants who have to provide maintenance of those areas through community work (CONSERVCOM, 2010).

The main productive activities include *milpa* for subsistence, allspice (*Pimenta dioica*) and honey production for sale, and work in the tree nursery and in the ethno-eco-tourism centre. Due to water and land scarcity only few families maintain livestock. *Milpa* is the traditional slash and burn agriculture system that includes intercropping of corn, beans and squash. The opening of landowners' lands originally under fallow or forest for *milpa* incentivised with the PROCAMPO programme has been one of the major drivers of local deforestation, which between 1994 and 2000 reached an annual rate of -0.51%. The clearing of landowners' lands for livestock breeding, supported with the federal agricultural programme PROGAN, and the opening of new lots in the state-owned forests to claim land property, contributed the most to the annual deforestation rate increase to -0.81% during the period 2000-2010 (CONSERVCOM, 2010).

People from *La Mancolona* are organised in productive activities groups, such as allspice production and beekeeping. Besides, some men and women of different ages with or without land rights participate in the local ethno-eco-tourism centre and in the tree nursery, in which they hold an equal share of related infrastructure and equipment. By 2009, 82.9% of village land was under forests, 8.75% was covered with fallows, and 4.3% and 2.57% were dedicated to agriculture and pasture, respectively (CONSERVCOM, 2010). There was no area available for timber extraction. Due to the type of property regime (individual landowners), the community does not count with a local land-use plan. In 2010, a group of 38 community members signed a five-year long contract with the PSAH programme involving an area of 1,631 ha, bringing together several of their forested plots ranging from 25 to 90 ha. They have been compensated with US\$40/ha per year.

4.1.2. Xmaben

Xmaben is located in the region of *La Montaña*, an area considered part of the Mesoamerican Biological Corridor and of the area of influence of the CBR. The village exists since 1861 and has 251 households and approximately 1,300 inhabitants (Casa de salud, 2013). *Xmaben* inhabitants are of Yucatec-Maya origin and speak both Maya and Spanish. In 1929, the community received a land endowment of 2,448 ha and was formally recognised as an *ejido*. In 1980 and 1986, the *ejido* was granted two land extensions of 2,407 ha and 32,539 ha, respectively. Nowadays, the *ejido* counts with 216 *ejidatarios* (of whom 11 are women), who share ownership over 37,394 ha of land. Since 1999, 5,669 ha of the *ejido* land are used by the Mennonites³² under a 30-year usufruct contract (CONSERVCOM, 2010). The *ejido* assembly holds the highest authority, where simple majority makes decisions. There are three representing authorities (i.e., *comisariado ejidal*) elected every three years, including the *comisario ejidal*, the *ejido* secretary, the *ejido* treasurer, as well as the three-member forest monitoring council. In addition, *Xmaben* also counts with the village authorities in charge of urban areas and include the *comisario municipal* and a secretary that are selected for a period of three years.

³² The Mennonites are a Christian religious group whose members are characterised by practicing extensive mechanised agriculture with use of inorganic agricultural inputs. There were 17 Mennonite settlements in *La Montaña* in 2005; this number is constantly growing due to the population growth and migrations from the northern Mexico (Porter-Bolland et al., 2008).

In *Xmaben*, around 100 adult male community members do not hold land rights and are known as *comuneros*. Around 80 *comuneros* have obtained a usufruct contract of up to 2 ha of *ejido* land in exchange for community work, e.g., to help *ejidatarios* in case of forest fire. *Comuneros* with families are also eligible to receive agricultural support through the government's programme commonly called PROCAMPITO. In 2004, the internal regulations to manage the *ejido*'s affairs³³ were updated, however they have been only partially followed. The same occurred with the land management plan developed with CONAFOR's support in 2006.

For some of the activities performed in the commons, such as cleaning and monitoring community borders, opening firebreaks, work in the *ejido*'s tree nursery, and timber extraction, the *ejidatarios* organize in groups of ten people. Community members with and without land rights also cooperate on different productive activities, such as honey commercialization. Beekeeping has a long tradition in the region and it is the second most important activity in *Xmaben* after *milpa* cultivation. The community has a regional association that counts with 96 members from various neighbouring communities who collect and export honey to the EU through fair trade markets. The village also counts with a women-only association that produces and sells natural products. Livestock production is a family-based activity practiced as a savings strategy by one third of *ejidatarios*, while the number of livestock producers is increasing. Although most producers have less than five cows, some families account for up to 60 ha of pasture.

In *Xmaben*, in 2009 78.6% of the land was under forest cover, 5.7% were fallow, and 3.7% and 2.5% were dedicated to traditional agriculture and pasture, respectively (CONSERVCOM, 2010). Finally, 8.9% of *ejido*'s land is used by the Mennonites mostly for commercial agriculture. Between 1988 and 2000, the increase in agricultural activities and unregulated forests exploitation were identified as the main deforestation drivers and deforestation rate was -0.52% per year. The annual deforestation rate increased to -0.88% in the period 2000-2010, when the main drivers of deforestation were the conversion of forest to agriculture by the Mennonites, the increase and change of location of agricultural areas by *ejidatarios* due to the construction of access roads

³³ e.g., election of the members of the *ejido* authority council, authorization and regulation of production and commercialisation of timber, disputes resolution, and changes in *ejido* land allocation and membership (Janvry et al., 1999).

and the implementation of the PROGAN and PROCAMPO programmes (CONSERVCOM, 2010).

Between 2004 and 2009, *Xmaben* joined the PSAH programme. They put 3,451 ha of the forest commons under the programme and received US\$22/ha per year³⁴ (i.e., US\$366 per *ejidatario*). In 2011, the *ejido* signed another five-year PSAH programme contract: conservation of a new area of 5,631.47 ha is financed from the federal government funds and another 1,424 ha are protected with additional funds provided by a local foundation. The annual reward is US\$20/ha (i.e., US\$732 per *ejidatario*). During both periods, a small sum was left as emergency fund.

4.2. Data collection

I collected data using semi-structured interviews, focus groups, participant observation at meetings and events, and a literature and documents review. Most of the data for this thesis were collected during two periods of fieldwork, accounting for a total of nine months, from June to August 2011 and from September 2013 to February 2014. Each research activity was coded using a first letter of the activity name and the number according to chronological order; e.g., I use the letter “I” for interview, “F” for focus groups, “M” for meetings, and “E” for e-mail comment (see Appendix C for the full list of research activities).

4.2.1. Semi-structured interviews

Semi-structured interviewing includes the use of an interview guideline containing open-ended questions. While allowing the respondent to expand on the issues at hand, the interview guide helps keeping control over the interview and assures that topics of interests for the analysis are covered (Babbie, 2006; Newing, 2011). At national and regional level, semi-structured interviews were used to explore the stakeholders’ perceptions on the legitimacy of REDD+ readiness in Mexico (Chapter Five), as well as to grasp their general views on REDD+ and identify discourse coalitions (Chapter Six). Interviewees were asked to present the position of their organisation/institution/group regarding REDD+, while personal opinions were also welcomed as long as they were identified as such. At community level, semi-structured interviews with local

³⁴ 1 US dollar (US\$) = 13.64 Mexican pesos (average for period 01/02/2013- 04/02/2015 <http://es.investing.com/currencies/usd-mxn-historical-data>)

households and key informants were used to collect the necessary information to design the focus group discussions (Chapter Seven) and to explore local people's understanding and view of REDD+ to complement the analysis undertaken in Chapter Five and Six.

- *National and regional level semi-structured interviews*

An initial list of 20 potential informants at national level was developed using references found in collected documents, the Internet, and through REDD+ multi-stakeholders fora' assistance lists. The potential informants included representatives of all REDD+ sectors relevant at national level and in the Yucatán peninsula region, where the local case studies were located. The list was completed using a snowball sampling technique, i.e., interviewees identified additional informants (Beardsworth and Keil, 1992; Bernard, 2006). A total of 40 face-to-face semi-structured interviews were performed at both national and regional level. Most respondents were approached in their workplace during working hours, except for some NGO representatives that were more flexible regarding the time and venue of the interview.

The interview guide at national and regional level included four sections (Table 4.1 and Appendix D). The first section contains questions that helped determine whether the selected individuals and/or their organisations participated or not in REDD+ readiness, and to distinguish between actors who were not recognised and/or not invited to participate, and those who were recognised and invited but decided not to participate in REDD+ readiness. Actors that were not invited to participate were asked about their perceptions of why they had not been invited. Actors who had refrained from participating were asked questions exploring their motivation to not participate in REDD+ readiness.

The second section consisted of a series of questions exploring the interviewee's perception on the REDD+ readiness process, paying attention to the following procedural issues: 1) recognition, inclusiveness and representativeness; 2) productive deliberation and meaningful participation; and 3) transparency and accountability.

The third section explored the interviewee's opinion on key REDD+ design issues that, together with actors' motivation and opinions on public policy alignment under REDD+ explored in the fourth interview section, helped me identifying the most prominent

storylines and REDD+ discourses. The interview guide was pilot tested with a group of respondents. Pilot interviews were included in the analysis together with the main dataset, as the interview guide was refined, but did not change significantly.

Table 4.1: Sections and key issues explored in semi-structured interviews at national and regional level

Section		Key issues
Section 1. Participation in REDD+ readiness	1.1. Non-participants	<ul style="list-style-type: none"> • Reasons for non-participation • Motivation for non-participation
	1.2. Participants	<ul style="list-style-type: none"> • Role in REDD+ fora • Motivation for participation • Success of REDD+ readiness
Section 2. Input legitimacy	2.1. Recognition, inclusiveness and representativeness	<ul style="list-style-type: none"> • Missing and deliberately excluded/included actors • Dominating actors
	2.2. Productive deliberation and meaningful participation	<ul style="list-style-type: none"> • Understating of others views • Opinion changes • Contribution to particular REDD+ design topic • Representation of its view in final documents
	2.3. Transparency and accountability	<ul style="list-style-type: none"> • Information accessibility • Language barrier • Access divide • REDD+ readiness funds transparency • Rights and responsibilities
Section 3. Technical REDD+ design issues		<ul style="list-style-type: none"> • Public policies • Communities' participation in MRV • Reference level • Carbon rights • Equity and safeguards • Land tenure • Nested approach and leakage • Permanence period • Source of funding

<p>Section 4. Public policy alignment</p>	<ul style="list-style-type: none"> • Main national/regional deforestation and forest degradation drivers • Main mechanisms used to halt deforestation and forest degradation • Coordination among different land-use sectors institutions
--	--

Source: own elaboration.

As I speak Spanish, I did not require a translator during the semi-structured interviews at the national and regional level, which allowed for direct personal contact with the interviewees. In general, respondents showed a high degree of responsiveness, engagement, and willingness to share information. However, some respondents tended to avoid giving a straightforward answer to some of the questions related to certain controversial REDD+ issues (e.g., the REDD+ pilot in Chiapas), even after I reformulated them. The major limitation of the semi-structured interview methodology was its length combined with a busy agenda of many interviewees.

- *Community level semi-structured interviews*

Key informants from local communities were selected based on their position and role in the village, including authorities, leaders and representatives of different productive activities. I conducted a total of nine and five interviews in *La Mancolona* and *Xmaben*. The interview guide contained a set of open-ended questions covering a variety of key topics, which differed depending on the interviewee's position and role (Table 4.2 and Appendix E). The questions referred to the period 2010-2013, given that communities' basic information for previous years was available from the 2010 CONSERVCOM project's reports. All key informants interviews were conducted in Spanish. Sometimes it was hard to find the mutually convenient day and time to organise the interviews due to the persons' busy working agenda and travels. The information obtained through key informants' semi-structured interviews was used to refine and develop the protocols for household-based semi-structured interviews and focus groups discussions.

Table 4.2: Topics explored in key informants' interviews

Interview with	Key topics explored
Local authorities	<ul style="list-style-type: none"> • Local community organisation • Important events in the community • Governmental and NGO support • Community needs • Conflicts within the community
Productive group representatives	<ul style="list-style-type: none"> • History of the group • Group composition and membership • Governmental and NGO support • Group needs • Conflicts within the group

Source: own elaboration.

- *Household level semi-structured interviews*

The census lists in *La Mancolona* and *Xmaben* included 60 landholders and 29 *pobladores* and 201 *ejidatarios* and 96 *comuneros*, respectively. I used stratified random sampling to select a total of 30 households in *La Mancolona* (20 with and 10 without land rights) and of 45 households in *Xmaben* (30 with and 15 without land rights) from the census. Women-headed households were not specifically targeted. However, aiming for a balanced number of male and female in the sample, interviews were organized both in the morning (women were at home) and in the afternoon (higher availability of men). A total of 76 household-based semi-structured interviews were conducted in *La Mancolona* (n=37) and *Xmaben* (n=39). The sample included both households with land rights (26 in *La Mancolona* and 27 in *Xmaben*), and without land rights (12 and 12), as well as men (23 and 28) and women (15 and 11).

The household's interview guide consisted of two sections (Table 4.3 and Appendix F). The first section had a number of close-ended questions regarding the household's basic socio-economic characteristic and information on the respondent's involvement in productive activities and income. The second section included open-ended questions exploring the possible options of REDD+ benefit-sharing scheme design. The information obtained through household semi-structured interviews was used to develop the protocols for focus groups discussions.

Table 4.3: Topics explored in household interviews

Section		Key topics
Section 1. Close-ended questions		<ul style="list-style-type: none"> • Personal information including land ownership and participation in PSAH • Main productive activities and source of income • Support received with government programmes • Use of timber, firewood and non-timber forest products, and hunting
Section 2. Open-ended questions	2.1. Opening and REDD+ explanation	<ul style="list-style-type: none"> • Perceptions on land-use change in the community • Knowledge on REDD+, forest carbon and climate change
	2.2. Options for REDD+ benefit-sharing scheme design	<ul style="list-style-type: none"> • Activities within REDD+ • Details of activities • Actor who would promote the activities • Benefiting actors • Actor who should administer the benefits • Compensation level • Compensation type • Contract duration • Frequency of compensation • Compensation period • Sanctions • Principle of conditionality
	2.3. Closing and recommendations	<ul style="list-style-type: none"> • PSAH experience • Further advices on REDD+ design

Source: own elaboration.

Only a few household interviews were conducted in Spanish. For the remaining households, I read the interview guide in Spanish and a local research assistant(s) translated it to Tzeltal (*La Mancolona*) and Yucatec-Mayan (*Xmaben*). Local people's availability was generally good, as only one person in each community refused to participate.

4.2.2. Focus groups

A focus group is considered a time- and cost-efficient method to collect data, as it involves face-to-face and spontaneous interactions with several individuals engaged in a guided discussion on a particular topic (Onwuegbuzie et al., 2009; Newing, 2011). In this research, I used focus group discussions to analyse local communities' preferences on alternative REDD+ scenarios, including benefit-sharing and equity, and to identify factors that mediate those preferences (Chapter Seven).

- *Preparation*

Information obtained through household interviews was analysed during fieldwork and used to develop four REDD+ alternative scenarios that were discussed in focus groups. In the first step of the analysis, household interviews were transcribed from notes and were coded using the key topics listed in sub-section 2.2 of Table 4.3. The second step of analysis included calculating the frequency of each answer provided by the respondents on the question addressing the key topics. In the third step, I combined the four most frequent answers under each key topic into four alternative REDD+ scenarios.

According to responses provided in the interviews, I selected four main productive and conservation activities that could be taken into account for REDD+ scenarios. For the purpose of comparing the two research sites, the scenarios encompassed extensions or improvements of the four central productive and conservation activities already happening in the communities: i) *reforestation* of fallow areas, ii) *other productive activities*, including reforestation with melliferous trees to support beekeeping in *La Mancolona*, and with fodder trees to improve livestock breeding in *Xmaben*, iii) *agriculture intensification* to increase production per area of land, and iv) *PES-like conservation*, to protect standing forests.

Imagining the net carbon gains from scenarios suggesting reforestation and conservation activities was quite straightforward. However, positive impacts on forest carbon of an agricultural intensification required more explanation, particularly as the use of mechanisation for soil tillage and irrigation, agricultural inputs (e.g., fertilisers and pesticides) and improved seeds can result in higher CO₂ emissions and pollution, and can have negative impacts on agrobiodiversity (Matson and Vitousek, 2006; Nabuurs et al., 2007; Kapos et al. in Parotta et al., 2012). In order to ensure that the

scenario proposed under this activity would result in net gains in carbon, the proposed scenario included the use of small tractors for land preparation, organic inputs, and native corn species, and limited the production area to 2 ha per person. Still, it would be necessary to empirically confirm all these theoretical assumptions.

Once I had decided the type and details of activities under each scenario, I added details on potential beneficiaries, compensation level (e.g., household or community), contract duration, actor who should administer the benefits (e.g., community or external actor), type of benefits (e.g., cash or in-kind), frequency and timing of benefits disbursement, type of sanctions, and principle of conditionality. The amount of compensation and the actor who would promote the activities were not included in the scenarios' descriptions, but were discussed during the focus groups. I used the information from the key informants' interviews to refine the scenarios' design so to make them equally feasible to be implemented in the communities. In this way, I ensured that none of the scenarios was discarded on the premise that it was not implementable, and that the focus groups captured people's preferences. More details on the contents and storylines of each scenario are provided in Sections 7.1 and 7.2.

- *Selection of participants*

I purposively selected both interviewed and not interviewed community members to participate in focus group discussions. To select members for the authorities' group, in both communities I followed the *comisario's* advice. The selected focus group participants shared at least one characteristic: property rights, gender or social status. However, participants within each group differed in age, marital status, education level, participation in PSAH programme, and social membership. In *La Mancolona*, participants also differed in the proximity of their land to the urban area, and on whether the person had claimed or not property rights over vacant land located north of the village (Appendix G).

Property rights can determine people's eligibility to participate and benefit from REDD+, in the same way that they influence participation in PES programmes in Mexico and beyond (Corbera et al., 2007; García-Amado et al., 2012; Calvet-Mir et al., 2015). Land rights would also likely influence landowners' choices on REDD+ scenarios (Eastman, 2012; Enright et al., 2013). Segregation of men and women participants was done so to capture women's views and priorities in REDD+ but also to

encourage their participation in the research process, as research shows that in mixed groups women tend to remain quiet and agree with men (Onwuegbuzie et al., 2009; Enright et al., 2013). In addition, I conducted a specific focus group only with authorities, because the interests of the more powerful members in the village, such as community authorities and leaders, is an important factor influencing local institutions and decision in natural resources management (Merino-Pérez, 2004).

- *Execution*

The four focus groups conducted in each community were: i) *women's group* (women with and without rights); ii) *authorities' group* (men and women with and without land rights holding some social status in the community); iii) *rightholders' group* (men and women landowners/*ejidatarios* with or without PSAH income); and iv) *non-rightholders' group* (men and women *pobladores/comuneros*). Between nine and 12 participants were invited to each focus group aiming for an optimum number of six participants (but no less than three) to keep the size manageable and conducive to open discussion (Morgan, 1997; Wilkinson, 2004 in Onwuegbuzie et al., 2009). I carefully selected the day and time for conducting the focus groups, so not to disturb people's weekly schedules and daily routines (Enright et al., 2013). Experience showed that it was more socially acceptable to invite participants one day in advance to prevent confusion and keep it fresh in their memory, and to do so orally. The hardest was often to find the mutually convenient day and time to organise the focus groups due to the community members' busy working agenda and travels. In total, 45 people participated in eight focus groups, 24 in *La Mancolona* and 21 in *Xmaben* (Table 4.4).

The focus groups were designed to last less than two hours and were conducted in the village house. I was in charge of facilitating the discussion, prompting and encouraging all members to speak, ensuring that talkative members did not take over the discussion, as well as taking notes to guide potential emergent questions (Onwuegbuzie et al., 2009). I counted with an assistant moderator who was responsible for dealing with first- and late-comers, arranging seats and refreshments, for taking detailed notes and photos, and for providing help in analysing and interpreting the focus group information on the spot (Krueger and Casey, 2000). All focus groups were conducted in Spanish, except for the women's group in *La Mancolona*, which was conducted in Tzeltal and translated to Spanish.

Table 4.4: Focus group characteristics

Focus group/Village	La Mancolona	Xmaben
“The women’s group”	5 women: 4 from rightholders’ household, 2 of them rightholders, only 1 rightholder without PSAH, and 1 non-rightholder	5 women: 4 from rightholders households, and 1 from non-rightholders household
“The authorities’ group”	6 men, all rightholders receiving PSAH	5 men, all rightholders receiving PSAH
“The rightholders’ group”	6 both women and men, 1 women, 2 do not receive PSAH	6 men, all receiving PSAH
“The non-rightholders’ group”	7 both women and men, 2 women (1 rightholder due to confusion)	5 men, all working outside of the community

Source: own elaboration.

I started each focus group with a short explanation about what REDD+ was, including the explanation of the carbon cycle. I presented the four REDD+ scenarios using illustrative material for easier comprehension. I then asked participants to order the scenarios according to their personal preferences, from most to least preferred using four cards with numbers from 1 to 4, corresponding to the scenario number (see Appendix H). The results of the first voting were analysed and discussed during the focus group, after which the voting was repeated.

- *Analysis*

I used both quantitative and qualitative procedures to analyse and interpret the focus groups information. First, I used the results of the second individual voting to determine the group’s preferences over the four alternative REDD+ scenarios. Namely, each REDD+ scenario was assigned with 3, 2, 1 and 0 points for each first, second, third and fourth place in the individual choice, respectively. For example, the first participant in the women’s focus group in *La Mancolona* ranked the scenarios in the following order “2 4 1 3”, according to which the second scenario was the most preferred (3 points) and the third was the least preferred (0 points). I calculated the total score of a given scenario by adding all the points attributed to it by participants. Finally, I compared the

total sum of the points gained by each scenario and considered the one with the highest/lowest total score as the most/least preferred in the focus group. For the purpose of comparison between the two studied communities, the overall community preferences were calculated from the group preferences using the same procedure.

Second, I used the qualitative data analysis to identify and comprehend the ideas and reasoning behind the participants' preferences (Stewart, 2006). The focus groups transcripts were translated into English and analysed using a "scissor-and-sort" content analysis technique (Stewart et al., 2006, p. 116). The first step was code assigning. Participants' comments were assigned to 13 categories corresponding to 11 key topics identified in the household interviews and listed in sub-section 2.2 of Table 4.3. To those codes, I added the amount of compensation and the actor that should promote the activities (see also Appendix I). In the "scissors" part of the technique, the different sections of the focus group discussion that had been assigned with the same code were cut out and grouped together in the "sort" part of the technique. Finally, an interpretative analysis of the text pieces for each of the focus groups was performed. The results of the focus group analysis are presented in Chapter Seven.

4.2.3. Participant observation at meetings and events

Participant observation at REDD+ related events held from June to August 2011 and from September 2013 to February 2014 was aimed at collecting first-hand information on discussions' dynamics, type of language used, meaningfulness of stakeholders' participation, and adherence to decision-making procedures. The attended events included: the ordinary and extraordinary sessions of sub-national CTCs; sessions of the Commission for State Development Planning (COPLADE); workshops, roundtables and working meetings on REDD+, organised by government, NGOs and academia (see Appendix C for details on meeting date and location). Data collection at the meetings and events included note-taking and recording (with consent), informal conversations with other participants, and formal participation in discussions (when adequate) (see Appendix J). I received invitation to the REDD+ related events through the interviewees, as well as through email communication, the country's online REDD+ platform public calls and personal contacts.

4.2.4. Literature and documents review

I gathered data from available REDD+ related publications and documents, both in English and in Spanish and published until December 2014, including: R-PIN (CONAFOR, 2008) and R-PP (CONAFOR, 2010b) documents; the FCPF REDD Readiness Progress Fact Sheets (FCPC, 2014) and ER-PIN (CONAFOR, 2013); the REDD+ Vision (CONAFOR, 2010a); the ENAREDD+ drafts (CONAFOR, 2011, 2012a, 2013a, 2013b, 2014a, 2014b); the ENAREDD+ Communication Strategy (CONAFOR, 2012b, 2014); comments on these documents; notices, agendas, and minutes from multi-stakeholders REDD+ fora; and government and NGO reports and scientific articles on REDD+.

4.3. Data analysis

Data analysis techniques used include qualitative content analysis, as well as stakeholder and discourse analysis.

4.3.1. Qualitative content analysis

I used qualitative content analysis to analyse the transcripts of the semi-structured interviews and REDD+ events. The analysis was performed with MaxQDA software programme. I first *coded* information by assigning codes based on the research questions to specific units of analysis (paragraphs, sentences or words). The final sets of codes, 14 for actors and 21 for discourses, were derived after testing the preliminary code list (Table 4.5). In the second step, the segments containing the same codes were grouped and extracted in specific documents that were later translated into English. The organisation of interviews and event data in this way allowed for triangulation (Robson, 2002; Graham, 2007; Bryman, 2008). The literature and official documents were not fully coded, but important paragraphs, sentences and statements corresponding to the particular code were extracted, translated and added to the corresponding document. Finally, an interpretative analysis of the documents containing the same codes was performed to explore the stakeholders' perceptions on the legitimacy of REDD+ readiness in Mexico (Chapter Five). The results of qualitative content analysis also informed the stakeholder and discourse analysis explained in detail below.

Table 4.5: List of codes for Chapters Five and Six

1. <i>Actors</i> (Chapter Five)	2. <i>Discourses</i> (Chapter Six)
<ul style="list-style-type: none"> • Motivation • Participation • Missing actors • Decision-making procedures • Transparency • ENAREDD+ Consultation • CONAF • CTC national • CTC state • REDD+ Vision • ENAREDD+ drafts • State REDD+ strategies • PY REDD+ strategy • Early actions 	<ul style="list-style-type: none"> • Deforestation drivers • Forest degradation • REDD+ definitions • Sustainable Rural Development • Food security • Community Forest Management • Reference level • Scope of activities • Permanence • Leakage • REDD+ scale • MRV system • Carbon rights • Land tenure • REDD+ finance • Legal system • False expectations • Apiculture • Mechanised agriculture • REDD+ pilots • Local governance

Source: own elaboration.

4.3.2. Stakeholder analysis

Stakeholder analysis allows identifying how different actors interact in existing and new policies, as well as in wider institutional arrangements and governance frameworks, and it has been extensively used in the context of natural resource management, development, and conservation policies (Grimble and Wellard, 1997; Brown et al., 2004). Stakeholder analysis can contribute to examine the legitimacy of a participatory process by investigating if some stakeholders are missing and, if so, what are the factors restricting their participation; the extent to which actors are able to express their opinion; and the trade-offs between various actors' objectives and competing interests inherent to decision-making processes (Grimble and Wellard, 1997; Steinman et al., 2002; Reed, 2008).

I used stakeholder analysis as an overarching analytical framework to analyse the level of input legitimacy in Mexico's REDD+ readiness process, which should in theory involve various actors at different scales, from indigenous groups to government agencies. Besides understanding how the process is conceived, who is invited to participate, by whom it is set, the level and capacity of active participation of different actors in decision-making, and the actors mutual interactions throughout the process, stakeholder analysis helped me identifying marginalised or under-represented groups and their interests and needs (Vallejo and Hauselmann, 2004).

This research defines REDD+ stakeholders in Mexico as actors with stakes in the country's forestry and land-use sectors as well as actors who will be affected either negatively or positively by future REDD+ implementation. The list of stakeholders coincides with the list of potential respondents in semi-structured interviews (Section 4.2.1). To keep the focus of the argument, I limited the list to actors relevant at the federal level and in the Yucatán peninsula region, particularly in the state of Campeche (case study region of Chapter Seven), and in the state of Chiapas (due to the specificity of the REDD+ process in that state as explained in Section 2.7.2).

To conduct the stakeholder analysis, I used the results of qualitative content analysis of semi-structured interviews (Table 4.3), the REDD+ events, and the literature and documents. Specifically, I used this information to categorised actors based on their a) relevance, b) power to influence, and c) interest in REDD+ in Mexico. *Relevance* was determined based on the likely impact of the actor's activities for REDD+ effectiveness in the country. I categorized actors as *very relevant* if their activities contributed directly to land-use change in Mexico, either by increasing or decreasing carbon stocks. These include, for example, federal forestry agencies that promote different forestry public policies and programmes and local people implementing them. I categorised actors as *moderately relevant* if they only played an indirect role in land-use change, for example, development agencies or NGOs that provide governments or local communities with financial resources and/or information for the development of particular land-use initiatives. I considered actors as *not relevant* if their activities did not have (or it was hard to prove) any impact on land-use change in Mexico, such as academic institutions working in or investigating REDD+ pilots.

Influence was determined based on the actors' power, i.e., the extent to which an actor was able to persuade or coerce other actors into making decisions and following certain courses of action in the REDD+ design and implementation (Mayers, 2005). The level of influence results from a combination of the financial resources that the actor possesses and its social status within formal and informal social hierarchies (Diefenbach and Sillince, 2011). Formal hierarchy is represented through official structures and rules allocating official roles and positions in decision-making processes at different levels (Diefenbach and Sillince, 2011), e.g., the relation between ministries controlling budgets (Mayers, 2005). Informal hierarchies refer to existing social stratification based on conscious or unconscious social processes that occur among members of any social system (Diefenbach and Sillince, 2011), as well as to personal and institutional connections between ruling politicians and socio-economic elites (Mayers, 2005). Given that the informal hierarchies stay largely hidden to the general public, this thesis only accounts for formal hierarchical relations.

I categorized actors as *very influential* when they had relevant financial resources for REDD+ design and implementation and had direct influence on policy, such as the government or certain multilateral organisations. I categorised actors as *moderately influential* when they had already received important financial resources as secondary recipients to develop REDD+ readiness activities at sub-national or local levels and had thus steered REDD+ design in ways that met their experience on the ground, for example some large national NGOs. Finally, I categorised actors as *not influential* when they did not hold significant financial resources and had not been present in formal REDD+ decision-making, such as community-based organisations.

Interest in REDD+ readiness was attributed based on i) the actors' role as financial investors in the REDD+ readiness; ii) the actors' frequency of participation in both the governmental and alternative REDD+ readiness events, and iii) the number of produced written or spoken documents contributing to REDD+ discussions. *Very interested* actors included those who had financially invested in REDD+ and/or had regularly participated in REDD+ fora, contributing to REDD+ discussions by publicly expressing their opinions in oral or written forms, for example certain large NGOs. *Fairly interested* actors included those who had all necessary preconditions to participate (e.g., sufficient financial resources, convenient knowledge of the timing of meetings, and proximity of the meeting venue) but only got intermittently involved in REDD+ fora,

such as commercial forest plantation industries. Finally, *not interested* actors included those who had been formally invited to participate in REDD+ fora but neither participated nor communicated their views on REDD+, such as the country's ministry of economy. The stakeholder analysis results are presented in Chapter Five.

4.3.3. Discourse analysis

Discourse analysis is a powerful methodological tool that allows examining the production of discourses within the socio-political practice in which social actors engage. It allows for the identification of actors participating in the construction of storylines and potentially engaging in the public policy domain. More importantly, it allows for the identification of groups known as discourse coalitions. Discourse analysis helps understanding the interrelations between different discourses, and highlighting which discourses and ideas become dominant or hegemonic and why (Hajer, 1993).

The analytical framework I developed to identify REDD+ discourses in Mexico, as well as their relations, and their relations with other global forest governance and REDD+ discourses, combines three elements suggested by Dryzek (1997):

1. Key storylines: a collection of stakeholders' stances on a variety of REDD+ issues, including i) *conceptual REDD+ dimensions* (for example the general idea of REDD+, the definition of forest, the global drivers of deforestation, and REDD+'s role within the climate change governance), and ii) *strategic REDD+ dimensions* (for example REDD+ design and implementation at the national level).
2. Main discursive agents: the actors who, through storylines, are characterised as the archetypes of *heroes* and *culprits*, those who positively or negatively contribute to forest management, conservation and REDD+ effectiveness, or the actors that are characterised as the *winners* and *losers*, those who will benefit the most or become worse off from REDD+.
3. Key metaphors and other rhetorical devices: two or three key word phrases used in storylines to symbolise the discourse, e.g., green deserts or "win-win-win"; and rhetorical techniques, such as sentences in spoken or written material, which actors use to persuade other actors to consider certain issue from a given perspective.

To explore the three analytical framework's elements for each of the REDD+ readiness stakeholders in Mexico, I used the results of qualitative content analysis of semi-structured interviews (Table 4.3), the REDD+ events, and the literature and documents. Specifically, I grouped in discourse coalitions those actors that produce, articulate, reproduce and transform particular storylines within certain discourses. I further explored overlaps and conflicts between different discourse coalitions by identifying whether they promoted the same or opposed storylines, respectively. I subsequently determined the degree of discourse institutionalization and therefore the existence of dominant and/or hegemonic discourses. In the case of REDD+ readiness in Mexico, this involved examining how many of the storylines promoted by each of the three discourses identified are, explicitly or implicitly, represented in the two most advanced national documents on REDD+: the latest ENAREDD+ draft and the ER-PIN document. I then estimated the level of discourse institutionalisation by calculating the percentage that its storylines represent in the total number of institutionalised storylines. Finally, I compared storylines of REDD+ discourses in Mexico with those of the REDD+ meta-discourses presented in Section 3.3.3 to evaluate their resemblance.

Discourse analysis builds on and complements stakeholder analysis. Beyond just grouping the REDD+ stakeholders into different discourse coalitions, by examining the institutionalisation of the identified discourses, discourse analysis helps to further explain an actor's power to influence REDD+ design and provides concrete examples of how this power is exercised in REDD+ readiness. The results of the discourse analysis are presented in Chapter Six.

4.4. Ethical considerations

During research I followed the Universitat Autònoma de Barcelona ethical guidelines³⁵. The disclosure risk is one of the most commonly referred ethical considerations in environmental social science research. Therefore, all data were anonymised for presentation. Additionally, verbal consent was sought and gained from all participants when conducting interviews and focus groups and when participating in events, as well as for note-taking and voice recording. At the national level, only one interviewee asked

³⁵ <http://www.recerca.uab.es/ceeah/docs/CBPC-cat.pdf>

for a formal interview request letter (apart from email invitation) and a permission to record the interview.

At the local level, I provided the local authorities with a formal letter from the UAB and the research group upon arrival, indicating the purpose and length of my stay in the village. Both local communities had previous experience with hosting domestic and foreign researchers, which eased my adaptation to and familiarization with the local context. In addition, during fieldwork I was accompanied with local research assistants, who were also members of the studied local communities, which increased responsiveness to household interviews and focus groups. Given that both of the local assistants had previous experience in interviewing and research, it did not take much time to train them.

At the beginning of each interview and focus groups, I shortly introduced myself and explained the research. I emphasised that I was neither an NGO nor a government representative, but a university student. I would then shortly introduce the objectives of my research and the importance of the information participants could provide. In focus groups, I also emphasised that the discussion was a purely hypothetical situation that would not lead to any actual REDD+ actions. I tried not to guide interviewees or focus groups discussions toward possible answers. However, when respondents were unsure about the meaning of a given question, I clarified the question by rephrasing it.

I acknowledge that some issues could not be controlled but influence the research process, such as my role in the research context as well as my social characteristics (e.g., nationality, gender, level of education, economic status). However, I consider that being a Serbian woman helped me to approach the potential respondents, particularly local women. In general, all interviewees at community level were curious about my reasons and motivations for conducting the research in Mexico, which make them keen to enter into informal conversations with me and invite me to participate in the events related to the object of my research. This friendliness allowed me to interview them and observe their activities.

At community level, the need for compensating participants and host families for their support during my research stay was also raised. According to the local assistants, it was not common to use rewards for participation, except for the provision of snacks and refreshments during focus groups. The host families also refused to charge me for

accommodation and food. However, I tried to compensate them by helping with household tasks, as well as by bringing grocery supplies from neighbouring towns. I also organised farewell parties with food and drinks in both communities.

4.5. Summary

This chapter has provided a description of the two case study communities. It has also presented the methodological and analytical approach used to operationalize the theoretical framework and to answer the three research question of this thesis. The chapter included a thorough description of the qualitative data collection through semi-structured interviews, focus group discussions, participant observation at meetings and events, and a literature and documents review; as well as of the qualitative content, stakeholder and discourse analysis.

Chapter 5. Actors: Analysing stakeholders and the legitimacy of decision-making processes in REDD+ readiness

This chapter explores the legitimacy of Mexico's REDD+ readiness process. The first section identifies the key stakeholders in REDD+ readiness and classifies them based on their relevance, influence, and interest. The second section examines the normative and organisational characteristics of the most important multi-stakeholder fora articulated to design the national REDD+ strategy, while the third section analyses how legitimate these fora are according to their participants. Finally, the fourth section discusses the chapter's results in the light of existing literature.

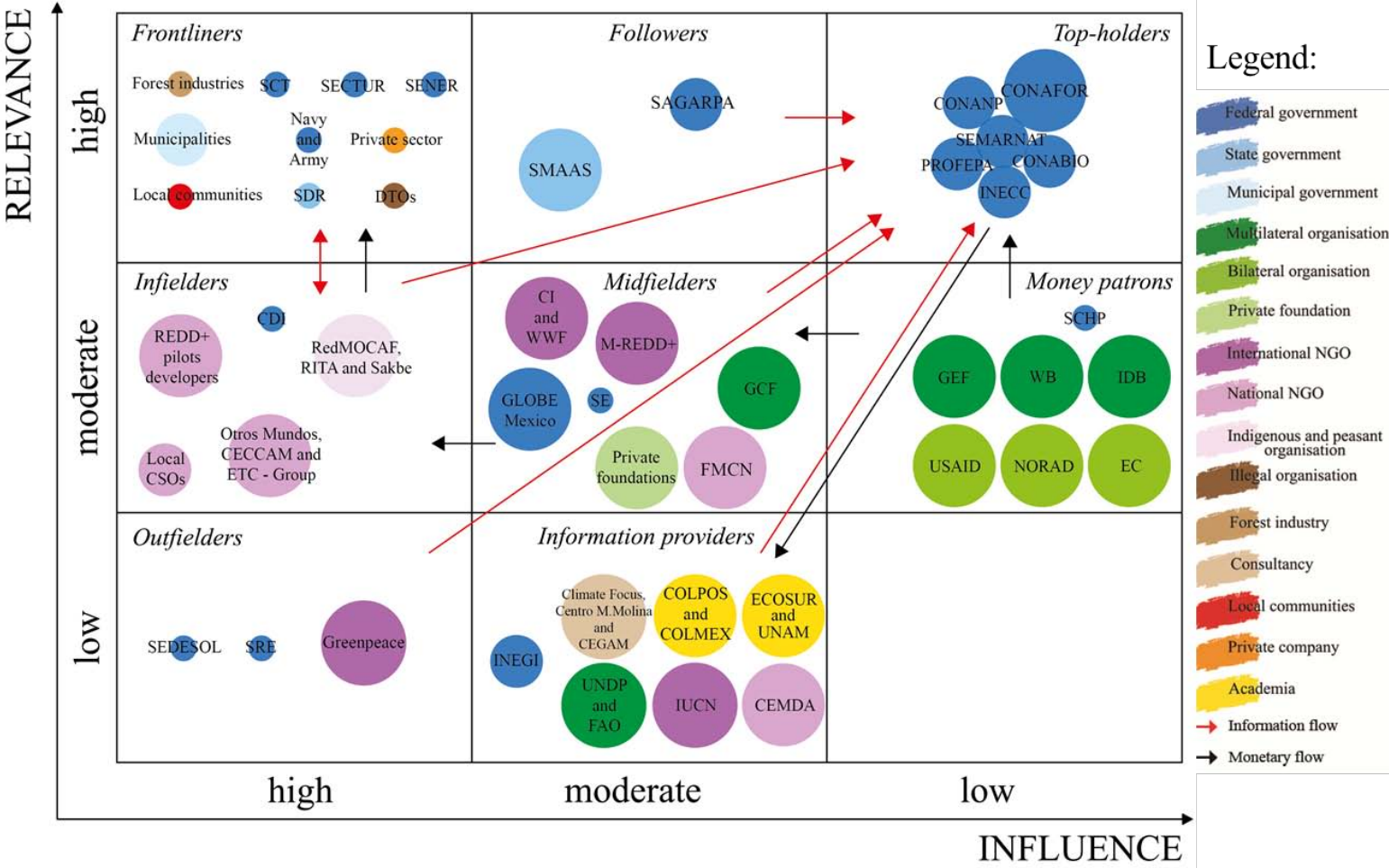
5.1. Mapping REDD+ actors in Mexico

The final list of national and sub-national stakeholders in Mexico's REDD+ readiness encompasses 90 actors. Stakeholders include representatives from 15 groups, defined by the type of organization they represent. The list cannot be considered comprehensive, because of the large number of REDD+ stakeholders at national level and because at the sub-national level it only includes actors relevant for the state of Chiapas and for the Yucatán peninsula region (Section 2.7.2 for the justification of this focus). However, due to similarities in actors' composition among the Mexico's forested regions, I argue that the list of actors at sub-national level used here likely exemplifies the sub-national level REDD+ stakeholders in other country's states.

As noted in the methodological chapter (Section 4.3.2), stakeholders were categorised based on their *relevance*, *influence* and *interest* and using a three-grading system (high, moderate and low). Gradients of actors' relevance and ability to influence have been combined to identify nine theoretically possible stakeholder groups: *top-holders*, *followers*, *frontliners*, *money patrons*, *midfielders*, *infielders*, *information providers* and *outfielders*, labels derived from the most common role or position that group members have in REDD+ readiness. Among the listed REDD+ stakeholders, I identified representatives of all groups, except for the group with low relevance but high ability to influence REDD+ design. Such group, although theoretically possible seem not be represented in the real world. Within each identified group, the stakeholders were

further classified according to their level of interest in REDD+ implementation represented in the size of the circle in Figure 5.1.

Figure 5.1: REDD+ stakeholders mapping: relevance, influence and interest



Source: own elaboration.

5.1.1. Top-holders

Top-holders are the most relevant and most influential stakeholders in Mexico's REDD+ readiness process (upper right corner of Figure 5.1). Top-holders are typically actors with a leading role in official decision-making processes. They manage a substantial amount of financial resources for REDD+ implementation and their activities directly contribute to land-use change in the country. This group includes the federal environmental agencies, namely the ministry of environment (SEMARNAT) and its *deconcentrated public agencies* and an *inter-ministerial commission* that have been considered as jointly contributing to SEMARNAT's prominence in the REDD+ readiness process (Table 5.1). It also includes the federal forestry agency (CONAFOR), which has been considered apart, because although it is a *public agency decentralised* from SEMARNAT, it controls its own budget and administration (Aspinwall, 2013).

Table 5.1: Mexico's REDD+ readiness Top-holders

Characteristic	Relevance	Influence	Interest
Scale			
Actor	The Ministry of Environment and Natural Resources (SEMARNAT)		
National	High: It is responsible for environmental governance, including climate change mitigation and adaptation policies. It formulates environmental laws and policies and issues land-use change permits. Its state branches implement and supervise programmes and co-ordinate with local environmental authorities.	High: It holds the highest position in the formal environmental policy decision-making hierarchy. It does not control REDD+ readiness finances. It will be chair of the Climate Change Fund, including the Registry of Mobile and Fixed Source Emissions.	High: It presides the CICC and participates in the CTC and the GT-ENAREDD+.
	The National Commission of Protected Areas (CONANP)		
	It is responsible of nature conservation through Protected Areas.	It develops REDD+ pilots as a secondary recipient.	It is member of GT-REDD+ and participates regularly in the CTC and state CTCs.
	The Office of the Federal Attorney for Environmental Protection (PROFEPA)		
	It controls illegal logging	It does not receive	It participates

through law enforcement.	REDD+ readiness funds.	irregularly in the CTC.
The National Institute of Ecology and Climate Change (INECC)		
It evaluates environmental public policies and provides improvement recommendations. It coordinates formulation and implementation of The National Climate Change Program, the State Climate Change Action Programs, and the Municipal Climate Action Plans. It is responsible for elaboration of the National IPCC Communications and National Inventories of GHGs.	It does not receive REDD+ readiness funds. It evaluates the effectiveness of REDD+ public policies.	It participates regularly in GT-REDD+ and intermittently in the CTC.
The National Commission for Knowledge and Use of Biodiversity (CONABIO)		
It is a permanent interdepartmental commission composed of representatives of ministry of agriculture, health, education, social development, foreign affairs, energy, economy, tourism, finance, and a technical secretary-SEMARNAT aimed at promoting biodiversity research and conservation.	It works on development of MRV system as a secondary recipient. It is a partner on the Cooperation South-South, with the responsibility to develop a methodology to measure forest degradation.	It is member of GT-REDD+, and participates regularly in the CTC and state CTCs.
The National Forest Commission (CONAFOR)		
High: It is responsible for national forest governance, produces forest inventory and manages the Mexican Forestry Fund. It is represented at the sub-national level through its state branches.	High: It is REDD+ focal point under UNFCCC. It coordinates the development of the FCPF- Emission Reductions Initiative. It receives the largest REDD+ readiness	High: It is founder member and technical secretary of the CTC.

		funds, and is the utmost REDD+ authority and author of ENAREDD+.	
--	--	--	--

Source: own elaboration.

5.1.2. Followers

The *Followers'* group includes very relevant and moderately influential actors in REDD+ readiness (upper middle field of Figure 5.1). In line with the Top-holders, Followers' activities directly contribute to land-use change and have a leading role in official decision-making processes, however, they do not typically manage large shares of REDD+ funds. This group includes the federal ministry of agriculture (SAGARPA), as well as environmental agencies in the states that have promoted early REDD+ actions (Table 5.2).

Table 5.2: Mexico's REDD+ readiness Followers

Characteristic	Relevance	Influence	Interest
Scale			
Actor	The Ministry of Agriculture, Livestock, Rural Development, Fisheries and Food (SAGARPA)		
National	High: It is responsible for public policies supporting commercial and subsistence agriculture - mayor sources of deforestation in Mexico. It has well-developed institutional arrangements at the local level e.g., the Municipal Council for Sustainable Rural Development.	Moderate: It coordinates the Work Group on Regional Project under the Inter-ministerial Commission for the Sustainable Rural Development. It does not control REDD+ readiness funds.	Moderate: It is a member of CICC and GT-REDD+ and secretary of CONAF. It participated in the CTC until 2012.
State	The Ministry of Environment and Sustainable Use, Campeche (SMAAS), The Ministry of Ecology and Environment, Quintana Roo (SEMA), The Ministry of Urban Development and Environmental Planning, Yucatán (SEDUMA), and The Ministry of Environment and Natural History, Chiapas (SEMAHN)		
	High: They are responsible of state environmental governance in coordination with	Moderate: In the absence of the State Forest Commission, they are the highest forestry authorities in	High: They are leaders of state CTCs. They have used the State Forestry Councils and the State Planning

	CONAFOR. They are in charge of elaboration of State Climate Change Action Programs.	the state forestry sector. SMAAS and SEMAHN are members of GCF, while only SEMAHN implemented the Lacandon REDD+ pilot project. They are the authors of the State REDD+ strategies.	Development Committees to promote REDD+.
--	---	---	--

Source: own elaboration.

5.1.3. Frontliners

The group of *Frontliners* includes a large variety of actors from different social sectors, some operating at national and others at local levels (upper left corner of Figure 5.1). The commonality between all these actors is that their activities induce direct land-use change in Mexico, either positive or negative. Due to their marginal position in REDD+ decision-making and lack of REDD+ financial resources, none of the actors in this group can influence Mexico's REDD+ design.

Actors in the frontliners group include some federal government agencies such as the ministries of tourism (SECTUR), communications and transport (SCT), and energy (SENER). The group also includes the Mexican navy, army and drug-trafficking organizations, as well as representatives of the forest industry sector, the state federal agricultural agencies, the municipal authorities, private sector representatives and local communities (Table 5.3).

Table 5.3: Mexico's REDD+ readiness Frontliners

Characteristic	Relevance	Influence	Interest
Scale			
Actor	The Ministry of Tourism (SECTUR), The Ministry of Communications and Transport (SCT), and The Ministry of Energy (SENER)		
National	High: They are responsible of public policies in tourism, transport and communications, and energy - major drivers of deforestation in the country.	Low: They do not have a role in REDD+ and do not receive REDD+ funds.	Low: They are members of CICC and CIDRS, but since the elaboration of the REDD+ vision they did not contribute to REDD+ design.
	The Mexican Navy (SEMAR) and Army		

	High: They are the federal bodies in charge of protection of coastal and inland forests from illegal logging.	Low: They do not have role in REDD+ and do not receive REDD+ funds.	Low: They have not participated in the REDD+ readiness.
	Drug-trafficking organizations (DTOs)		
	High: Narco-trafficking is acknowledged as one of the main deforestation drivers in rural Mexico.	Low: They are illegal organisations.	Low: They are illegal organisations.
	Private sector		
	High: International and national private mining, agricultural, and processing companies, among others, that cause deforestation and soil and water contamination. Private companies buyers or potential buyers of forestry carbon credits.	Low: They do not have role in REDD+ and do not receive or provide REDD+ funds.	Low: They do not participate in the REDD+ readiness.
	The Mexican Association of Forest Planters (AMEPLANFOR), National Chamber of Wood Industry (CNIM), and National Chamber of Forest Industries (CNIF)		
	High: They are organisation of producers who manage large surfaces of forest plantations in the country. They are interested in exploring the potential to benefit from REDD+.	Low: They do not have role in REDD+ and do not receive REDD+ funds.	Moderate: They represent industrial and professional sectors in GT-ENAREDD+ and in workshops on REDD+.
State	The Ministry of Rural Development, Campeche (SDR-Campeche), The Ministry of Rural Development, Yucatán (SDR-Yucatán), The Ministry of Agricultural and Rural Development, Quintana Roo (SEDARI), and The Ministry of Rural Affairs, Chiapas (SECAM)		
	High: They are responsible of state public policies in the agriculture sector.	Low: They do not have role in REDD+ and do not receive REDD+ funds.	Low: SDR-Campeche and SEDARI have participated in the corresponding state CTCs.
Municipal	Municipal authorities		
	High: They are responsible of parks,	Low: They do not have role in REDD+ and do	Moderate: Municipalities of

	water and sanitation services, and to implement the federal and state environmental policy. They are also in charge of elaboration of Municipal Climate Action Plans.	not receive REDD+ funds.	Calakmul and Hopelchen participate in the CTC-Campeche.
Local	Local communities		
	High: They own 70% of forests in Mexico and are responsible for its sustainable management. They implement the federal and state environmental and land-use policies.	Low: They implement REDD+ pilots and/or participate in protests against REDD+. Some of them are not familiar with REDD+.	Low: They are absent, underrepresented or indirectly represented by NGOs. Some are largely indifferent of or against REDD+.

Source: own elaboration.

5.1.4. Money patrons

Money patrons are moderately relevant and very influential actors in REDD+ readiness (middle right field of Figure 5.1). They provide and/or manage financial resources for the development of certain public policies that can have either positive or negative impacts on the country's land-use trajectories. They also provide and/or manage large amounts of REDD+ funds through which they impact REDD+ readiness agenda and therefore REDD+ design in Mexico. This group includes the ministry of finance (SHCP) and its decentralised rural development agency, as well as numerous multilateral and bilateral organisations who are investors in REDD+ readiness (Table 5.4).

Table 5.4: Mexico's REDD+ readiness Money patrons

Characteristic	Relevance	Influence	Interest
Scale			
Actor	The Ministry of Finance and Public Credit (SHCP)		
National	Moderate: It is the federal ministry in charge of controlling federal money and international donations and loans directed towards forestry,	High: It is the utmost financial authority that approves the projects' proposal before they are submitted to REDD+ funds. It is Mexico's focal point for GEF and	Low: It participates only in CIDRS.

	agriculture and other land-use sectors.	responsible of creating the public trust through which the Climate Change Fund will operate.	
Financiera Rural (FR)			
	It facilitates local producers' access to government subsidies and programs.	It is a key partner in the Forest Investment Program.	It rarely participates in the CTC.
The World Bank (WB), The United States Agency for International Development (USAID), The Inter-American Development Bank Group (IDB), The Norwegian Agency for Development Cooperation (NORAD), The Global Environment Facility (GEF), The European Commission (EC), The French Development Agency (AFD), and The Spanish Agency for International Development Cooperation (AECD)			
	Moderate: They are multilateral and bilateral organisations that support implementation of land-use change activities.	High: They provide large shares of REDD+ readiness funds (mostly through loans) to CONAFOR, but also to M-REDD+ and other NGOs, for development of early actions, REDD+ pilots, development of MRV system and legal reforms.	High: They are only observers in the REDD+ fora, but invest in REDD+.

Source: own elaboration.

5.1.5. Midfielders

Midfielders are moderately relevant actors as they can help promoting some land-use activities over others (central area of Figure 5.1). They are also moderately influential, as they receive or provide certain amounts of REDD+ financial resources. This group includes the ministry of economy (SE) and the federal agency in charge of legislative power (GLOBE Mexico), the consortium of national and international NGOs (the M-REDD+ Alliance), two large INGOs, the voluntary carbon market developers, and private conservation foundations and funds (Table 5.5).

Table 5.5: Mexico’s REDD+ readiness Midfielders

Characteristic	Relevance	Influence	Interest
Scale			
Actor	The Ministry of Economy (SE)		
National	Moderate: It is the federal ministry in charge of national and foreign investments in productive sectors such as mining, agriculture and forestry. It could steer forest owners’ decisions towards pursuing land-use activities of one type or another.	Moderate: It controls foreign investments, but it does not have a role in REDD+ readiness and it does not receive REDD+ funds.	Low: It participates in CIDRS and GT-REDD+, and only rarely in the CTC.
	GLOBE Mexico		
	Moderate: It is a national chapter of the Global Legislators Organisation (GLOBE International) comprising legislators from different parliamentarian groups. It promotes legislative reforms for REDD+ in Mexico which should reduce deforestation rates.	Moderate: It receives REDD+ readiness funds for legal reforms.	High: It participates in the CTC and CONAF and leads the Legislators Forest Initiative to build their capacities in REDD+.
	The M-REDD+ Alliance -The Nature Conservancy (TNC), Rainforest Alliance (RA), Woods Hole Research Center (WHRC), and Natural Areas and Sustainable Development (ENDESU)		
	Moderate: It is a consortium of national and international conservation NGOs working on M-REDD+ project.	Moderate: It is funded by USAID, and provides CONAFOR with technical advice and financial support on REDD+ design.	High: It supports the CTC and state CTCs, and organises “Learning communities” ³⁶ sessions.
	Conservation International (CI) and World Wildlife Fund for Nature (WWF)		
	Moderate: They are large international conservation NGOs that	Moderate: They function as technical and finance assistants	High: They invest in REDD+ in Mexico. In the past they

³⁶ *Comunidad de aprendizaje* in Spanish.

promote projects with land-use impact in Mexico.	for REDD+ pilot projects in Oaxaca and Chiapas with CONAFOR, state governments and CSOs	participated in the national CTC.
The Governors' Climate and Forests Task Force (GCF)		
Moderate: It includes representatives of 26 states and provinces, and promotes carbon markets and jurisdictional approach to REDD+.	Moderate: It collaborates with federal and state governments on sub-national REDD+ development.	High: It collaborates with federal and state governments.
Moore foundation, Ford foundation, CFH foundation, Christensen Fund, Oxfam, and Climate Works		
Moderate: They are private financial organisations that support REDD+ pilot activities.	Moderate: They financially support pilot activities implemented by civil society organisations.	High: They invest in REDD+.
The Mexican Fund for the Conservation of Nature (FMCN)		
Moderate: It is the largest private conservation fund in Latin America, who provides financial resources to local communities to develop conservation projects. It operates as Mexico's GEF National Fund.	Moderate: Until 2012, it was a national partner in M-REDD+. Currently it provides and channels funds for REDD+ pilots.	High: It is one of the most frequent participants in the CTC.

Source: own elaboration.

5.1.6. Infielders

Infielders are moderately relevant actors for the REDD+ readiness process (middle left field of Figure 5.1). Their moderate role comes from the combination of their role in promoting or facilitating certain land-use activities at local level. However, these actors are not influential on REDD+ design because they do not have an important role in the formal decision-making and/or do not hold significant financial resources. This group includes the federal agency for indigenous affairs (CDI) and different types of civil society organisations (CSOs) such as NGOs developing carbon forestry and/or REDD+ pilot projects, peasant and indigenous peoples' organisations, CSOs partners in the *Reddeldia*-Chiapas movement, and several other local CSOs (Table 5.6).

Table 5.6: Mexico’s REDD+ readiness Infielders

Characteristic	Relevance	Influence	Interest
Scale			
Actor	The National Commission for Indigenous Development (CDI)		
National	Moderate: It is the federal agency in charge of development and evaluation of public policies and programmes on indigenous matters.	Low: It supports the establishment of consultative and participatory fora and platforms, but it does not receive REDD+ funds.	Low: It participates in CICC without holding a vote. It has rarely participated in CTC. Its Indigenous Broadcasting System will be used to communicate REDD+ to local communities.
	The Mexican Civil Council for Sustainable Forestry (CCMSS), PRONATURA A.C., Reforestamos Mexico, Cooperative AMBIO A.C., Servicios Ambientales de Oaxaca (SAO), and U’yool’che A.C.		
	Moderate: They include national NGOs and local civil associations working with local communities on sustainable forest management and development of carbon forestry projects.	Low: They develop REDD+ pilot projects with readiness funds, and collaborate with CONAFOR and state governments.	High: They participate in the CTC, state CTCs, and other REDD+ related events.
	The Mexican Campesino Forest Producers Network (RedMocaf), The Indigenous Network of Environmental Tourisms (RITA), The Mexican Network against Desertification and Degradation of Natural Resources (RIOD MEX A.C.), Sakbe- Communication and Defence, and Fundar A.C.		
	Moderate: They are CSOs working on information provision and capacity development of local communities for self-management of forest resources. They represent rural and indigenous sectors in political bodies.	Low: They receive funds from private foundations for conducting REDD+ workshops on social safeguards.	High: They have frequently participated in the CTC, lobbied establishment of GT-ENAREDD+ within CONAF and published REDD+ material.
State	Otros Mundos A.C. Chiapas (Friends of the Earth Mexico), Maderas del Pueblo del Sureste A.C., Vía Campesina, Center for Studies for Change in the Mexican Countryside (CECCAM), and Action Group on Erosion, Technology and Concentration (ETC Group)		
	Moderate: They are	Low: They are not	High: They organise

	CSOs partners on the <i>Reddeldia</i> -Chiapas movement and -together with many other organisations ³⁷ - fight against REDD+. CECCAM and ETC-Group also work as research centres providing information to local communities.	involved in REDD+ readiness.	national and international protests against REDD+ and meetings with local communities.
Local	Organisation of ejidos forestry producers in Mayan zone (OEPFZM), Kooel Kab, and Union of Indigenous Beekeepers from Chenes region (UAIC)		
	Moderate: They are CSOs working on local communities' capacity building by providing information and technical assistance on productive land-use activities.	Low: They do not receive REDD+ readiness funds. UIAC collaborate on REDD+ pilot with PRONATURA.	Moderate: They participate in the state CTCs.
	The Popular Indigenous Regional Council of Xpujil S.C. (CRIPX) and Ka Kuxtal Much Meyaj A.C.		
	Moderate: They are local indigenous organisations working with local communities from the Municipality of Calakmul and Hopelchen, respectively.	Low: They are not involved in REDD+ readiness.	Moderate: They have not been invited to national or state CTCs, but have participated in CEECAM's meetings.

Source: own elaboration.

5.1.7. Information providers

Information providers are stakeholders without relevance in REDD+ readiness as their activities do not directly relate to land-use change (lower middle field of Figure 5.1). These actors, however, hold moderate power to steer REDD+ design in certain ways, since they are the secondary recipients of REDD+ financial resources for sub-national REDD+ research activities or the facilitators and observers of the REDD+ readiness process. This group includes the national institute of statistics (INEGI), two large

³⁷ See: <http://reddeldia.blogspot.mx/p/declaratoria.html> and <http://reddeldia.blogspot.com/2013/04/carta-abierta-de-chiapas-sobre-el.html>, Accessed: 20/10/2015

national research institutions, two UN agencies, a large international NGO, a national NGO, and independent expert advisories (Table 5.7).

Table 5.7: Mexico’s REDD+ readiness Information providers

Characteristic	Relevance	Influence	Interest
Scale			
Actor	The National Institute of Statistics, Geography and Informatics (INEGI)		
National	Low: It performs the country’s population, economic, agricultural, livestock and forestry census and it is responsible of the National Forest and Land Inventory.	Moderate: Its land-use change and vegetation maps are used to build the national reference level under REDD+.	Moderate: It regularly participates in the CTC and is a permanent invited member in CICC.
	The National Autonomous University of Mexico (UNAM), The College of the South Border (ECOSUR), The College of Postgraduates (COLPOS), and The College of Mexico (COLMEX)		
	Low: They are large public universities and research centres studying REDD+. They collaborate with government and NGOs on early activities and pilot projects and in particular on MRV system design and implementation.	Moderate: They hold information and receive important amounts of REDD+ readiness funds as secondary recipients.	High: They frequently participate in the CTC and/or CONAF, and produce REDD+ related documents.
	The Mexican Centre for Environmental Law (CEMDA)		
	Low: It is a large national NGO that works on the implementation of environmental legislation. It develops public policies and legal instruments for REDD+, but has no impact on land-use change in Mexico.	Moderate: It receives finance from Ford Foundation for promoting REDD+ among civil sectors.	High: It participated in the CTC, state CTCs, and in GLOBE Mexico consultations.
	The International Union for Conservation of Nature (IUCN), The United Nations Program for Development (UNDP), and Food and Agriculture Organisation (FAO)		
	Low: IUCN is a large professional global	Moderate: IUCN and UNDP are partners	High: They participate in different REDD+

conservation network, while UNDP and FAO are UN agencies promoting poverty eradication and sustainable use of natural resources.	with M-REDD+ on equity and gender issues and REDD+ pilots. UNDP and FAO are agent managers and technical assistants on the Cooperation South-South, respectively.	readiness initiatives. UNDP has also participated in CTC-Campeche.
Climate Focus, Centro Mario Molina and The Centre of Specialists in Environmental Management (CEGAM)		
Low: They are consultancies and expert advisory companies in the field of environmental protection.	Moderate: CEGAM was in charge of planning and facilitating the CTC. Centro Mario Molina follows transparency of REDD+ financial flows.	High: They observe and facilitate the work of CTC, and organise REDD+ related events.

Source: own elaboration.

5.1.8. Outfielders

The group of *outfielders* includes actors whose activities do not have an impact upon land-use change in the country and therefore have been categorised as not relevant for REDD+ effectiveness (lower left corner of Figure 5.1). Furthermore, these actors have no role in the formal decision-making processes and do not have resources to mobilize for REDD+, which vest them with no influence on Mexico's REDD+ design. Although they hold no relevance or influence, these actors are still considered REDD+ stakeholders for different reasons. Representatives of federal agencies, such as the foreign affairs (SRE) and social development (SEDESOL) ministries have been recognised as important by other stakeholders, the former because it has helped CONAFOR in negotiating foreign investments for REDD+ and the latter because its public policies may help ensuring that REDD+ activities translate into social benefits. In turn, the large international NGO Greenpeace has demonstrated strong interest in REDD+ readiness process (Table 5.8).

Table 5.8: Mexico’s REDD+ readiness Outfielders

Characteristic	Relevance	Influence	Interest
Scale			
Actor	The Ministry of Foreign Affairs (SRE) and The Ministry of Social Development (SEDESOL)		
National	Low: They are federal ministries in charge of international economic and cultural cooperation, and of public policies in social development, respectively.	Low: SRE has negotiated foreign bilateral investments for REDD+, however it does not manage or receive REDD+ funds.	Low: They participate in GT-REDD+. SEDESOL also participates in CIDRS and only rarely in the CTC.
	Greenpeace		
	Low: It is an international conservation NGO.	Low: It does not have role in REDD+ and it does not receive REDD+ funds.	High: It has participated in the CTC and has published REDD+ related documents.

Source: own elaboration.

5.2. Normative and organisational characteristics of multi-stakeholder processes in Mexico’s REDD+ readiness

As it has already been emphasised throughout this thesis, there are several multi-stakeholder fora for discussing ENAREDD+ design in Mexico, including the national CTC and the sub-national CTCs, and GT-ENAREDD+ under CONAF.

5.2.1. REDD+’s Technical Advisory Committee

Mexico’s REDD+’s Technical Advisory Committee has been informally operating since 2008 as a subgroup of the Technical Advisory Committee for PES Programme (CTC-PSA). In 2010, with support from CONAFOR, SEMARNAT, and a group of civil society organisations, CTC was officially established as a space for open dialogue on REDD+ between the government and the civil society (CTC, 2010). According to the government, the process leading to the CTC establishment was legislatively supported by Article 159 of the General Law of Ecological Equilibrium and Environmental Protection, which regulates the establishment of consultative bodies for evaluating and monitoring environmental policies (LGEEPA, 2012) and by Article 13 of the National

Development Law on Activities of Civil Society Organisations, which encourages federal ministries to promote the participation of the civil sector through consultative bodies (LFFAROSC, 2012). The aim of the CTC is “to support the construction of an effective, efficient and participatory mechanism for the design and implementation of ENAREDD+, to ensure its transparency and to maximize economic, environmental and social benefits” (CONAFOR, 2010a). The CTC gives recommendations to CONAFOR, which may accept or refuse them, although it should provide information on the reasons for its decision (CTC, 2010).

The CTC constitutes a non-restrictive participatory forum that, theoretically, seeks for all sectors’ balanced participation through members’ accreditation (CTC, 2010). Initially, the CTC had 60 accredited members including representatives of both international (5 members) and national CSOs³⁸ (15); academia (7); government at the federal (18) and state (2) levels, and the private sector (7) (CTC, 2010). All accredited members participate in the CTC plenary, the highest decision-making authority of this forum. CTC’s guests or observers, such as international development and financial organisations (7), can also attend plenary meetings, but cannot vote (CTC, 2010). The CTC’s activities are organised in Thematic Working Groups on particular ENAREDD+ design issues in which all participants hold voice and vote (CTC, 2010). The CTC is coordinated by a president (CSO sector representative) and a technical secretary (CONAFOR representative) (CTC, 2010).

Decisions should be taken by consensus when possible, or by voting, in which case 75% of votes represent the majority (CTC, 2010, Article 20). The decisions should be made with quorum, namely with the presence of the president, the technical secretary and at least 51% of registered members (CTC, 2010, Article 19). When an agreement cannot be reached through such procedure, the CTC should inform the Inter-ministerial Commission on Climate Change’s working group on REDD+ about all existing views (CTC, 2010).

5.2.2. REDD+’s state-based Technical Advisory Committees

Since 2011, CONAFOR and state governments have promoted the establishment of state-based Technical Advisory Committees, or sub-national CTCs. Sub-national CTCs operate in parallel with the CTC and aim to identify REDD+ regional and state

³⁸ CSOs include peasant, indigenous peoples and forest producers’ groups and organisations.

priorities, to foster local people's participation in ENAREDD+ development, and to elaborate state level REDD+ strategies in the priority regions, including the states of Oaxaca, Chiapas, Jalisco, Campeche, Quintana Roo and Yucatán (CONAFOR, 2011b, 2013b).

Here, I exclusively focus on the functioning and development of the CTC-Campeche, where the two case studies addressed in this thesis are located. Given that sub-national CTCs work according to their own internal regulations (CTC, 2010) and that this study investigates the fora's legitimacy as perceived by participants, findings regarding the CTC-Campeche legitimacy cannot be generalised. Results, however, could be considered indicative of the impact that the perceived legitimacy of sub-national CTCs may have on the overall legitimacy of the country's REDD+ readiness process.

The CTC-Campeche started as a non-restrictive participatory forum, but later introduced a rule of balanced representation of accredited members of five main productive sectors (agriculture, livestock, forestry, beekeeping, and hunting and fishing) and a gender balance. The representatives hold both voice and vote and have been recruited from the Municipal Council for Sustainable Rural Development (COMUNDERS) in the four municipalities with potential for REDD+ activities (Calakmul, Hopelchen, Escarcega and Candelaria). The CTC-Campeche's president and vice-president (CSO representatives) and the secretary (SMAAS representative) convene meetings every two months, rotating among the abovementioned four municipalities, in order to facilitate the participation of actors at the municipality level (I139, I140). Representatives of the federal government, NGOs, academia, and local communities, e.g., *comisarios ejidales*, can also participate in the CTC-Campeche discussions organised through working groups, but cannot vote. Decisions are made based on the majority (75%) of votes and with quorum (51% of accredited members). The documents produced by the committee (so far only meeting minutes and internal regulations) should be made available to the general public through the SMAAS's webpage and the COMUNDERS's venues, and sent as hard copies to local communities (Arriagada, 2014). However, there are still no formal mechanisms of an information dissemination and communication strategy (I139).

5.2.3. ENAREDD+'s Working Group of the National Forestry Council

The ENAREDD+'s Working Group of the National Forestry Council was established in July 2013, following a request made by a group of peasant and indigenous peoples' organisations (LGDFS, 2012, Article 156; CONAF, 2014; I126). The decisions and suggestions made by GT-ENAREDD+ should be approved by the CONAF's plenary which comprises two representatives from each of the following sectors: government (8 accredited members), NGOs (9), indigenous organizations (3), peasants organizations (6), academia (3), private and communal forest industries (5), and professional organizations (3), such as forestry services providers³⁹ (CONAF, 2010). In CONAF's decision making procedures, each sector has only one vote and non-attendance to meetings is sanctioned (CONAF, 2010). GT-ENAREDD+ includes participation of the representative of all named sectors and has so far provided comments on the ENAREDD+ drafts and the ER-PIN document.

Besides the specialised working groups of informal and temporal character and the formal and permanent Technical Support Committees working on specific issues (e.g., legislation, inspection and forest monitoring, technical forestry services), CONAF counts with a decentralised network of 32 State Forest Councils, which are also likely to be included in regional and local consultations about the design and implementation of the REDD+ national strategy (CONAF, 2013). Additionally, the Indigenous and Peasant Roundtable has been recently created in the framework of CONAF and includes representatives of the social and indigenous sectors and the National Commission for Indigenous Development (FCPF, 2015).

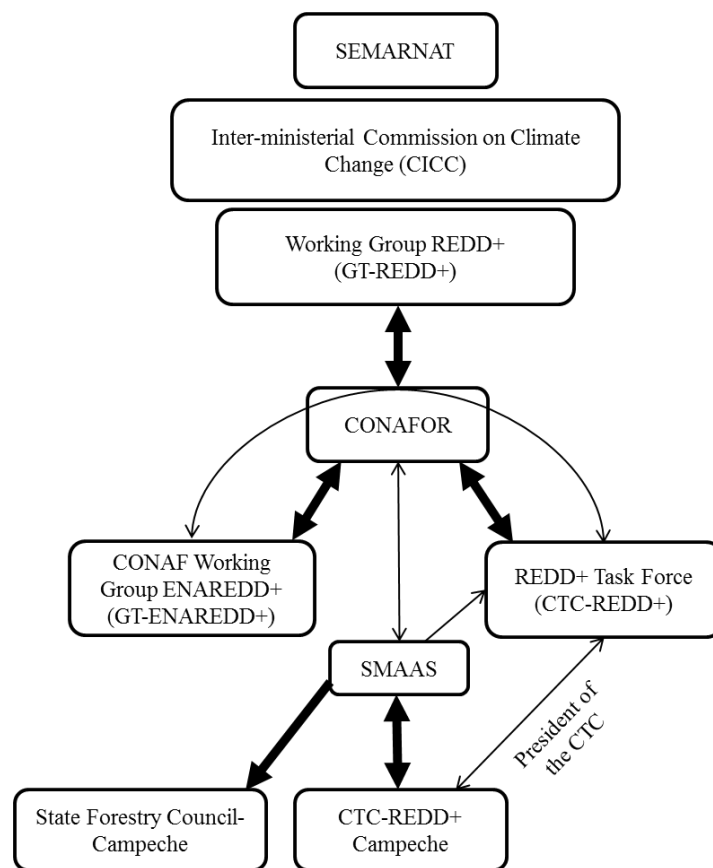
5.2.4. Information sharing between multi-stakeholders fora

The CTC, the sub-national CTCs, and the GT-ENAREDD+ aim to improve input legitimacy of the REDD+ readiness process. Namely, these fora should provide the REDD+ working group led by SEMARNAT with comments from the civil society on the ENAREDD+ drafts, ER-PIN and other REDD+ readiness documents. Despite such common aim, the CTC and the GT-ENAREDD+ work completely independent of each other, only linked through CONAFOR representatives who attend both fora's meetings.

³⁹ To become or continue to be CONAF members, representatives should demonstrate their credibility and experience in national forestry issues in a public call organised every two years (CONAF, 2010).

In theory, the CTC should coordinate and maintain formal communication with its sub-national counterparts, i.e., the states' CTCs. However, as the CTC-Campeche example suggests, the information exchange between these two fora is informal and predominantly occurs through the president of the CTC (NGO CCMSS) and the technical secretary (SMAAS). Through SMAAS, the state CTC also interacts with CONAFOR's federal and state offices, as well as with other participants in the Campeche forest council. In turn, the state forest councils should have a representative in CONAFOR's sessions. However, there is no record of whether the Campeche state forestry council had been represented in the GT-ENAREDD+ discussion to date (see Figure 5.2).

Figure 5.2: Information flow among the main multi-stakeholders fora in national and Campeche's REDD+ readiness process⁴⁰



Source: own elaboration.

⁴⁰ Thick and thin arrows are used to distinguish among formal and informal information flows, respectively.

5.3. The legitimacy of Mexico's REDD+ multi-stakeholders fora

This section evaluates the legitimacy of REDD+ readiness in Mexico based on the stakeholders' views about the functioning of CTC, GT-ENAREDD+, and CTC-Campeche. The national CTC has the longest history and occupies a central position in my analysis. The legitimacy of GT-ENAREDD+ did not receive as much attention as the CTC by the interviewed stakeholders, probably because REDD+ issues have only recently been included in its agenda. Therefore, stakeholders' views on its procedures are presented together with CTC-related opinions. Logically, the legitimacy of the CTC-Campeche received more attention by the interviewees at the state level.

Drawing on the analysis of interviews conducted at national and regional levels (see Appendix C), I identified two groups with contrasting perceptions about the input legitimacy of the CTC: the *CTC supporters* and the *CTC detractors* (see Table 5.9), and another two groups with contrasting perceptions about the input legitimacy of the CTC-Campeche: the *CTC-Campeche supporters* and the *CTC-Campeche detractors* (see Table 5.10). The descriptions below include insights into the groups' perception on the legitimacy of the ENAREDD+ consultation protocol.

5.3.1. The CTC-REDD+ as a legitimate decision-making forum

As expected, stakeholders who consider the CTC as a legitimate forum, or the *CTC supporters*, include the government, INGOs, large NNGO sectors and consultancies. In their view, the CTC legitimacy is predominantly built on inclusiveness, which is -in turn- achieved through its non-restrictive approach to participation (I125, I127, I132, I136, I138).

There are, however, nuances in stakeholders' perceptions. For example, one NNGO stakeholder considers that even though a large number of participants would be desirable, the inclusion of more participants could jeopardize the quality of discussion (I132). In contrast, other stakeholders mentioned that the legitimacy of the CTC process might be possibly reduced because some relevant actors, including governmental agencies working with land-use and financial sectors or private actors, are missing (I125, I131, I133, I134, I135, I138).

Most centrally, members of this group consider the lack of local communities' participation as intrinsic to environmental decision-making, and they justify such

absence on the grounds of lacking resources at CTC level to support a greater inclusion of local people (I132, I133). In the words of one interviewee, the criterion of representativeness is irrelevant for granting legitimacy to the CTC because the “CTC is informal, no consensus is sought, but all opinions are passed to government to choose among them” (I132). Instead, they favour indirect representation of local people mainly through NNGOs that have a role in presenting any ‘processed’ and adapted REDD+ related information to local people. According to some representatives of this group, this would help avoid creating false expectations about REDD+ and raise local legitimacy in the design phase and during implementation (I17). Furthermore, some members of this group consider that the inclusion of local people in REDD+ readiness should be improved by establishing state-based CTCs, and organising a REDD+ strategy consultation process using the protocol elaborated by the CDI’s Consultative Council (I132, I133).

However, some organisations are concerned with the fact that some CSOs left the process. Given that the CTC was established to facilitate dialogue between government and civil society, the fact that some stakeholders left the group is perceived as a procedural weakness (I132, I133, I136, I138). Still, they are keen to stress that it is wrong to put excessive expectations on the CTC as a decision-making forum: “some people would like the CTC to be a decision-making space, but it is not! The CTC is just an advisory group. It holds advisory and no executive power”, suggested an interviewee (I132). Some representatives of this group also support decision-making or voting without quorum, under the argument that obtaining quorum might take time (CTC, 2013).

The stakeholders in the supporters’ group also consider the CTC legitimate because it is transparent, i.e., all information is available on-line, and the draft documents have been circulated for comments, even among non-participants (I15, I136). Some of them also consider the CTC accountable, both because the agenda is developed in consultation with CONAFOR and the presiding NGO and because the large international financial and development organisations (e.g., WB, FAO and USAID) observed the forum’s sessions (I132, I136). For them, CTC’s discussions allow actors to communicate, explain, and exchange their views and ideas on REDD+, which in turn leads to major understandings and minimizes ideological differences. As one government representative in this group suggests, the fact that some important topics, such as carbon

ownership, are still under discussion only proves the deliberative nature of the group (I136). Beyond inclusiveness, NNGOs also consider the CTC a legitimate forum because all its recommendations have so far been considered in ENAREDD+ design (I132, I133). In the words of a CONAFOR representative:

“CTC is a space of joint exploration and exchange of information and points of view on different REDD+ issues. In that process we are equal, and we try to be transparent particularly in the moments of decision, at least we try to disseminate the final document and ask for comments... The actors [other sectors] have been actively participating because they saw we [CONAFOR] did not only send someone just to take notes, but we are really looking for ideas that could help us make a serious use of the CTC input” (I17).

5.3.2. The CTC-REDD+ as an illegitimate decision-making forum

CTC's legitimacy, however, has also been subject to numerous criticisms from the *CTC detractors*, which involve peasant and indigenous peoples' organisations. According to these stakeholders, the CTC's non-restrictive approach to participation at the beginning of the process allowed for a broad involvement of non-governmental actors. However, such approach had a detrimental effect on the CTC's representativeness and therefore affected its legitimacy. Participants' self-selection resulted in the overrepresentation of wealthier individuals and organisations active at the national level and the underrepresentation of local communities and their organisations. As the CTC decision-making procedure has been functioning under 'one vote per participant' rule, some actors find this outcome worrisome (I126, I137) and suggest 'one vote per sector' to enhance the CTC legitimacy. They also advocate going back to membership accreditation based on demonstrated competence and experience in REDD+ related activities, as initially indicated in the council's internal rules (I126, I137).

One actor also emphasised that the only time the government attempted to include more local people, it did so by targeting local communities supportive of its proposal for ENAREDD+ design (I126). They have also criticised the lack of active participation by SAGARPA and SEDESOL, the most important ministries dealing with rural development policies and programmes in Mexico (I126).

Another critical reason to consider CTC an illegitimate forum is its lack of influence on the ENAREDD+ design, and particularly the lack of official feedback by CONAFOR (I126, I137). It is argued that even if the CTC has enabled a better understanding of REDD+ readiness among participants, in practice the government has used this forum to legitimate its on-going land-use and conservation policies, neglecting the discussion of some important issues such as carbon rights. As described by the RedMOCAF's representative: "The culmination of the CTC informality was when they [CONAFOR] tried to pass an ENAREDD+ draft that did not resolve some fundamental issues such as carbon property" (I126).

Furthermore, peasant and indigenous peoples' organisations believe that the state-based CTCs suffer from the same informality and low participation of local communities and that the protocol for the inclusion of indigenous peoples in the national-wide ENAREDD+ consultation elaborated by the Consultative Council of the National Commission for Indigenous Development will be insufficient to guarantee their rights. Moreover, they argue that such protocol lacks intra- (different indigenous and non-indigenous groups) and inter- (women, elderly, landless) community representativeness. A main problem of the national-wide consultation is that it ultimately depends on the government's goodwill to decide if and how it will organise such consultations. As these actors emphasised, the consultation protocol does not clarify many important issues such as the form (e.g., audio-visual or oral) and language in which the ENAREDD+ draft will be distributed to local communities; the rules of discussion; the time frame for providing comments; and the feedback procedure on inclusion/rejection of suggestions.

For all these reasons, some of the stakeholders included in this group, i.e., RedMOCAF, RITA and Sakbe, left the CTC in 2013 to establish GT-ENAREDD+ within CONAF (I126, I132, I137). These actors consider CONAF more legitimate than the CTC and believe that participation in this alternative forum would result in a larger impact on the ENAREDD+ design. They think so because CONAF uses a one vote per sector rule, has accredited membership, and is legally legitimate, which would force the government to take CONAF's opinion into account (I126, I137). As the RedMOCAF's representative nicely depicted: "Through CONAF we are trying to give more seriousness to REDD+ and to get clearer compromises by the government" (I126).

Table 5.9: Summary of supporters' and detractors' perceptions on the CTC input legitimacy criteria (✓ - met; ✗ - not met)

Criterion Group (members)	CTC supporters (Government, INGOs, NNGOs, and academia)	CTC detractors (Peasant and indigenous peoples' organisations)
Recognition	✓ Representatives of all sectors are present	✓ All important actors are recognised
Inclusiveness	✓ Non-restrictive participation. Missing governmental agencies from land-use and financial sectors or private actors. Lack of local communities' participation intrinsic to environmental decision-making- to be improved through state CTCs	✗ Government targeted local communities supportive of its proposal in ENAREDD+ design. Missing high profile representatives of SAGARPA and SEDESOL
Representativeness	✓ Not important because of the consultative nature of the forum	✗ Self-selection resulted in underrepresentation of local organisations and communities
Representation	✓ Favour indirect representation of local people for avoiding false expectations	✗ Lack of accredited membership
Transparency	✓ Information available on-line and document circulated even among nonparticipants	✗ Lack of reasoning of final decisions in the official CONAFOR's feedback
Accountability	✓ Agenda agreed among CONAFOR and presiding CSOs. Sessions are observed by WB, FAO, and US-AID	✗ Lack of reasoning of final decisions in the official CONAFOR's feedback
Deliberation	✓ Major understanding and minimization of ideological differences	✓ Improved understanding among participants
Meaningful participation	✓ Recommendations included in the ENAREDD+ draft	✗ Recommendations not included in the ENAREDD+ draft. Used by government to legitimate its public policies
Input legitimacy	Legitimate	Illegitimate
Main criteria for (not) granting legitimacy	Inclusiveness and deliberation	Lack of representativeness and transparency

Source: own elaboration.

5.3.3. The legitimacy of the CTC-Campeche

I also identified two groups with distinguishable perceptions over the legitimacy of the CTC-Campeche. The state environmental authorities, the M-REDD+ Alliance and large NNGOs perceive CTC-Campeche to be a legitimate forum for discussing REDD+. I labelled this group *CTC-Campeche supporters*. These actors argue that the criterion of representativeness has been respected and that the votes are casted only by accredited members representing each invited socio-economic sector. In such a way, the number of votes is limited, which keeps the decision-making procedure easy and clear-cut. According to this group, this procedure does not restrict the inclusiveness of the forum, given that other stakeholders such as local communities, municipal authorities, and academia are also allowed to express their opinion in the plenary and working groups. The use of working groups in CTC deliberations makes the discussion among numerous participants manageable (I139). Or in the words of the SMAAS representative:

“Not all representatives of around 70 communities from the municipality of Calakmul could participate in the CTC-Campeche, as it would not be possible to reach an agreement between so many participants. [Due to the accredited membership] the *ejido* presidents, who have participated in earlier meetings, may continue to participate, having voice but not vote” (I139).

For this group, special attention should be given to disseminating and communicating the CTC-Campeche’s documents among local people as this would increase transparency and would help overcome the existing information divide (I138, I139).

The CTC-Campeche has also been subject to numerous criticisms. The *CTC-Campeche detractors* encompass CSOs and NNGOs representatives and academics. According to some stakeholders, local communities’ participation in CTC-Campeche is low or irregular and the process suffers from informality (I123, I140). Furthermore, the process is not legitimate because it suffers from low gender-, sectors-, and municipalities-balance (I123, I140). As the representative of a small local CSO mentioned:

“Initially, anyone could participate in the meetings as criteria for participation were not really defined. The problem is that there was a high turnover and no continuity in participation, so the discussion could not move forward. People cannot participate in all meetings due to attendance related costs and this made

the government select only those municipality representatives with sufficient funds” (I124).

Table 5.10: Summary of the supporters’ and detractors’ perceptions on the CTC-Campeche input legitimacy criteria (✓ - met; ✗ - not met)

Criterion Group (members)	CTC-Campeche supporters (Government, INGOs, and NNGOs)		CTC-Campeche detractors (Peasant and indigenous peoples’ organisations, NNGOs, and academia)	
Recognition	✓	All important actors are recognised	✗	Not all important actors are recognised
Inclusiveness	✓	All participants have voice, only representatives vote	✗	Low and irregular participation by local communities
Representativeness	✓	Representatives of main productive sectors	✗	Low gender-, sectors-, and municipalities-balance
Representation	✓	Representatives recruited from COMUNDERS	✗	Government select only those representatives with sufficient funds
Transparency	✓	Information available online. Planed dissemination of hardcopies of documents	✗	Lack of dissemination of information. Terminology hard to understand by local people and organisations
Accountability	✓	Representatives accountable to local producers through COMUNDERS	✗	Power accumulated with the state environmental agency
Deliberation	✓	Only internal rules document have been discorsed	✗	Discussion could not advance due to discontinuity in participation
Meaningful participation	✓	Manageable discussions organised in working groups	✗	Used by government to legitimate its public policies. Participants cannot make input on the proposals
Input legitimacy	Legitimate		Illegitimate	
Main criteria for (not) granting legitimacy	Representativeness		Lack of internal rule application and meaningful participation	

Source: own elaboration.

Since the internal rules have not been respected (despite what is claimed by *CTC-Campeche supporters*), the CTC-Campeche still operates under a non-restrictive approach to participation. To overcome these procedural shortcomings, *CTC-Campeche*

detractors suggest bringing REDD+ discussions to the Municipal Council for Sustainable Rural Development's agenda (I124, I140).

Furthermore, detractors consider that the CTC-Campeche is not transparent (I56, I124, I140, I141). For example, one actor argues that information on REDD+ exists, but there is no dissemination of such information by the government, which in turn complicates the ability of local people to understand complex REDD+ terminology (I124). Additionally, there are complaints that the CTC-Campeche lacks decision-making power, as the state environmental agency remains in full control of policy development (I123, I140). It is also argued that the CTC-Campeche is highly politicised and only used by government to legitimate on-going land-use policies and to promote private economic interests (I123, I140).

5.4. Grounds for and current state of REDD+ readiness legitimacy

This section builds on the previous sections of this chapter to address the first research topic of the thesis and its related questions concerned with the overall political legitimacy of Mexico's REDD+ readiness process. The first part of the discussion focuses on the effects that asymmetries identified between REDD+ stakeholders regarding their relevance, influence, and interest may have on REDD+ readiness success from a legitimacy point of view. The second part focuses on the factors underlying the REDD+ readiness participants' reasons to grant or not legitimacy to the national CTC and the CTC-Campeche.

5.4.1. Impact of stakeholders asymmetries on REDD+ readiness legitimacy

The results of section 5.1 suggest that the federal government's forestry authority (CONAFOR) holds the most powerful position in pursuing and overseeing REDD+ development. CONAFOR's power emanates from its leading role in the national forestry sector that over the years has resulted in an important level of knowledge and strong sense of ownership over the REDD+ readiness process (Beisheim and Dingwerth, 2008). However, CONAFOR has been challenged by the persistent lack of public funding and human resources, particularly compared with the environment (SEMARNAT) or agriculture (SAGARPA) ministries to which is hierarchically and financially subordinated. The institutional fragility of the forestry agencies worldwide

often results in their lack of capacity to coordinate and promote reforms to align policies in various land-use sectors (Mathews, 2011; Agbeja and Derkyi, 2011), leading to failure and disillusionment with the process (Gallopín, 2002) instead of sustainable rural development aimed through REDD+.

The legitimacy of the REDD+ readiness process could potentially be enhanced if the ministry of environment took over the leadership role, given that it would have more authority than CONAFOR to pursue the cross-sectoral integration among land-use sector ministries. However, SEMARNAT has not developed strong ownership for REDD+ and shows little inclination to do so. This contrasts with the development of the process in other countries, where the REDD+ readiness process has been characterised by more pronounced leadership disputes. For example, this has been the case between the ministry of environment and the ministry of forestry in Cameroon (Somorin et al., 2014), between various environmental sector agencies and the ministries of finance in Tanzania (Manyika et al., 2013), and between the ministry of forestry and the ministry of economy in Indonesia (Mulyani and Jepson, 2013).

Among the rest of federal agencies important for REDD+ development in Mexico, the ministry of agriculture holds the highest level of influence. However, despite concentrating more financial and human resources than the ministry of environment, to date, SAGARPA has not demonstrated a strong interest in REDD+. The establishment of the working group on ATREDD+ under CIDRS chaired by SAGARPA can be understood as an intention to develop a stronger sense of ownership over REDD+ (Beisheim and Dingwerth, 2008), but it is early to say if this will translate into more interest and buy-in from the agriculture sector in REDD+ and ultimately, in power in REDD+ readiness. While the low level of the agricultural sector involvement in REDD+ is not unique to Mexico, as it has been found in other REDD+ readiness process, e.g., in Cameroon (Somorin et al., 2014), there are also countries where the agricultural federal agencies have more accentuated role in REDD+ readiness. In Vietnam, for example, the ministry of agriculture shares authority over REDD+ implementation with the federal forestry administration (Sunderlin et al., 2014b). In Peru, in turn, the ministry of agriculture is in charge of forestry issues and therefore shares leadership over the REDD+ readiness process with the ministry of the environment (Zelli et al., 2014).

Other federal agencies with an important impact on land-use, including the ministries of tourism, energy and transport and communications, or those with the mandates on social development and indigenous affairs, have not been particularly incentivised by CONAFOR as leading institution to take more active part in the REDD+ readiness. Consequently, these agencies lack information on REDD+ and clarity in their roles in it. This results in a low sense of ownership and motivational difficulties to participate in the readiness process (Parkinson, 2006).

The fact that these federal agencies, including SAGARPA, remain marginal to REDD+ processes has a twofold negative effect on its overall legitimacy. First, the absence of these sectors' expertise from the readiness discussion impoverishes REDD+ design and reduce chances for cross-sectoral integration. Second, such absence also negatively affects the non-governmental sector's perceptions of the process's legitimacy, as has been suggested in Section 5.3.

Not surprisingly, some of the caveats related to REDD+'s legitimacy at the national level, have been replicated at the state level. Namely, the state environmental authorities manage only a limited portion of the state budget (OECD, 2013), and their responsibilities overlap with those of the state agricultural agencies which are largely absent from REDD+ sub-national fora (Nájera et al., 2011). In addition, and despite a long history of administrative decentralisation of forest management powers in Mexico, state and municipal authorities are still controlled by the federal government (OECD, 2013). The federal government justifies its control over REDD+ by portraying itself as more capable and reliable than state authorities (Phelps et al., 2010). This results in sub-national authorities' limited roles and capacities to develop locally adequate and acceptable REDD+ design and undermines the overall process legitimacy.

INGOs and academia representatives contracted by the Mexican government provide guidance on technical and, to a lesser extent, governance issues in REDD+. The inclusion of these actors can be understood as CONAFOR's answer to the lack of institutional capacities at the sub-national level (Zelli et al., 2014), and should have led, at least in theory, to a higher level of the process legitimacy, since it implies sharing power between government and other sector (Biermann and Pattberg, 2008; Biermann, 2009; Noor et al., 2010; Roberge et al., 2011). However, the NNGOs questioned the legitimacy of the INGOs on the basis of their limited capacity to understand and

mediate local communities' interests in REDD+ readiness (Ribot et al., 2006; Colfer, 2011; Thompson et al., 2011; Beymer-Farris and Bassett, 2012). In addition, the research performed by these INGOs and academia might be entangled with the government's or other sponsors' objectives and result in biased and uncritical findings (Luttrell et al., 2014).

Sub-national carbon forestry and REDD+ pilot projects have been developed and implemented by NNGOs, which have strategically transformed themselves into REDD+ beneficiaries (Vatn and Vedeld, 2011). Such role contrasts with their traditional role of defenders of local communities' interests and rights, and could potentially undermine their ability to represent local people's voices in REDD+ readiness (Vatn and Vedeld, 2011). The same situation has been documented within REDD+ readiness processes in other countries, including Nepal (Bushley and Khatri, 2011) and Tanzania (Manyika et al., 2013).

The results presented here further suggest that, even though not directly involved in decision-making, multilateral and bilateral organisations have financially and procedurally influence REDD+ development in Mexico. For example, REDD+ design in Mexico is pursuing the FCPF SESA process to meet environmental and social safeguards. In addition, the approval of the Carbon Fund could shorten the REDD+ readiness phase in order to respond to the FCPF's timetable, although such shortening could have a detrimental effect on the process's legitimacy. Another example is that the early action areas selected by USAID through the M-REDD+ overlap with those of CONAFOR only to some extent. Such strong financial and procedural influence could undermine the REDD+ readiness legitimacy by causing the perception that the process is externally driven or detrimental to national sovereignty (Luttrell et al., 2014).

At least two reasons explain the identified limited involvement of the international and national private sector in Mexico's REDD+ readiness. First, the great uncertainty surrounding the future of REDD+ at international and national levels disincentives potential private carbon credits buyers or carbon forestry projects' developers. Second, the communal land tenure and administration system in Mexico does not favour the establishment of large timber or agriculture concessions. However, soy production is gaining momentum in several forested states including Campeche, which could seriously jeopardize REDD+ implementation, as large forest palm oil concessionaries in

Indonesia (Edwards et al., 2012), the paper pulp industry in Mozambique (Quan et al., 2014), or the private agro- and mining- industries in Cameroon (Somorin et al., 2014). The experience from other countries suggests that -from the investment perspective- it could be important but difficult to attract the private sector to participate in REDD+ readiness, given that these wealthy and powerful actors are mostly interested in the continued profitability of resource use, irrespectively of the unsustainability of their exploitations, and therefore rather prone to oppose national policy reforms under REDD+ (Thompson et al., 2011; Angelsen and McNeill, 2012; Edwards et al., 2012; Kashwan and Holahan, 2014; Luttrell et al., 2014).

The legitimacy of the readiness process has been further threatened by the presence of CSOs who were self-excluded from the government-led readiness process (Yosie and Herbst, 1998) but used informal mechanisms such as alternative fora, protests, and campaigns to contest the idea of REDD+, and keep the authorities accountable (Newell and Wheeler, 2006). In Peru, for example, the *indigenous roundtables for REDD+* - initially established as an informal mechanism- have been endorsed by the federal government and have now become part of the government-led REDD+ readiness process, which has in turn contributed to the legitimation of the process among indigenous peoples (Zelli et al., 2014). In Mexico, given that these CSOs oppose the very idea of REDD+ (as it will be explained later), it is likely that they will continue in a power struggle with the government.

However, the most relevant fact undermining REDD+ readiness legitimacy in Mexico is the poor representation of local and indigenous peoples' views in the formal fora. This has also been the case in most developing countries participating in REDD+ (Veierland, 2011; Minang et al., 2014), but it is particularly worrisome in Mexico, as rural communities own the majority of forests and agricultural land in the country (Corbera et al., 2011).

In conclusion, until now Mexico's REDD+ governance has suffered from both the centralisation of decision-making process in the federal forestry sector and poor cross-sectoral integration among land-use sector agencies. The fact that the REDD+ process in Mexico is still led and dominated by CONAFOR can be understood as a sign of institutional inertia, i.e., the choice of the leading institution has been influenced by past circumstances that are no longer relevant (Rosenschöld et al., 2014), such as

considering that REDD+ should only concern forest-based activities. The centralisation of REDD+ power within federal government is not surprising and results from the adoption of the national approach to REDD+ (Phelps et al., 2010). The federal forestry sector has been willing to share some decision-making power with academia and with INGOs that have been more or less legitimately representing local realities, but the lack of direct participation by local communities' representatives and organisations remains the most important weakness in the REDD+ readiness process. All these findings can be interpreted as a sign of low level of polycentricity (Ostrom 1972; Nagendra and Ostrom, 2010) and lack of policy integration (Lafferty and Hovden, 2002) in Mexico's REDD+ governance.

5.4.2. Explaining actors' legitimacy perceptions

The results presented in sections 5.2 and 5.3 revealed two contested views on the perceived legitimacy of the national and sub-national REDD+ readiness fora. Such contrasting perceptions are primarily based on stakeholders' views on the fora' normative characteristics, namely on their roles and powers in REDD+ decision-making. CTC supporters grant legitimacy to the CTC and to CONAFOR as an advisory rule-making space and authority, respectively. In contrast, CTC detractors are genuinely unsatisfied with the CTC's consultative role in REDD+ readiness, mostly because its advices were not necessarily taken into account by CONAFOR in the design of the country's national strategy.

In line with their understanding of CTC role in the context of REDD+ readiness, these two groups differ in the importance they attribute to inclusiveness and representativeness. CTC supporters consider inclusiveness the most important criterion to guarantee input legitimacy because it allows all views to be represented (Hemmati, 2002). CTC detractors consider inclusiveness without representativeness detrimental to the forum's legitimacy because it deepens existing inequalities between wealthier NNGOs and disadvantaged local CSOs (Edmunds and Wollenberg, 2001 and Warner, 2007 in Noor et al., 2010; Hartman, 1998 in Boedeltje and Cornips, 2003). The reason why CTC detractors advocate for representativeness as the most important criterion is rooted in their aspiration to give a more prominent role to the CTC in REDD+ decision-making. Such different weights given to inclusiveness and representativeness are also exemplified by their differing views on the issue of local people's representation in

REDD+ readiness. Namely, CTC supporters consider that their non-governmental members adequately represent local voices, while CTC detractors call for more direct participation of local people in the REDD+ readiness (Hemmati, 2002).

My analysis also suggests that the perceptions of REDD+ process legitimacy is relational, i.e., it largely depends on the actors' characteristics, sectorial affiliation, and role in REDD+ readiness (see also Hatanaka and Konefal, 2012). CTC supporters include the representatives of government and of NGOs facilitating development of REDD+ pilots and carbon forestry projects that have been strategically positioning themselves to benefit from REDD+ (Vatn and Vedeld, 2011; Bushley and Khatri, 2011). Consequently, it could be concluded that the supporters' group grant the CTC with legitimacy led by a pragmatic logic or, in other words, by their self-interest that is in this case to profit economically from the process (Cashore, 2002). In turn, the CTC detractors include peasant and indigenous peoples' organisations, which organise dialogue on REDD+ with civil society and local people, and portray themselves as defenders of local communities' interests and rights (Vatn and Vedeld, 2011; Bushley and Khatri, 2011). Such a stance could be explained by a moral logic, i.e., they feel ethically responsible to speak on behalf of local communities, and partly by a cognitive logic, i.e., they consider the experience of the CONAF -which involves more actors and has more power in REDD+ decision-making- a more relevant and desirable forum than CTC (Cashore, 2002).

The two groups, however, acknowledge that the participation and consultation processes articulated by the CTC have improved the REDD+ readiness process compared to its early phase, but also to the previous decision-making processes in the country (see Brown et al., 2004). Even the detractors' group considered the CTC a legitimate forum in the early days.

In an attempt to respond to the CTC's shortcomings, in particular to the representativeness criterion, the government established the sub-national CTCs. The analysis of the normative characteristics of CTC-Campeche reveals that this forum does explicitly consider the accredited members' representations of the main productive sectors, however -according to the CTC-Campeche's detractors- such criterion has been poorly enforced. Therefore, the CTC decentralisation has failed to accomplish the detractors' expectations in terms of normative and procedural characteristics, which

resulted in their burnout (Yosie and Herbst, 1998; Hemmati, 2002). This then supports the point made in Chapter Three that the legitimacy of a multi-stakeholder forum is a dynamic state that must be constantly created and recreated among participants (Parkinson, 2006; Boström and Tamm Hallström, 2013).

Stakeholders' burnout due to the lack of effective public and community participation in REDD+ policy-making is not unique to Mexico. For example, in 2012 a group of NNGOs suspended their engagement with the REDD+ coordination process in DRC (Forest Peoples Programme, 2012), and an indigenous peoples' coordinating body withdrew from the Panama's UN-REDD planning body in 2013 (Lang, 2013). However, while in these countries the resignation could be understood as 'a political move' to delegitimize the entire national REDD+ process (Hatanaka and Konefal, 2012), the Mexican case is different. Even though, the detractors' reaction indirectly contributed to delegitimise the CTC in front of other broader constituencies (Hatanaka and Konefal, 2012), such as peasant and rural organisations, the CTC detractors in Mexico did not tend to leave the REDD+ readiness process entirely, given that they continued participating through CONAF. Consequently, CONAF has consolidated its position as one of the main REDD+ multi-stakeholder bodies under which the Indigenous and Peasant Roundtable has been recently established to foster local people's inclusion in the national REDD+ strategy consultation process. Similar attempts have been recently pursued by other developing countries involved in REDD+ readiness, such as Costa Rica and Peru (Backer, 2014; Zelli et al., 2014).

My original expectation was that governmental and non-governmental sectors would have opposed perceptions regarding the legitimacy of the REDD+ readiness process. However, the results suggest the existence of converging views between one part of the NGO sector and the government on what the REDD+ multi-stakeholder process in Mexico offers, while another part of NGO sector demand procedural reforms. The fact that the CTC supporters include representatives of the NGO sector was actually one of the main reasons why the government did not develop practical solutions to attain the CTC procedural legitimacy among the CTC detractors. Given that not all participants consider REDD+ readiness a legitimate process so far, it can be concluded that the process requires strategic re-thinking (Hemmati, 2002).

In turn, given the significant variation in participants' interests and perspectives on inclusiveness and representativeness, and the fact that such criteria seem to stand in a trade-off relation, one could also conclude that there might not be a perfectly legitimate governance process. This means that the design of multi-stakeholders fora for REDD+ have to be flexible enough to convince one part of its participants of their credibility and legitimacy, while maintaining the others satisfied. Therefore, the first strategic step toward increasing the level of legitimacy in the REDD+ readiness process is overcoming the current inertia in normative, organisational and operational characteristics of such fora, which in turn largely depends on the government's will as a convener.

5.5. Summary

This chapter has addressed the questions under the first research topic of this thesis concerned with REDD+ actors' relevance, influence, and level of interest in the REDD+ readiness, and their perceived legitimacy of the REDD+ multi-stakeholders fora.

I have identified many power asymmetries between participant stakeholders and shown that there is a high level of decision-making centralisation within the federal government's environment agencies as well as a lack of direct participation of local communities. I have also identified two groups of actors at the national and state level that hold contrasting perceptions of the multi-stakeholders fora' legitimacy. Such contrasting views are principally based on different expectations on their role in the REDD+ process. The supporters consist of government, academia, INGO and NNGO representatives, who are satisfied with how REDD+ decision-making has unfolded to date. The detractors, mainly peasant and indigenous peoples' organisations, and some representatives of NNGO and academia, demand changes in the normative and procedural characteristics of the process. In addition, they feel alienated from the decision-making process due to repeated intransigence by the government to change the fora' normative and organisational characteristics.

Chapter 6. Discourses: Analysing the key narratives and their prominence in REDD+ readiness

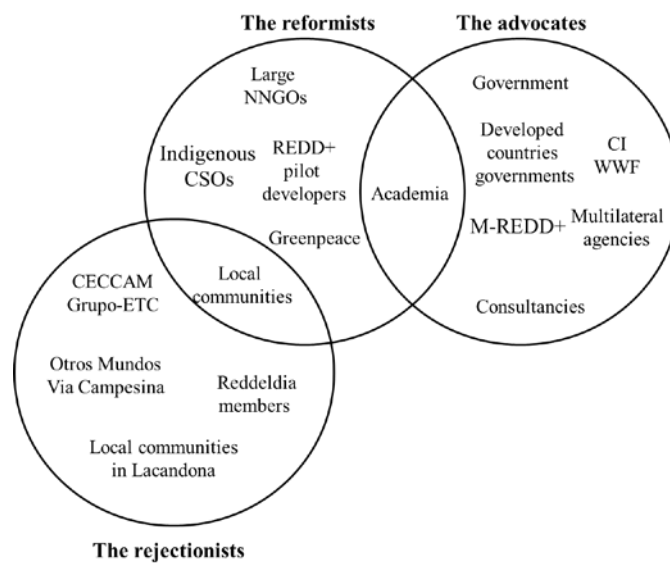
This chapter explores the discourses mobilised by Mexico's REDD+ readiness process stakeholders and their relative power to influence the national REDD+ design. The first section draws on discourse analysis to identify the storylines employed by different stakeholders to influence social debates around REDD+. The second section explores the resemblance of REDD+ discourses with environmental meta-narratives identified in Chapter Three. The third section investigates the level of discourse institutionalisation in two main REDD+ readiness documents in Mexico. Finally, the fourth section explores the interrelations between REDD+ discourses and discusses the overall findings in the context of similar studies.

6.1. REDD+ discourse coalitions in Mexico

Drawing on van der Hoff et al. (2015), I grouped the main storylines promoted by Mexico's REDD+ stakeholders along REDD+ *conceptual* and *strategic* dimensions. The conceptual dimension encompasses the general idea of REDD+, the definition of forests, the global drivers of deforestation, and REDD+'s role in the governance of climate change mitigation, while the strategic dimension focuses on REDD+ design and implementation issues at national level. In grouping stakeholders around discourse coalitions, I paid particular attention to the extent they supported calls for equity in national REDD+ decision-making and benefit-sharing processes.

Three discourse coalitions emerged: *the rejectionists*, *the reformists* and *the advocates* (see Figure 6.1). While labels have generalised meanings, I use them here to describe the stakeholders' attitude toward REDD+: the rejectionists are critical with the ideas underpinning REDD+; the reformists demand changes in REDD+ design; and the advocates support REDD+ implementation as it is currently envisioned. Some of the other REDD+ stakeholders identified in Chapter Five, such as government agencies outside the forestry and agriculture sectors, have a neutral position on REDD+ or are not sufficiently informed on the issue; such actors are not included in the discourse analysis.

Figure 6.1: Composition (non-exhaustive) of the three REDD+ discourse coalitions in Mexico⁴¹



Source: own elaboration

The reformists' discourse shares some storylines with both the advocates and the rejectionists, which have no storyline in common and can be considered as antagonistic. Each of these coalitions is described in detail below, focusing on their main storylines and how they relate to the other two elements of the discourse analysis framework (introduced in Section 3.3), namely discursive agents, key metaphors and rhetoric devices (see also Table 6.1).

6.1.1. REDD+ rejectionists

*“We reject REDD+ in all its versions because we believe it would irreversibly damage both the forest ecosystems and the local communities living there”*⁴²

The first identified coalition involves actors who, at least until today, have vehemently opposed the development of REDD+, both nationally and internationally. The most politically active actors representing the rejectionist discourse include civil society organisations such as CECCAM, Grupo-ETC, Otros Mundos A.C., Via Campesina, Maderas del Pueblo del Sureste A.C., as well as other numerous peasant and indigenous

⁴¹ Overlaps among coalitions represent shared storylines.

⁴² Quote is paraphrased from “Open letter from Chiapas against the Agreement between the States of Chiapas (Mexico), Acre (Brazil) and California (USA)” to summarise the rejectionists' discourse <http://reddeldia.blogspot.com/2013/04/carta-abierta-de-chiapas-sobre-el.html> Accessed: 20/10/2015.

peoples' organisations, such as the members of the *Reddeldia*-Chiapas movement⁴³, the signatories of the open letter to the Government of California, and certain local communities of the Lacandon rainforest.

The rejectionists believe REDD+ would not provide any benefits to peasants and forest dwellers. Rather, they highlight the likely constraints that REDD+ might impose on people's rights and the negative distributional effects that REDD+ implementation may have on forest-dependent people. Storylines in the rejectionists' discourse contain multiple examples of how REDD+ can negatively impact and lead to exploitation of both environment and local people. A representative quotation of such discourse is:

“Putting forest, a common good, into the market has the effect of tearing the social fabric and generating economic interests that go directly against the interests and values of the indigenous peoples. And it is causing death; not only physical death, but the death of a culture, and of a cosmovision. It is an ethnocide” (coordinator of NGO Maderas del Pueblo, in Conant, 2011a).

The rejectionists do not consider deforestation as a predominant driver of climate change, and accordingly, they suggest that REDD+ and global forest governance cannot be the solution to climate change. Moreover, they criticise REDD+ for being a market-based mechanism inserted in the broader idea of building a global “green economy”. According to the rejectionists, REDD+ only contributes to deepen the environmental justice gap by allowing the global North countries to offset their emissions cheaply in the global South, instead of reducing domestic emissions or paying off a climate debt.

The rejectionists also criticize the idea, advanced by some REDD+ advocates, that small-scale subsistence agriculture contributes to deforestation and is a source of GHGs emissions. They contend that local people are perceived as culprits, when they should be considered forest stewards. In the rejectionists' opinion, the process of consultation with local communities is reduced to manipulation insisting in the moral obligation to conserve forests. Their position is nicely depicted by the following statement:

“What they say to the communities is: -We are protecting the planet, we are fighting climate change, and we will pay you to help. So then the consultation consists of one question: -Are you with us? The answer you can expect from

⁴³ <http://reddeldia.blogspot.mx/p/declaratoria.html> Accessed: 20/10/2015.

rural communities is: -Of course we are” (representative of Otros Mundos in Conant, 2011b).

Some rejectionists consider REDD+ as “the largest land grab of all times” (as defined by Tom Goldtooth in Conant, 2011a), a process that would engender a dispossession and alienation of community lands, particularly among local communities without clear land tenure rights or among those where land tenure privatisation has been successful. Rejectionists have vividly criticized privatisation of communal land, introduced with reform of Article 27 of the Mexican Constitution in 1992 and PROCEDE: “We do not want to change *ejido* land into small properties, we continue to believe in the commons. They want to make us enter FANAR [before PROCEDE] to pay taxes on our land, they want to legally urbanize indigenous people” (members of National Indigenous Congress in Bellinghausen, 2014).

The rejectionists argue that REDD+ will never be successful in promoting economic and social development for rural communities. Instead, any foreseeable REDD+ payments may only contribute to local elite capture, local social division, and the weakening of peasant networks. They also warn that REDD+ might constrain local people’s access to forest and further induce the loss of local knowledge and traditions, as one informant stated referring to the local communities participants in a REDD+ project in Chiapas: “They have been robbed of their history, identity, and dignity. They have been turned into walking folkloric entities” (coordinator of NGO Maderas del Pueblo in Conant, 2011b).

According to the rejectionists, another negative effect of REDD+ on biodiversity might result from the likely expansion of monoculture tree plantations. This has been the case, for example, in Chiapas where REDD+ pilot project activities have been developed alongside the government-subsidised expansion of African oil palm plantations for biofuels. Some of the most radical rejectionists, such as the representatives of ETC-Group, think that the use of remote-sensing technology combined with on-the-ground monitoring for REDD+ to track carbon stocks and flows, as well as wildlife and humans, paves the road for new bio-piracy endeavours. With such information, for example, private companies could take advantage to appropriate forest resources and related knowledge (Ribeiro, 2011; Pskowski, 2013).

The rejectionists signal that there is a lack of proper consultation with local people. They sustain that community-based forest management founded upon democratic consultation with local people should be an alternative approach to REDD+ and its foreseeable accompanying carbon trading. Overall, in the rejectionist storyline, local communities are characterised as both heroes and losers in REDD+, while the government, private companies, financial institutions and large international NGOs are seen as culprits and winners.

6.1.2. REDD+ reformists

“We must be constantly vigilant and closely monitor the design and implementation of REDD+ in Mexico, thereby ensuring its development respects social safeguards and brings benefits to local people”⁴⁴

The reformists’ discourse is held by a number of actors who believe that REDD+ can be an important element of a national climate change policy, with potential to provide positive benefits to rural communities, but that REDD+ implementation should be constantly monitored to ensure these potential benefits are realised. The reformists include national NGOs, such as CCMSS, CEMDA, and OEPFZM; NGOs developing carbon forestry and REDD+ pilot projects, such as SAO, AMBIO, U’yool’che A.C., and PRONATURA A.C.; some peasant and indigenous peoples’ organisations, such as RITA, RedMOCAF, Sakbe and Fundar, A.C.; Greenpeace as the representative of international NGOs; academic organisations such as UNAM and ECOSUR; and some local communities.

The reformists’ discourse supports REDD+, but recognises that deforestation and land-use change cannot be considered the largest and most worrisome source of GHGs emissions in Mexico or elsewhere. The reformists think that a good REDD+ design can guarantee the provision of local benefits. Thus the focus of the reformists’ storyline is on REDD+ safeguards and policy strategies that can guarantee local participation and equitable benefit-sharing. The reformists broadly agree that arguing that local communities are responsible for deforestation is a simplification of a complex reality. According to them, over-consumption of natural resources by urban populations indirectly plays an important role in driving both deforestation and forest degradation processes in the country. In this regard, the reformists emphasize the importance of

⁴⁴ Quote is paraphrased from various interviews and documents to summarise the reformists’ discourse.

broad policies aiming at, for example, moderating consumption, dealing with subsidies in agricultural development, and regulating uncontrolled urban and tourism infrastructure development. Among the reformist, the radical, mostly peasant and indigenous peoples' organisations, point toward the need for identifying the root causes of deforestation originated within the forestry sector itself, i.e., the low international competitiveness of the domestic timber industry and the low attractiveness of forestry activities in comparison to other productive activities.

Virtually all reformists, except carbon forestry project developers, would prefer REDD+ to be financed through international and national public budgets rather than through carbon markets. They are not convinced that carbon markets can become a reliable and sufficient source of funding in the near future and thus call for a more efficient use of new and existing rural development funding to implement REDD+ and make it less dependent on the international climate change mitigation agenda. The reformists support sustainable rural development as a mean to realise REDD+ because it combines conservation and productive activities while giving local communities the central position in REDD+.

In the early stages of the REDD+ readiness process, practically all reformists, except the representatives of academia, were against a national REDD+ approach (see Section 2.5.4.). They argued that such an approach implied a shared responsibility over emission reductions between all country regions, i.e., compliance by actors in one region could be offset by non-compliance by others elsewhere. They also considered that local leakage would be prevented if all rural communities developed and complied with local land-use plans. Contrarily, academics supported a national approach because, in their opinion, it minimised the risk of national leakage and was aligned with the international climate policy process. As noted by an interviewee: "The whole international treaty is based on the idea of country involvement, and good performance at the national level is far more important in the long run than individual projects" (I21).

Under the current national REDD+ architecture, all reformists support a jurisdictional approach in which the sub-national REDD+ bodies or funds are responsible for designing regional land-use policies and receive or disburse carbon funding depending on the responsibilities and rights attributed to each region by the federal government and on their correspondent land-use change dynamics. The reformists highlight that

such a regional approach can contribute to a more effective design of supporting policies, which might or not include direct payments to local actors (e.g., through a PES programme) that they criticise for contributing to passive conservation strategies. The jurisdictional approach can also enhance the identification and involvement of all actors contributing to deforestation or to forest conservation. In fact, reformists argue that it would be misguided to attribute responsibility only to rural communities. As one of the interviewees suggested: “The drivers of deforestation are not controlled by communities; and communities should not take the responsibility of deforestation caused by other actors on a given landscape” (I137).

Reformists consider that all actors involved in land-use activities can become potential winners in REDD+ implementation. Culprits are or will be only those who continue to contribute to deforestation and forest degradation, regardless of their social condition. Practically all reformists suggest that the legitimacy of the current land tenure regime in Mexico and the clear tenure situations and general lack of disputed territories guarantee that REDD+ will not become a means to alienate local peoples’ land rights. Some reformists, such as those CSOs developing carbon forestry projects, think it would be easier to reach an agreement with individual private landowners than with communities that hold communal land rights.

All reformists also consider that carbon rights should be linked to forest and land ownership. The reduction of emissions from avoided deforestation should be recognised as an ecosystem service, potentially tradable within REDD+, and any derived benefits should accrue to local forest owners. For this reason, the radical reformists consider unfair that, under the current landscape approach, local communities will be provided only with REDD+ incentives to promote forest management activities that reduce deforestation, instead than with real REDD+ benefits (either monetary or in-kind).

Academics, however, identify and stress technical difficulties in attributing emission reduction from avoided deforestation to individual actors or communities, since the latter would involve identifying those who have not deforested their land but would have done so without REDD+ incentives. Academics thus suggest decoupling REDD+ payments from carbon measurements, at least at the national scale. They support an input-based benefit-sharing approach, including payments on a flat rate per hectare, and contingent on positive performance of REDD+ activities. In their opinion, a flat rate

payment would lead to more equitable outcomes since such payment would reduce the communities' differences in the social capacities and environmental conditions for REDD+. In yet another suggestion on how to improve the equity and effectiveness of REDD+ the Mexican Civil Council for Sustainable Forestry support the classification of local communities based on their level of development and experience in conservation and sustainable forest management, which would allow for selection of the most suitable REDD+ activities for each community.

All reformists place emphasis on the fact that REDD+ policies and measures should respect international laws and conventions on human and indigenous peoples' rights, while social and environmental safeguards should guide REDD+ implementation. They suggest the development of baselines for social and environmental conditions in the country and advocate for the monitoring of environmental and social safeguards through the national REDD+ MRV system. The radical reformists further call for the greater inclusion and empowerment of local communities in REDD+ decision-making at the sub-national and local levels and in the MRV system, paying particular attention to gender and ethnicity. They promote the full respect of the free, prior and informed consent (FPIC) principle, as the first step toward an equitable and effective REDD+ strategy. Therefore, they criticise early actions for being implemented without such principle and other social safeguards guidance. In addition, virtually all reformists consider that early actions had been selected on the basis of government representatives' own interest, and that their experiences are not representative and not replicable in other regions.

6.1.3. REDD+ advocates

“REDD+ will stop the Earth's climate change and save local people and tropical forests”⁴⁵

The advocates' discourse is held by a number of actors who promote REDD+ as a prominent solution to climate change. It is represented by Mexican federal and sub-national government ministries and agencies, including CONAFOR, SEMARNAT, CONABIO, CONANP, INECC, SAGARPA, SMAAS, SEMA, and SEMAHN; multilateral and bilateral financial organisation and carbon market developers, such as

⁴⁵ Quote is paraphrased from various interviews and documents to summarise the advocates' discourse.

WB, GCF, and USAID. It also includes the group of conservation INGOs, such as TNC, Rainforest Alliance, CI, and WWF, as well as consultancies such as CEGAM.

REDD+ advocates consider deforestation and forest degradation in developing countries as key drivers of climate change. They promote REDD+ as a cost-efficient and effective solution to deforestation and an opportunity for Mexico's economic growth. The principal storyline in the advocates' discourse emphasises that REDD+ can mitigate climate change while generating other environmental benefits and supporting local people's development. As noted by a CONAFOR's representative:

“If local communities do not want an adequate incentive [REDD+] to manage their forests...and strengthen their organization...they can veto the action [entering REDD+]. But what ENAREDD+ is looking for is that all public programmes have a better impact on the communities and their resources” (CONAFOR's representative in Mendoza, 2013).

Virtually all advocates agree that some of the most important underlying drivers of unsustainable economic activities causing deforestation in Mexico are unsound policies and activities in several land-use sectors. These include paternalistic agricultural subsidies, uncontrolled urban and tourism infrastructure development, illegal logging, and invasion of protected areas. Under this view, and given that local people participate in most of such activities, they are also to be blamed. Consider as an example the following statement by a SAGARPA officer:

“Our livestock programme does not say that to raise cows you should cut forest. The organization [SAGARPA] is responsible for promoting the programme, but local actors have to apply the subsidies in the best way; they also have their responsibility” (I19).

In turn, this discourse coalition sees actors supporting REDD+ development, i.e., the government, large NGOs, academia and financial institutions, as heroes because they assume the responsibility of halting national deforestation.

Based on past effectiveness in reducing deforestation and provision of social benefits to local communities, the advocates consider result-based mechanisms, such as PES, central to REDD+ success. However, they consider that passive conservation is not cost-effective and that it does not motivate enough local people to enter REDD+.

Rather, they suggest that the promotion of productive activities from different land-use sectors should become coordinated under the umbrella of sustainable rural development.

Even though in the past the government defined REDD+ as “yet another instrument to understand the environmental, social and economic effects of forest policies through the markets” (I17), REDD+ advocates currently support performance-based REDD+ independently from the source of funding. As one of the discourse representatives suggested: “We do not know if carbon markets will exist, however we are sure there will be financial transfers of some kind for the results of reduction of carbon emissions from deforestation” (CONAFOR’s representative in Mendoza, 2013). In addition to market- and performance-based funds, advocates are keen on using public funds to support early REDD+ activities (e.g., the special programmes explained in Section 2.7.2). Large INGOs representatives lobby for broader participation of the private sector in REDD+ readiness and implementation activities due to the pivotal role they might play in making the carbon market work.

Advocates support a national approach to REDD+, which would allow for the centralised control of REDD+ funding and would also increase the mechanism’s effectiveness by restricting in-country leakage. Under the current slow pace and uncertain path of international climate change negotiations, advocates support a jurisdictional approach because it would allow for immediate commercialisation of carbon credits through voluntary carbon markets (e.g., GCF) or result-based funds (e.g., the FCPF Carbon Fund). Sub-national activities would then be developed alongside the national readiness process to avoid, for example, the double-counting of emission reductions. Advocates support landscape level implementation of REDD+, as they think such inclusion would lower the implementation costs and increase the certainty of success by avoiding leakage, thus making REDD+ more attractive to buyers and donors. Advocates also call for targeting only the communities with good local governance conditions to further assure REDD+ effectiveness.

Advocates suggest that the voluntary nature of REDD+, the current widespread legitimacy of Mexico’s land tenure regimes, and the formal recognition of carbon rights to forest owners assure that REDD+ social safeguards would be respected during implementation. They consider that any potential benefits accruing from forests’ carbon stocks and their expected carbon gains should be disbursed to forest owners, while

benefits from emission reductions from avoided deforestation should be attributed principally to the government that would then direct them to local communities through public incentive-based land management programmes or regional funds. This perspective is primarily based on the ethical and legal implications involved in rewarding land managers for avoided deforestation efforts that are additional, since deforestation is legally sanctioned. The following statement by INECC's representative picturesquely explains this matter: "Under the current legal framework, any change in land-use has to be authorised. Therefore if a person says: -I will deforest; it is the same as if he says: -I will kill three persons, but if I instead kill only one, you have to compensate me" (I136).

Advocates also promote local forest peoples' participation in REDD+ as they consider that the mechanism's effectiveness also depends on land managers' activities. As a SEMARNAT officer noted: "REDD+ is not ours. We have to build it from the bottom-up and if we do not include local people now, we will have a headache latter" (I135). Still, due to the technical language and advanced stage of the ENAREDD+ discussion, advocates consider that the indirect participation of local people through NGOs is more appropriate and easier to control than their direct participation. They value positively the involvement of local communities in MRV as a procedural and methodological contribution, which they argue would add to more centralised efforts of data collection such as remote sensing and randomized on-the-ground controls.

6.2. The resemblance of Mexico's REDD+ discourses with global forest governance discourses

The rejectionists' discourse identified among Mexican REDD+ stakeholders contains both *populist* and *radical* discursive elements, but is predominantly similar to discourses focused on social justice (Section 3.3). The rejectionists resemble the *populist* discourse in that they understand small local producers as victims rather than as agents of deforestation in the global South (Adger et al., 2001). The rejectionists also resemble what Bäckstrand and Lövbrand (2006) term as *radical civic environmentalism* and what Hiraldo and Tanner (2011) term as *social greens*, given that they define forests as a source of livelihoods and of biological and cultural diversity. Another point of resemblance with these discourses is viewing REDD+ as a new form of colonialism

that brings along new economic, ecological, and social risks. The rejectionists' discourse demands transformational changes in the underlying power structures of both Mexico and the global economy, and particularly in the socio-economic processes underpinning deforestation and land-use change. In Nielsen and Thomson's (2013) classification, the rejectionists resemble the *egalitarian* discourse, because despite opposing the idea of REDD+, they still consider deforestation should be addressed through community-based forest management.

The reformists' discourse contains both *populist* and *reformist* discursive elements, and similarly to the rejectionists' discourse, it predominantly falls into more general social justice discourses. The reformist discourse resembles the *populist* discourse to the extent that it considers that subsistence agriculture is not the main deforestation driver (Adger et al., 2001). It also resembles what Hiraldo and Tanner (2011) label as the *social green* discourse, to the extent that it accepts the central role of forests in climate change mitigation, but reminds us that forest are home of local people who should be consulted and involved in mitigation activities. The reformists' discourse can also be related to Bäckstrand and Lövbrand's (2006) *reform-oriented version of civic environmentalism*, because they call for the inclusion and respect of social and environmental safeguards that would prevent trade-offs between economic, ecological, and social outcomes (Nielsen, 2013). Finally, the reformists' discourse could also relate to Nielsen and Thomson's (2013) *egalitarian* discourse in that both discourses are rather sceptical about the role of markets in guaranteeing a fair and effective functioning of REDD+.

Finally, overall the advocates' discourse resembles Adger et al.'s (2001) *managerial* discourse and reproduces conventional storylines found among global REDD+ discourses focused on sustainable development and top-down forest governance. The advocates' discourse resemblance with the managerial discourse is based on the advocates understating of over-population and particularly subsistence agriculture in developing countries as main drivers of deforestation (Adger et al., 2001). Namely, the advocates discourse features the storylines from Bäckstrand and Lövbrand's (2006) *weak ecological modernization* and *green governmentality* discourses. They frame forests as carbon sinks and consider them as key instruments for climate mitigation. Furthermore, they emphasise the secure provision of REDD+ economic and environmental co-benefits and regard REDD+ as a "win-win-win" strategy. In line with

the weak version of ecological modernisation, the advocates' discourse calls for changing underlining power relations, but only across government agencies. In turn, the advocates promote what could be considered a reflexive variant of the green governmentality discourse, since they underline the importance of scientific knowledge in achieving REDD+ effectiveness while recognizing the importance of including all actors, and particularly local people, in decision-making processes.

The advocates' discourse also resembles Hiraldo and Tanner's (2011) *institutionalists'* discourse and Nielsen and Thomson's (2013) *hierarchical* discourse as all these discourses call for strong institutions, effective laws and policies, cooperation and scientific expertise in intergovernmental negotiations to protect the environment, and for the use of markets and performance based funds for REDD+. The advocates' discourse can also be related to Hiraldo and Tanner's (2011) *market liberals*, as it considers economic growth essential to secure human welfare and sustainable development. Finally, the advocates discourse also resembles Nielsen and Thomson's (2013) *individualists'* discourse because it advocates for a cost-effective REDD+ implementation articulated through markets and with the strong involvement of the private sector.

Table 6.1: Description of the main REDD+ discourses in Mexico

Discourse coalition		Rejectionists	Reformists	Advocates	
Frame REDD+ as		The problem The solution would be recovery fund to pay back climate debt	Partial solution	The solution Mexico's potential to economic growth through REDD+	
Have main focus on		Global environmental justice	Equity and social safeguards	Effectiveness and cost-efficiency	
Summary of the storylines on the 12 key dimensions of REDD+	1) <i>Forests definition</i>	Forests are livelihoods and source of cultural values	Forests are source of local income	Forests are instruments for low-cost climate change mitigation Forest are carbon sinks	
	2) <i>Deforestation and climate change</i>	Caused by North-South divide	Caused by urban-rural divide	Caused by deforestation in developing countries	
	3) <i>Deforestation drivers</i>	Subsistence agriculture is not responsible of deforestation Local people are forest's stewards		Local people cause deforestation	
				Unsound national land-use policies caused deforestation	
	4) <i>Source of REDD+ funding</i>			Internal to forestry sector	
				Input based REDD+	Result based REDD+
Abbreviations of the storylines on the 12 key dimensions of REDD+	5) <i>Co-benefits and safeguards</i>			Mixed REDD+ finances	
				Importance of private sector	
	6) <i>Carbon rights</i>	Trade-offs Risk of monoculture plantations, bio-piracy, cultural extinction, alienation of rights, and moral manipulation	Potential co-benefits Social safeguards and FPIC MRV for safeguards needed Gender equality Risk of land privatisation	Guaranteed co-benefits Voluntary participation	
			Land tenure in Mexico is clear		

Discourse coalition		Rejectionists	Reformists	Advocates
Abbreviations of the storylines on the 12 key dimensions of REDD+			Avoided deforestation is an ecosystem service provided by local forest owners	Avoided deforestation is NOT an ecosystem service because deforestation is illegal
			Technical difficulties to assign benefits from avoided deforestation	
	7) <i>Scope of activities</i>	CFM is an alternative to REDD+	Not just PES, but CFM also should be part of REDD+	Predominant focus on PES and protected areas
			Sustainable rural development as a leading principle for REDD+	
	8) <i>Participation</i>	Lack of consultation and lack of the right to veto REDD+ readiness process in the country	Broader participation for social benefits Promote local people participation in MRV	Local people indirect participation to guarantee REDD+ effectiveness
	9) <i>Implementation scale</i>		Jurisdictional approach for effectiveness	Jurisdictional approach for fast commercialisation Top-down approach
	10) <i>Payment strategy</i>		Against landscape approach, pro individual community approach	Pro landscape approach including groups of communities
	11) <i>Targeting</i>		Communities' level of development and experience	Good local governance conditions
12) <i>Early actions</i>		Early actions are NOT good examples	Early actions provide valid experience	
Main discursive agents		Heroes and losers: Local communities from Global South Culprits and winners: Large industries from Global North	Heroes and losers: Local communities in Mexico Culprits: Tourism, infrastructure, and agriculture sector in Mexico Winners: Local communities, Mexican government	Culprits: Land-use sectors and local people Heroes: Government and financial institutions Winners: All stakeholders No losers

Discourse coalition		Rejectionists	Reformists	Advocates
Key metaphors and other rhetorical devices		Environmental crisis, Carbon colonialism, Capitalist accumulation, Ethnocide, Land grab, Climate mask, Green deserts, Biopiracy, Climate debt, Criminalization of poverty	Not panacea, Part of solution, Urban-Rural divide, Inequality, Trade-offs, FPIC, Benefit-sharing	THE solution, win-win-win, Co-benefits
Discourse coalition		The group of CSOs, peasants and indigenous organisations: CECCAM, Grupo-ETC, Otros Mundos A.C., Via Campesina, Maderas del Pueblo del Sureste A.C., other small peasants and indigenous organisations members of the <i>Reddeldia</i> movement, and some local communities.	National NGOs: CCMSS, CEMDA, OEPFZM; Peasants and indigenous people organisations: RITA, RedMOCAF, RIOD MEX, Sakbe, and Fundar A.C.; Carbon forestry project developers: U'yool'che A.C., PRONATURA A.C.; Local communities; INGOs: Greenpeace; Academia: UNAM, ECOSUR.	Government: CONAFOR, SEMARNAT, INECC, CONABIO, CONANP, SAGARPA, legislative power; Multilateral and development leading agencies and investors: WB, GEF, IUCN, UNDP, Foundation Ford, GFC, Norad, USAID, AFD, AECD; International NGOs: TNC, CI, WWF, RA; Consultancies: CEGAM
Resemblance with meta-discourse	Bäckstrand and Lövbrand (2006)	Radical Civic environmentalism	Reformist	Weak ecological modernization Green governmentality
	Hirald and Tanner (2011)	Social greens		Market liberals Institutionalists
	Nielsen and Thomson (2013)	Egalitarian		Individualists Hierarchical

Source: own elaboration.

6.3. Discourse institutionalization in REDD+ readiness

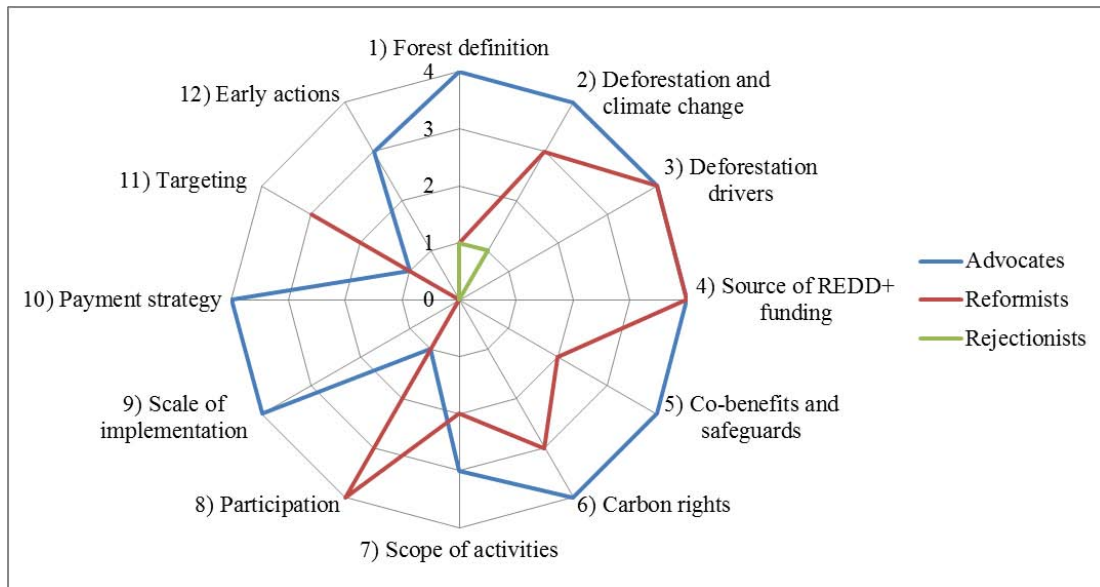
The analysis suggests different levels of institutionalisation of the three identified discourses. Namely, 96.3% (26 out of 27) of the total number of storylines promoted by the advocates group have been, explicitly or implicitly, included in the REDD+ documents. Out of the total number of storylines promoted by the reformists (25), 68% (17) have been explicitly or implicitly institutionalised. Finally, only 12.5% (two out of 16) of the total number of storylines promoted by the rejectionists have been implicitly institutionalised. Furthermore, the advocates discourse is found to be the most represented in the documents, with its storylines representing 57.8% of the total number of institutionalised storylines (45). The reformists discourse follows with 37.8%, while the rejectionists' discourse is the least represented participating with only 4.4% (see Table 6.2). Figure 6.2 graphically represents the share and level of institutionalisation of the central storylines on the 12 key dimensions of REDD+.

Table 6.2: Institutionalisation of the storylines behind the correspondent discourse coalition

Discourse coalition Number of	Rejectionists	Reformists	Advocates	Total
Promoted storylines	16	25	27	60
Institutionalised storylines	2	17	26	45
<i>Explicitly</i>	0	12	20	32
<i>Implicitly</i>	2	5	6	13
Percentage of institutionalised storylines	12.5%	68%	96.3%	75%
Percentage of the discourse storylines in total number of institutionalised storylines (45)	4.4%	37.8%	57.8%	100%

Source: own elaboration.

Figure 6.2: Spider chart of the degree of institutionalisation of the most general storylines from the 12 key REDD+ dimensions⁴⁶



Source: own elaboration.

I discuss this graph in the following sections, focusing first on the institutionalisation of the storylines on the REDD+ conceptual dimensions, i.e., the perception over global environmental issues and deforestation, and subsequently on REDD+ strategic issues, such as the approaches to national REDD+ implementation and sources of funding.

6.3.1. Institutionalisation of REDD+ conceptual dimensions

In itself, the fact that Mexico is pursuing REDD+ development under the UNFCCC framework suggests that the country's official REDD+ documents explicitly endorse the idea of reducing emissions from deforestation and forest degradation. Namely, in line with the advocates' storyline on deforestation and forest degradation, the ENAREDD+ makes an explicit connection between climate change mitigation and the need to preserve tropical forests in the developing world (ENAREDD+, 2014, p. 12). Furthermore, in line with the advocates' discourse, the strategy provides only a technical definition of forest, which draws upon existing definitions in FAO reports and the country's approved CDM projects (ENAREDD+, 2014, pp. 19, 84). Additionally, the ENAREDD+ implicitly defines forests as one of the most important global carbon

⁴⁶ 0- no storyline institutionalised in the REDD+ official documents; 1- the storyline implicitly institutionalised only in one document and not institutionalised or only explicitly institutionalised in other; 2- implicitly institutionalised in both documents; 3- the storyline explicitly institutionalised only in one document and not institutionalised in other; and 4- explicitly institutionalised in both documents.

sinks (ENAREDD+, 2014, p. 11). The social perspective of forests, as promoted by the reformists and the rejectionists through the storylines on local people as forest stewards (both discourses) and forests as a source of local income (only the reformists), have only implicitly been included in the ENAREDD+ through a statement about the importance of full and effective participation of local people in achieving forest conservation (ENAREDD+, 2014, p. 5), and in the ER-PIN acknowledgement that adequate forest management can help increase communities' economic benefits (ER-PIN, 2013, p. 33).

In line with the rejectionists' and reformists' views on deforestation, the ENAREDD+ states that -in general- land-use change is the third largest source of carbon emissions in Mexico and worldwide. In line with the advocates' discourse, the strategy adds that deforestation should be considered a significant contributor to climate change (ENAREDD+, 2014, pp. 11, 20). Somewhat differently, the ER-PIN reproduces the National Climate Change Strategy definition of REDD+ as a key national mitigation measure and stresses the country's REDD+ potential (ER-PIN, 2013, p. 13). The ENAREDD+ draws on the National Development Plan to consider REDD+ as a key approach to realise sustainable economic growth (ENAREDD+, 2014, p. 3), and, in line with the advocates' storyline on cost-efficiency and effectiveness, it calls for an urgent implementation of REDD+ to prevent a future increase in the environmental and economic costs of climate change mitigation (ENAREDD+, 2014, p. 13).

Regarding the country's main deforestation drivers, both documents institutionalise the idea shared by the advocates and the reformists that the key underlying drivers of deforestation are unsound policies, lack of coordination among different land-use sectors, and ineffective legislation (ENAREDD+, 2014, p. 20; ER-PIN, 2013, p. 28). In addition, the ER-PIN includes the reformists' storyline on urban-rural divide but only implicitly, as it blames the high demand of forestry and agricultural products for disincentivizing forest owners from preserving them (ER-PIN, 2013, p. 27). The same document further explicitly resembles the reformists' storyline in that it recognises the shortcomings in the operation of the national forestry sector as one of the main causes of deforestation (ER-PIN, 2013, p. 26). These shortcomings include the low attractiveness of forestry activities in comparison to agriculture and the low market competitiveness of domestic timber produced from minimally managed naturally forests in comparison to foreign wood that is grown in commercial plantations. It could be

understood that, by using this type of wording, the ER-PIN indirectly promotes the establishment of commercial forest plantations within REDD+. However, I was not able to identify the storyline promoting plantations among REDD+ stakeholders, except for the antagonistic storyline supported by the rejectionists.

In addition to economic (high opportunity costs of agriculture and high transaction costs of sustainable forest use) and institutional (agricultural subsidies, unsustainable urban and tourism development) drivers, the ER-PIN emphasises the role that other social factors can play in causing or halting deforestation. Specifically, this document mentions forest owners' capacities and incentives to sustainably use their forests, particularly in marginal areas (ER-PIN, 2013, p. 27). This resembles the advocates' storyline, which stresses local people's responsibilities in land-use change. Furthermore, the ER-PIN explicitly blames local people as principal forest degradation agents, although it also acknowledges that such actions are partly driven by poor management of the forest commons and a focus on short-term needs (ER-PIN, 2013, p. 26).

6.3.2. Institutionalisation of REDD+ strategic dimensions

Ever since the elaboration of the country's Vision document, REDD+ in Mexico has been directed towards achieving sustainable rural development. In that sense, the ENAREDD+ and ER-PIN documents reproduce the advocates' storyline on guaranteed co-benefits from REDD+. The ENAREDD+ defines REDD+ co-benefits as *collateral* (meaning indirect, secondary) social and environmental benefits, additional to climate mitigation outcomes. Such benefits include economic (poverty alleviation, local employment), environmental (biodiversity conservation and hydrological services), and social (improvement in forest governance, strengthening of social capital, access to information, participation of indigenous populations) (ENAREDD+, 2014, p. 86; ER-PIN, 2013, pp. 63-64). In turn, the ER-PIN states that the activities implemented with the FCPF Emission Reductions Initiative will generate *substantial* (meaning important, considerable) non-carbon benefits, particularly because they will be implemented in the so-called "early action" regions (ER-PIN, 2013, pp. 2, 30) (see Section 2.7.2). These regions have been selected based on the existing records of high deforestation rates, environmental values, development needs, and local stakeholders experience and progress in REDD+ and previous innovative forest conservation initiatives (ER-PIN, 2013, p. 63).

The last two criteria represent the advocates' storyline because they promote the inclusion of local communities who have good governance conditions to guarantee REDD+ effectiveness (ER-PIN, 2013, p. 63). However, the documents do not clarify what weighting is being given to each criterion, and therefore it stays unclear of why the other regions in the country (meeting some or all of the criteria) do not figure as possible beneficiaries from REDD+. This is so despite the fact that the ENAREDD+ recognises the need of identifying and addressing the variety of deforestation drivers in different regions and of extending the benefits of CONAFOR programmes to all forest *ejidos* and communities, beyond the early action regions (ENAREDD+, 2014, p. 44).

The reformists' storyline on social safeguards and equity is also identified in the ENAREDD+. In addition to the Cancun Agreements' REDD+ safeguards, the ENAREDD+ includes a set of principles to govern national REDD+ design and implementation, which are based on international and national laws⁴⁷ (ENAREDD+, 2014, p. 70). Taken together, both international safeguards and national REDD+ principles (i.e., the country safeguards) are intended to effectively realise the three dimensions of equity. First, they theoretically address *procedural equity* through a firm commitment to include all REDD+ relevant actors in the readiness process (Decision 1/CP.16, UNFCCC, 2011, Safeguards article (d); ENAREDD+, 2014, p. 70, principle I), and by assuring transparency and legality, and fulfilling the requirement of FPIC of local and indigenous communities (ENAREDD+, 2014, p. 70, principles III, IV and VII). Second, they theoretically address *contextual equity* through a firm commitment to respect territorial, cultural, social, and gender equity, as well as local organisations and governance and property rights of forest owners, and to improve the competitiveness of community forestry and enterprises (Decision 1/CP.16, UNFCCC, 2011, Safeguards article (c); ENAREDD+, 2014, p. 70, principles II, VI and VIII). Finally, these safeguards and principles theoretically address *distributional equity*, through the determination of realizing an equitable sharing of REDD+ benefits for forest owners (ENAREDD+, 2014, p. 70, principle V).

The strategy recognises that women in Mexico suffer from contextual inequalities such as lower access than men to land, governmental programmes, credit, and information; it thus calls for inclusion of a gender perspective in both REDD+ development and

⁴⁷ These include articles 1 and 2 of the Constitution, and article 134bis of the General Law of Sustainable Forest Development (LGDFS) (ER-PIN, 2014).

implementation (ENAREDD+, 2014, pp. 5, 16, 42, 43, 48). The strategy also contemplates promoting particular REDD+ policies and measures (PAMs) to include women in REDD+ implementation and benefit-sharing (ENAREDD+, 2014, p. 74), but it does not make a reference to other marginalised groups such as non-rightholders (ENAREDD+, 2014, p. 73). Therefore, under current documents, and in accordance with the General Law on Sustainable Forest Development, only people with formal rights to forests, i.e., forest owners, including small landowners, agrarian communities and *ejidos*; and legal possessors (*poseedores legales*)⁴⁸ or community members with land but without full bundle of rights, will be able to benefit from REDD+ (ENAREDD+, 2014, p. 73) independently of their gender, race, ethnicity, religious belief, or socio-economic status (ER-PIN, 2013, comments, p. 10).

In line with the advocates' storyline, the ENAREDD+ defines safeguards as rights and duties that REDD+ actors should respect. However, by promoting the elaboration of the Safeguard Information System and Safeguard National System, the strategy reflects the reformists' storylines that represent safeguards as the processes and procedures that should guarantee enforcement and respect of the actors' rights and duties. SIS and SNS should oversee the implementation and respect of the social and environmental safeguards, including the provision of REDD+ co-benefits (ER-PIN, 2013, p. 14; ENAREDD+, 2014, p. 70).

In line with the advocates' storyline, the ER-PIN emphasises the voluntary nature of REDD+ and the fact that a collective consent obtained from community authorities will be enough to guarantee respect of social safeguards (ER-PIN, 2013, p. 80). As signalled by the reformists' discourse representatives, even though the ER-PIN contemplates the inclusion of REDD+ SES for safeguards, it fails to clarify the procedure through which the FPIC will be sought (ENAREDD+, 2014, p. 72; ER-PIN, 2013, Annex 1, p. 1, Appendix 4, p. 11). Yet again, in line with both advocates and reformists, the ER-PIN asserts that, due to the soundness of the country's land tenure regime, REDD+ implementation will incur little risk to tenure rights of local communities (ER-PIN, 2013, p. 36).

Again in line with the advocates' storyline the ENAREDD+ recognises the forest owners as holders of the property rights over carbon stocks and expected carbon gains,

⁴⁸ For simplicity, the term forest owners included both groups.

but it does not assign these actors with the ownership over potential emission reduction from avoided deforestation on their lands. Instead, forest owners are only entitled with the rights to benefit from such emission reductions (ENAREDD+, 2014, p. 35). The reason for this is the fact that the country's current legal framework does not recognise avoided deforestation as an environmental service and that there are critical technical difficulties to attribute emission reductions from such activities to one forest owner (ENAREDD+, 2014, p. 35). The ER-PIN, however, explains this situation differently and by virtue of the fact that "...some rights to carbon services and other services could be directly linked to land tenure and the adoption of best practices, while others could be more general and related to the performance of larger regions" (ER-PIN, 2013, p. 36). The ER-PIN refers only to reduced deforestation and forest degradation, while it does not clarify who and how will be rewarded for any potential forest carbon enhancement.

The ER-PIN document advocates for a jurisdictional approach to REDD+. In line with the reformists' discourse, the ER-PIN states that REDD+ activities implemented at sub-national level and through the so-called "special programs" should address deforestation drivers and respond properly to local needs (ER-PIN, 2014, pp. 19, 33, 61). Also in line with the advocates' discourse, it states that the verified emission reductions in the first phase of the implementation of the FCPF Emission Reductions Initiative will be transferred to a National Fund and subsequently to the correspondent state or region, which would help speed commercialisation of REDD+ carbon credits (ER-PIN, 2014, p. 34).

According to the ER-PIN, the costs involved in implementing REDD+ activities at local level during the first year will be covered with federal, state, or other funds. The activities included in the so called "investment plan" will be defined and carried out by communities and landowners with help from the "local implementing agents", probably large national and international NGOs that would meet demanding requirements, such as to have high operational and technical capacity to facilitate collaboration of a variety of sectors, to administer public funds, and to manage watershed areas or biological corridors (ER-PIN, 2013, p. 34). The investment plan could include activities already promoted with the special programmes as well as sustainable agricultural practices that would contribute to reduce deforestation and forest degradation (ER-PIN, 2013, p. 33). The monetary income from selling carbon credits resulting from avoided deforestation

to FCPF through Carbon Fund in the first year will be reinvested in the subsequent four years so to cover incremental costs (not the opportunity costs) and strengthen the local activities that resulted in avoiding deforestation and forest degradation (ER-PIN, 2013, pp. 34-35, 61; ENAREDD+, 2014, p. 36). These payments may not be used as a substitutes or duplicates of government programmes' subsidies, but they must be fully used to continue and strengthen activities to halt deforestation and forest degradation (ENAREDD+, 2014, p. 36; ER-PIN, 2013, p. 62). Therefore, contrary to the reformists' storyline, both documents imply that REDD+ payments will reach local communities in the form of *REDD+ incentives*, i.e., monetary and non-monetary rewards aimed at supporting REDD+ activities and actions on the ground, which do not have to be additional and/or linked to emissions reductions results (ENAREDD+, 2014, p. 90) and not as *REDD+ benefits*, i.e., payments resulting from additional reductions in CO₂ emissions from REDD+ actions (ENAREDD+, 2014, p. 84).

In theory the region/state's incentives should be shared further with communities and landowners across targeted landscapes (ER-PIN, 2013, p. 33). However, the documents do not define the basis for such benefit-sharing plan. This so called "distribution plan of the benefits" will be designed in consultation between state governments, local implementing agents, and local stakeholders. Furthermore, it will be done using the existing national and state platforms (ER-PIN, 2013, p. 62, comments pp. 12, 14). In line with the reformists' discourse, the official REDD+ documents do not consider how REDD+ benefits and/or incentives should be distributed at community level, under the premise that local communities should retain the rights to decide on this matter (ENAREDD+, 2014, p. 72; ER-PIN, 2013, Appendix 4, p. 10).

Further in line with the advocates' discourse, the ER-PIN promotes a top-down control of sub-national REDD+ development (ER-PIN, 2013, pp. 44, 89) and a landscape approach to REDD+ activities, which should be built upon improved local forest governance, resource management capacities, and better cross-scale institutional coordination (ER-PIN, 2013, p. 30).

In both REDD+ documents, the national PES programme and the protected areas approach are the policies and measures most commonly considered as adequate to promote REDD+. Nevertheless, the ENAREDD+ makes only an indirect connection between deforestation in protected areas and economic activities promoted by local

communities. Namely, it states that deforestation was observed in protected areas that are in turn located in rural and indigenous communities' lands (ENAREDD+, 2014, pp. 17, 20). The documents also explicitly promote community forest management as an integral part of the special programmes under REDD+ and as suggested in the reformists' storylines.

Regarding the contentious issue of local people's participation, the ENAREDD+ recognises that only full and effective participation of local people in REDD+ would make it possible to preserve national forests (ENAREDD+, 2014, p. 5). The strategy adds that broader participation of civil society in forest policy-making has been already encouraged through numerous multi-stakeholders fora and other forms of organization. The ER-PIN addressed both the advocates' and the reformists' argument on broader participation. Namely, in the same sentence, the document states that the REDD+ readiness process has so far shown a strong record of local communities' inclusion but that local people's participation can still be improved (ER-PIN, 2013, p. 35). Furthermore, the ENAREDD+ calls for a clear definition of the role of local people's in MRV (ENAREDD+, 2014, p. 67) as implicitly promoted in the reformists' storyline.

Finally, and in line with the advocates discourse, the ER-PIN and the ENAREDD+ promote a results-based REDD+ strategy and carbon accounting at the sub-national scale, namely they both note that REDD+ payments will depend on the amount of emission reductions achieved by each Mexican state (ER-PIN, 2013, pp. 34, 64; ENAREDD+, 2014, p. 46). The documents further reproduce the storyline shared by both advocates and reformists on the need to mobilise different economic sources to finance REDD+ (ER-PIN, 2013, pp. 17, 34; ENAREDD+, 2013, pp. 36, 48). The ER-PIN states that early REDD+ funding will come from the federal government forest management subsidy programs, supplemented by the World Bank's Forest Investment Program and resources from voluntary carbon markets. It also mentions the idea of developing a national carbon market as contemplated in the country's General Climate Change Law. The ENAREDD+ particularly articulates the need for including a larger share of private investment, thus reproducing the advocate's storyline on the pivotal role of the private sector in REDD+ development (ENAREDD+, 2014, pp. 45-46).

6.4. Interpreting the discursive dynamic of REDD+ readiness

This section builds on the findings from the previous sections to address the questions under the second research topic of this thesis related to the discursive dynamic of the REDD+ readiness process in Mexico. The section discusses the findings in light of the current scholarly literature. I start by focusing on the patterns of interaction, conflict or cooperation, that exist between the identified REDD+ discourses and that result from the promotion of antagonistic or shared storylines. Then, I explore possible reasons for the differences found in the level of institutionalisation of different Mexico's REDD+ discourses.

6.4.1. REDD+ discourses overlaps and conflicts

As it was made clear in section 6.1, the three identified discourses have coalesced around numerous storylines which have been mobilised by the actors in the REDD+ readiness process. These issues were broadly grouped in those that focus on conceptual and strategic REDD+ dimensions. I argue that the principal differences between discourses reflect divergent perspectives around REDD+ conceptual dimensions. The rejectionists oppose the idea of REDD+ and thus do not mobilise storylines on REDD+'s strategic issues. The reformists' and the advocates' discourses accept REDD+ but differ in their views about strategic issues of benefit-sharing and co-benefits, carbon rights attribution, scale of implementation, scope of activities, safeguards, and the ways to realise the latter.

On the one hand, even though advocates argue that co-benefits are guaranteed with REDD+ implementation, they also emphasize that some trade-offs between carbon, environmental, and social REDD+ outcomes are inevitable and therefore should be negotiated in advance. On the other hand, the rejectionists and reformists stress the potential risks and costs of REDD+. While, the rejectionists vehemently oppose REDD+ implementation, the reformists place emphasis on safeguards and on how to maximize the potential benefits from REDD+.

In line with other studies about national REDD+ debates in Tanzania (Rantala and Di Gregorio, 2014), Mozambique (Quan et al., 2014), and Brazil (May et al., 2011), the analysis developed in this chapter shows that carbon rights attribution features among the most controversial issues in REDD+ design. In comparison to these other countries,

Mexico has a relatively clear land tenure system and, by law, ownership over carbon sequestered in forests lies within local people (Corbera et al., 2011). However, this does not apply to the carbon stocks that result from activities targeted at avoiding deforestation, an issue that represents a major point of contention between the reformists' and the advocates' discourse coalitions. In this respect, the former coalition is being essentially against the nationalisation of carbon, i.e., the government holding exclusive rights to REDD+ benefits (Peskest and Brodnig, 2011), while the latter coalition considers deforestation as illegal unless it is backed up by a government-issued authorisation for land use change.

The discussion on carbon rights is further broadened to include the debate on the right scale for REDD+ implementation. This debate can be considered a continuation of the previous international discussions on national vs. sub-national approaches for REDD+ implementation (Angelsen et al., 2009), which came to a closure after the jurisdictional approach was officially accepted as an interim measure towards a full national approach (UNFCCC, 2012). The current discussion between advocates and reformists is focused on the adequacy of the landscape approach, accepting that the benefits from REDD+ should be delivered to local actors at the landscape scale. The advocates support that such approach would lower the risk of leakage and therefore guarantee environmental effectiveness of REDD+. In addition, they argue that organising consultations with a group of communities, rather than with individual communities, would lower transaction costs associated with decision-making at local level. However, the reformists oppose the landscape approach for it would imply shared responsibility of delivering REDD+ outcomes across all landscape actors, which would in turn result in the unfair distribution of benefits as all actors would equally benefit, independently of their compliance with REDD+ activities. The debate suggests that the current disagreement over the right implementation scale is essentially rooted in the choice of, and any related trade-offs between, the key REDD+ performance criteria, namely effectiveness and cost-efficiency on one side and equity on the other (Angelsen et al., 2008; Angelsen et al., 2012; Sikor, 2013; Skutsch, 2013).

The question of how different coalitions interpret REDD+ equity merits further discussion. Rejectionists principally use the arguments of environmental justice and the North-South divide, while reformists and advocates focus on how to achieve social benefits and equitable outcomes across national REDD+ stakeholders and support a

merit-based distributive justice principle (Mohammed, 2011; McDermott et al., 2011). All advocates and most reformists promote benefit-sharing approaches based on outputs (Skutsch et al., 2011) and under an “emission reductions” rationale, i.e., benefits should go to actors realising emission reductions (Luttrell et al., 2013). However, advocates consider that states or regions should also be a subject of equity, while reformists consider that equity should only apply to individual communities and landowners, i.e., any benefits deriving from REDD+ activities should accrue to these actors only. Only academic representatives who adhere to the reformists’ discourse support an input benefit-sharing approach (Skutsch et al., 2011).

Discourse coalitions differences regarding the principles that should govern the distribution of REDD+ benefits can be explained by the discourse members’ role in the forest carbon supply chain and by the administrative level at which they operate more often. Thus, it is not surprising that the advocates’ coalition supports the national approach to REDD+, given that its members include predominantly carbon sellers, carbon buyers and facilitators in carbon forestry projects. The reformists’ interest in the sub-national approach to REDD+ can be explained by their intermediary and provider role, but also by their role as facilitators of local communities’ development (Vatn and Vedeld, 2011). In turn, the rejectionists’ critical stance on REDD+ can be explained by the fact that most actors who adhere to this discourse include either carbon service providers with negative experiences from participating in REDD+ pilots or social organisations that actively oppose the idea of REDD+ as a form of global environmental governance.

Together with the heterogeneity of existing attitudes expressed through antagonistic storylines, the discourse analysis undertaken in this chapter has also helped uncovering shared storylines across discourse coalitions. For example, rejectionists share with the reformists storylines on REDD+ conceptual issues. Thus, they both agree that local people are forest stewards and that deforestation is not the largest global source of GHGs emissions. Reformists also share storylines with advocates on both conceptual and strategic REDD+ issues. These two coalitions agree that the main drivers of deforestation in Mexico are unsound land-use policies and illegal logging, that the country’s apparently clear land tenure regimes do not necessarily reduce the risk of land alienation, that REDD+ should be funded through both public contributions and

markets, and that sustainable rural development should be the guiding principle in REDD+ design and implementation.

The analysis presented here further suggests that advocates largely base their arguments on technical scientific knowledge and cost-effectiveness concerns. Rejectionists, in contrast, build their argument on social science knowledge, as well as on local and indigenous peoples concerns and perspectives, and they call for the moral obligation to protect local communities and nature. Therefore, some of the differences between REDD+ readiness discourses are fundamentally rooted in the division between technical (national and international level) and traditional (local level) approaches (Gallemore et al., 2014; Aicher, 2014). In constructing their storylines, the reformists' discourse combines all of the previously mentioned types of arguments and as such it could be seen as a step forward in overcoming this discursive divide and leading to more cross-scale cooperation required for REDD+ to be successful. The role of the reformists could be particularly important given that the rejectionists and the advocates do not meet each other in REDD+ discussions, and consequently the two types of knowledge they promote stay largely unconnected (Burt, 2005 in Gallemore et al., 2014).

The results presented in Section 6.2 suggest that the rejectionists' and the reformists' discourses reproduce the storylines of global REDD+ discourses focused on the social justice issue. Nevertheless, the rejectionists' discourse resembles more the *egalitarian* discourse (Nielsen and Thompson, 2013), while the reformists' discourse resembles more the *reformist-version of civic environmentalism* (Bäckstrand and Lövbrand, 2006) and the *social greens* (Hiraldo and Tanner, 2011). In turn, the advocates' discourse combines the storylines of global discourses with a focus on sustainable development and governance. The results further reveal that none of the identified Mexico's REDD+ discourses resemble the *bio-environmentalists* discourse (Hiraldo and Tanner, 2011), the only REDD+ meta-discourse with a focus on biodiversity conservation.

In sum, the REDD+ discourses in Mexico have been influenced by the domestic debates on forest governance and land-use change, at the same time that they have been influenced by the global REDD+ discourses promoted through international negotiations and treaties. However, not all of the storylines reproduced by the REDD+ discourse coalitions identified in this study have been incorporated in the official national REDD+ documents, an issue I turn to explore below.

6.4.2. Explaining different levels of discourse institutionalisation

The results of Section 6.3 suggest that the two most antagonistic discourses, the rejectionists and the advocates, have experienced asymmetric processes of institutionalisation in REDD+ readiness. The rejectionists' discourse is the least institutionalised, with only two of its storylines on conceptual REDD+ dimensions, being implicitly addressed in the official REDD+ documents. As this storylines are shared with the reformists, their institutionalisation can rather be attributed to the reformists, who, as participants in the national REDD+ discussion, promoted them. Contrarily, the advocates' discourse is the most institutionalised among the other REDD+ discourses, and advocates' storylines represent more than half of the total number of institutionalised storylines in the official REDD+ documents. This is not surprising, given that both REDD+ documents were signed by CONAFOR, the representative of the government's forest sector and the most powerful actor in the country's REDD+ readiness process (see Chapter Five).

The most interesting finding, however, is that the reformists' discourse is represented in almost 40% of all the institutionalised REDD+ storylines. Such high percentage is surprising given that this discourse coalition mostly includes the non-governmental sector, and it would be tempting to assume that under the dominant coalition, there would be little room for alternative arguments. I interpret the relatively high level of the reformists' discourse institutionalisation as an attempt of the Mexican government to tone down possible debates or conflicts by more saliently including alternative storylines in the official documents. To understand better the reasons for a relatively high level of institutionalisation of the reformists' storylines, it is necessary to take a closer look at the key issues that this discourse coalition promotes.

First, the issue of safeguards has received attention in international REDD+ discussions and has generated discussions at the national level through the UN-REDD programme and the World Bank's Forest Carbon Partnership Facility (Peskett and Todd, 2013). Therefore, the institutionalisation of the reformists' storylines on safeguards, such as the elaboration of the SIS and the SNS is not surprising and could be the result of a process of evolution and diversification of the Mexican government's position toward REDD+ under the impact of the global REDD+ debate, rather than of the national REDD+ readiness debate through multi-stakeholders fora.

However, the inclusion of the REDD+ Social and Environmental Standards for safeguards on top of the Strategic Environmental and Social Assessment (SESA) process promoted by the FCPF can be more directly attributed to the reformists. Namely, the SES promotes right-based safeguards and focuses on achieving multiple benefits beyond emission reductions; it also looks for free, prior and informed consent. In such a “consent-seeking” process, indigenous and local people have to be fully informed and have time to deliberate among themselves and with external actors in order to produce a consensual agreement on what is best for them (Aicher, 2014). In contrast, the SESA process is more carbon focused, and looks for free, prior and informed “consultation”, a much vaguer concept than “consent” (Aicher, 2014). Furthermore, by opening a discussion on which information should be included in SIS and SNS, the reformists discourse further challenges the somewhat dominant advocates’ discourse (Larsen et al., 2012; Aicher, 2014).

Second, the adoption of sustainable rural development as a leading conceptual principle for REDD+ design and implementation in Mexico can be explained by the reformists’ early push in this regard, and the later adoption by policy makers (the advocates) in Mexico’s REDD+ Vision document. It is assumed that if REDD+ is developed following such principle, the chances for “win-win-win” outcomes will increase because: “if local communities are well, the forest will also be well” (I125). Such focus on the social aspects of REDD+ has resulted in that the environmental safeguards received less attention from the REDD+ stakeholders.

Another important example that demonstrates the extent to which the reformists’ discourse has slowly permeated the policy discourse is the recent deletion of a statement equating deforestation with illegality from the ENAREDD+ text⁴⁹. Furthermore, the current ENAREDD+ draft primarily focuses on the technical difficulties for attributing the ownership over the emissions emanating from avoided deforestation to one particular forest owner, and more importantly recognises the possibility of changing the legal framework to define avoided deforestation as an ecosystem service. Although the current wording does not resolve the ambiguity about carbon rights’ ownership from all REDD+ activities, it soothes the previous argument under which the government was entitled to any potential benefits from emission reductions from avoiding deforestation.

⁴⁹ The statement was contained in the ENAREDD+ draft from July 2013 (p. 29), while it was removed from the next ENAREDD+ draft issued in April 2014 (p. 32).

Overall, however, many reformists express concerns about the lack of concrete suggestions in the strategy texts on how to address the recommendations they have put forward through their discourse. This issue is important because it anticipates potential discrepancies between the level of discourse institutionalisation (the readiness phase) and its materialisation (the implementation phase).

The advocates' discourse is both dominant and hegemonic. It is dominant because it controls REDD+ discussions and force other discourses to use certain REDD+ terminology and definitions (Hajer, 1995; Adger et al., 2001). And it is hegemonic because it is fully translated into current versions of the official REDD+ documents (Hajer, 1995). The dominance of the governmentally supported advocates' discourse in Mexico is not an isolated case. Rantala and Di Gregorio (2014) have also shown that the Tanzanian national REDD+ strategy largely reflects the positions of the discourse coalition led by the most influential governmental actors. Furthermore, Di Gregorio et al. (2014) show that in many other developing countries a REDD+ discourse based on weak ecological modernization principles and supported by the national governance, international investors and NGOs, has been preponderant in policy-making.

In conclusion, the ENAREDD+ and the ER-PIN documents combine the advocates' and the reformists' discourses, although the storylines on development and effectiveness are more salient than those on justice and equity. In addition, the tension between these two discourses' on the ownership over the carbon credits from avoided deforestation remains at the centre of the national REDD+ discussion. It is an open question whether the current level of the reformists' discourses storylines institutionalisation in REDD+ will continue in practice, once the country's REDD+ strategy is implemented.

6.5. Summary

This chapter has addressed the questions under the second research topic of this thesis aimed at identifying the main REDD+ discourses in Mexico. It has also explored their resemblance with forest governance meta-discourses. Furthermore, the chapter has analysed the discourses' level of policy institutionalisation.

There are three main REDD+ discourses with a varying level of policy institutionalisation. First, the policy marginalised rejectionists' discourse challenges the

idea of REDD+, reproduces the storylines of the archetypal global discourses on social justice, and it is supported by the coalition consisted of representatives of NNGO sector and some local communities. Second, the partly institutionalised reformists' discourse advocates for the implementation of legal and policy reforms in land-use sectors in order to achieve social benefits and equitable outcomes from REDD+ across national stakeholders. As the rejectionists', the reformists' storylines resemble those of the archetypal global discourse of social justice. The reformists' coalition includes representatives of NNGOs, academia, and some local communities. The dominant advocates' discourse openly supports REDD+ as potentially cheap, effective and profitable climate change mitigation mechanism. Advocates' arguments resemble both those used in the archetypal global discourses of sustainable development and governance. The advocates' coalition consists of representatives of government and INGOs.

This chapter has also shed light on the fact that attributing ownership to future emission reductions remains one of the most polarising issues in national REDD+ discussions. The chapter has finally argued that the content of the REDD+ discourses and the process of their institutionalisation have been influenced by both the global REDD+ negotiations and the domestic debates on forest governance and land-use change.

Chapter 7. Benefit-sharing: Exploring local preferences on REDD+ benefits distribution

This chapter investigates the preferences on REDD+ implementation and benefit-sharing of the case study communities' and identifies the social and economic factors mediating such preferences. The first and second sections of the chapter provide a short description of the four REDD+ scenarios developed and discussed in *La Mancolona* and *Xmaben*, and describe the preferences of different groups regarding these scenarios in each local community, respectively. The third and fourth sections dig into differences in preferences and the role of socio-economic factors (i.e., tenure rights, gender, and social status) in explaining such differences. The final section contextualises the findings presented here with decisions on equity and benefit-sharing taken at the national level, as well as with the broader literature on the topic.

7.1. Benefit-sharing preferences in La Mancolona

7.1.1. Scenarios characteristics

The four REDD+ scenarios discussed in *La Mancolona* include: i) reforestation for timber and non-timber forest products; ii) reforestation with melliferous trees including allspice; iii) agricultural mechanisation to reduce the extension of areas under slash-and-burn agriculture; and iv) PES-like forest conservation (Table 7.1). All scenarios include the principle of conditionality, i.e., compensation will be made only if all activities specified in the contract are met.

Table 7.1: REDD+ scenarios discussed in *La Mancolona*

Scenario 1	Scenario 2	Scenario 3	Scenario 4
<i>Reforestation for timber and non-timber forest products</i>	<i>Reforestation with melliferous trees including allspice</i>	<i>Agricultural mechanisation to reduce the extension of areas under slash-and-burn agriculture</i>	<i>PES-like forest conservation</i>
Activity			
Forest enrichment through reforestation of fallows with timber species cedar	Forest enrichment through reforestation of fallows with allspice (<i>Pimenta</i>)	Avoided deforestation through agricultural intensification	Forest conservation through payments for ecosystem services of forest carbon

(<i>Cedrela odorata</i>) and mahogany (<i>Swietenia macrophylla</i>) and non-timber tepejilote (<i>Chamaedorea elegans</i>)	<i>dioica</i>) and melliferous trees: jabin (<i>Piscidia piscipula</i>), chaka (<i>Bursera simaruba</i>), majagua (<i>Hampea trilobata</i>), and tsalam (<i>Lysiloma latisiliquum</i>)		
Details on the activity			
1 st year- planting trees on 0.25 ha 2 nd to 5 th year- area monitoring and cleaning, replanting of dead plants	1 st year- production of trees in community nursery 2 nd year- planting trees on 0.5 ha 3 rd to 7 th year- area monitoring and cleaning, replantation of dead plants	Mechanised soil tillage of areas used for traditional agriculture	Forest monitoring, cleaning of roads, opening of firebreaks Permission to collect firewood to satisfy household's needs will be granted
Potential beneficiaries			
Both land owners and <i>pobladores</i> with notarised authorisation from landowners	Mainly land owners; <i>pobladores</i> only as members of tree nursery and day labourers contracted in reforestation activities	Both land owners and <i>pobladores</i> with notarised authorisation from landowners	Mainly land owners under collective contract, i.e., bringing together several of their forested plots; <i>pobladores</i> only as day labourers contracted in scenario's activities
Compensation level			
Household	Household and collective	Household and collective	Household
Contract duration			
5 years	7 years	5 years	More than 20 years
Actor who should administer the benefits			
Local NGO	Community	Community	Community
Type of benefits			
Money, plants, and equipment for household	Money for household; infrastructure for community	Tractor for community; fuel, seeds and other agricultural supplies for household	Money for household
Frequency and timing of benefits' disbursement			
Twice a year 1 st payment 50% of money in advance plus plants and	Money annually between March and May, infrastructure to be built after	Tractor in advance Once a year 50% of fuel, seeds and organic fertilizers	Twice a year 1 st payment 50% in May just after the dry season

equipment to support tree planting between March and May, 2 nd payment 50% after verification of completed work in December	completion of the contract	needed for one year and fund for tractor repair and maintenance between May and June	2 nd payment 50% in December
Type of sanctions			
Second payment will be cancelled No payback required	No payment	Individual benefit would be cancelled No payback required Tractor would stay as collective good	Depends on the community assembly, but ranging from payment cancellation to expulsion from the programme
Principle of conditionality			
Yes	Yes	Yes	Yes

Source: own elaboration.

Scenario 1 would involve the planting of timber and non-timber species on 0.25 hectares of fallow land per person. The activity would last five years and would be implemented with support of a local NGO. Both landowners and *pobladores* would be allowed to participate. During the first year, participants would be provided with tree seedlings, equipment and cash transfers. In subsequent years, participants would have to monitor and clean the reforested area for which they would be compensated in cash in two equal annual instalments and, if necessary, new seedlings would be provided. In case of non-compliance, the second annual payment would be cancelled.

Scenario 2 would involve the planting of 0.5 hectares of fallow land per person with allspice and various species of melliferous trees. This scenario would involve a seven-year contract with landowners. *Pobladores* could participate only as members of the tree nursery or day labourers. The community would be in charge of conducting reforestation without external technical support. The compensation would include monetary support for the production of seedlings in the community's nursery (first year), planting the seedlings (second year), and monitoring, cleaning, and replanting dead seedlings (each subsequent year of the contract). The compensation would also include non-monetary benefits in the form of community infrastructure. Non-compliance would be sanctioned with the cancelation of individual payments.

Scenario 3 would involve a five-year contract with landowners and *pobladores*. Participants would have to perform soil tillage on their individual land parcels without

external actors' assistance and using a tractor disbursed in advance as a collective benefit. In addition, participants would receive half of the annually needed amount of fuel and seed supply. In case of non-compliance, the individual benefit would be cancelled.

Scenario 4 would entail a 20-year collective contract with the landholders to implement forest conservation activities on forested plots in return for carbon sequestration payments. Activities would include forest monitoring, road cleaning, and opening of firebreaks in individually designated areas. *Pobladores* could benefit only as day labourers. Participants would be allowed to use the areas under conservation for collecting firewood and for beekeeping. Payments would be disbursed twice a year and activities would be implemented without external technical support. In case of individual non-compliance, sanctions would be decided and implemented by the community assembly.

7.1.2. Preferred scenarios

Scenario 2 is the most preferred scenario in *La Mancolona*, followed by *scenario 4*, *scenario 1* and *scenario 3* (Figure 7.1). In the following text, I explore the reasons behind such preferences focusing on one scenario at a time and following the order of the community's collective preference.

- *Reforestation with melliferous trees including allspice (scenario 2)*

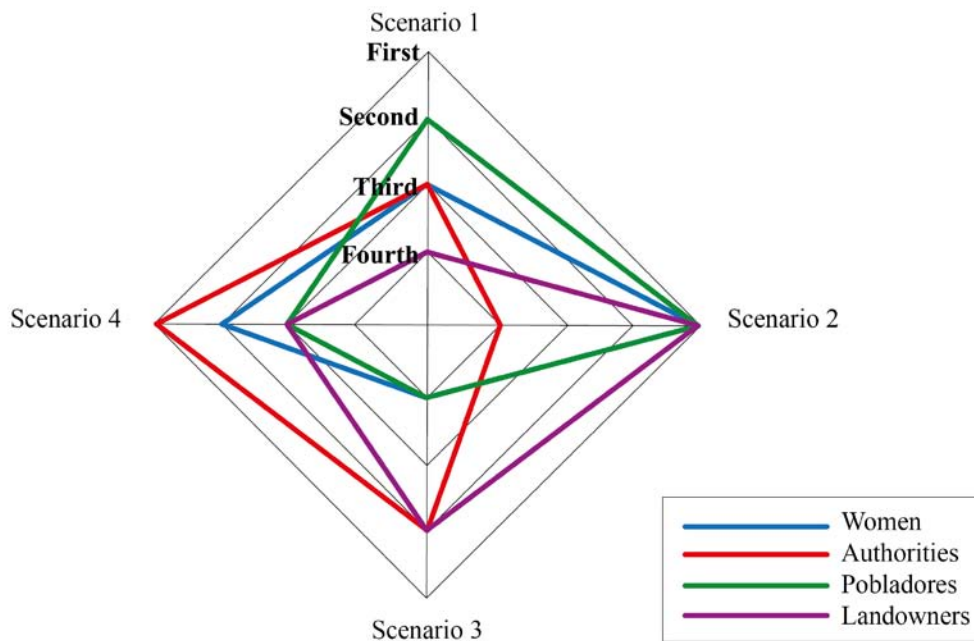
All groups except the authorities preferred *scenario 2* for the future implementation of local REDD+ activities. Women preferred this to other scenarios, because melliferous trees not only support beekeeping, one of the main productive activities in the village, equally practiced by women and men, but they also have other uses, such as the production of fruits and seeds and can be used as timber. They also valued the inclusion of monetary support for performing follow-up activities, which had not been the case with reforestation programmes locally implemented in the past.

Pobladores also liked *scenario 2* because it supports beekeeping, an economic activity they are allowed to perform. They also valued that this scenario included the building of community infrastructure and generated jobs in the construction sector. In turn, landowners liked *scenario 2* because they considered that agroforestry on small areas, including the production of honey and fruits for both marketing and self-consumption,

was more efficient and profitable than reforestation with cedar and mahogany on large areas (*scenario 1*).

In contrast, authorities rated *scenario 2* as the least preferred one. They argued that, although they liked the idea of producing and planting melliferous trees, the other scenarios were much more profitable. The authorities' opinion was based on their experience with past reforestation programmes, which they did not perceive as effective nor profitable. In addition, authorities did not like the idea of further developing community infrastructure as part of the scenario's benefits, as they thought it was not fair that those who did not invest their time and money in the activities could enjoy the benefits.

Figure 7.1: Focus group preferences for future REDD+ scenarios in *La Mancolona*



Source: own elaboration.

- *PES-like forest conservation (scenario 4)*

The authorities demonstrated a clear preference for *scenario 4*, as they considered PES-like forest conservation a logical continuation of current conservation activities in the community (i.e., payments for hydrological services programme). They also liked *scenario 4* because under such scenario each landowner would be able to decide the amount of forest area to be put under conservation, while not losing the right to collect firewood for self-consumption.

Women voted for *scenario 4* as their second most preferred, due to its potential positive impact on beekeeping. However, they expressed concerns that under this scenario firewood collection would be constrained. Landowners considered *scenario 4* as their third preferred option. Although landowners acknowledged that PES-like forest conservation would help keep the forests for future generations, they feared that under this scenario land could eventually be bought or expropriated by the government. Additionally, it was unclear to them who would pay for forest carbon.

Pobladores also voted for *scenario 4* as the third option. They considered that PES-like forest conservation was a more profitable activity than *milpa* or livestock breeding, but they did not like that they could not participate in PES-like programs nor benefit from the scenario's activities. They also considered that until they obtain land tenure rights over the vacant state-owned forests they have been using for agriculture -currently the most profitable activity- such areas would be heavily deforested and therefore not apt for conservation. Only one *poblador* was explicitly against PES-like forest conservation:

“Nobody has to tell me that I have to preserve my forest. I work with my father and we do not receive PSAH payment, but we conserve 25 ha of our forest through beekeeping and other 25 ha we use for productive activities, livestock production and *milpa*. We do not perform productive activities to deforest, but to produce food. Our production is affected by natural phenomena and for that reason we cannot have only one activity” (F03).

- *Reforestation for timber and non-timber forest product (scenario 1)*

Only the *pobladores'* group voted *scenario 1* among the preferred, and still only as the second best option. The reason why *pobladores* liked this scenario is because it would allow them to use the landowners' land, with notarised authorisation, to participate and benefit from the scenario's activities. They stressed that under such scenario it would be important to set the terms of the contract with landowners in such a way that they could also benefit from the future sale of timber.

Women and authorities ranked reforestation for timber and non-timber forest products as their third preferred option, whereas landowners voted *scenario 1* as their least preferred option. Women argued that they considered reforestation with melliferous

trees more attractive. Authorities and landowners alleged that past reforestation programmes had been rather ineffective and that the selected species (cedar and mahogany) are unlikely to fit the local ecological context. Authorities also considered that reforestation for commercialisation of timber and non-timber forest products should be performed in PES-like forest conservation areas as a complementary income-generating activity. Both authorities and landowners supported the idea of allowing *pobladores* with notarised authorisation to participate in and benefit from the reforestation programme on their land. However, they considered that ownership rights over the planted trees should exclusively lie with landowners.

- *Agriculture mechanisation to reduce the extension of areas under slash-and-burn agriculture (scenario 3)*

Authorities and landowners considered *scenario 3* as their second preferred option, as they believed that mechanisation would improve household income and increase *milpa* productivity. It was assumed that such alternative would reduce the use of fertilisers and the labour required for ploughing, harvesting and transporting yields (to date mostly provided by *pobladores*), as well as to potentially halt local deforestation rates. However, landowners considered the proposed levels of assistance as insufficient, and advocated for the provision of the full annual amount of fuel, agricultural supplies, and seeds. Landowners also requested more equipment and technical assistance by the government. Authorities, in turn, suggested that any programme supporting agriculture mechanisation should last longer than five years to enable producers to generate enough savings to continue working independently after the programme ended. Both groups considered that there would be no problem in sharing a tractor between various households based on the long history of cooperation in agricultural activities.

In turn, women and *pobladores* considered *scenario 3* as their least preferred option, even if they recognised that *milpa* yields were low. Both groups stated that there were unfavourable conditions for mechanised agriculture in *La Mancolona*, such as hilly areas, lack of water supplies, and lack of road access to productive areas. Women proposed the use of manual mechanisation⁵⁰ as a more appropriate alternative for local

⁵⁰ As proposed in a project of the NGO Fondo para la Paz's, the land would be cultivated manually using hand-operated seeders (*matraca* in Spanish) to dig a hole and sow seeds.

conditions. *Pobladores* considered that deforestation could be dealt with other means, such as agricultural rotation across the landscape.

7.1.3. Preferences in REDD+ implementation

Generally speaking, all groups agreed that the state and the municipal governments should bear the responsibility of administering REDD+ activities so to avoid losing monetary benefits through a long chain involving external actors, such as NGOs. To further reduce related costs, all groups considered that the community itself should implement the activities proposed under each scenario. Regardless of their ranking preferences, all groups also agreed that participants in future local REDD+ activities should be compensated based on the time and work invested. *La Mancolona* had a long-standing tradition of working in groups who share benefits from different productive and conservation activities, so this was considered a fairest benefit-sharing strategy by the entire community. However, the *pobladores* group added that benefit-sharing should include all community members, independently of their property rights.

All focus group participants also preferred individual over collective activities, as well as monetary over non-monetary benefits. *Pobladores*, however, emphasised that collective goods, such as the construction of community infrastructure suggested under *scenario 2*, could provide additional employment opportunities and could be included in any of the scenarios as a form of a bonus for successful accomplishment of REDD+ activities' requirements.

Both *pobladores* and landowners considered that under the current compensation rate of US\$75 per hectare, reforestation of only 0.25 or 0.5 ha -as proposed with *scenarios 1* and *2*- would not be profitable. Accordingly, they suggested an increase in the level of economic support. One landowner also suggested, and the other participants supported his idea, that the amount of benefits from the reforestation scenario should be calculated based on the number of days of work needed to meet the scenario requirements. In his own words: "to plant 0.25 ha of fallow one needs a minimum of four days to clean the area, two days to dig the holes, two days to transport the plants, and two days to plan them. This makes in total 11 days of work, and each day should be paid at US\$7.5" (F04).

Even if *scenario 4* represented an improved version of the current PSAH programme, all groups emphasised that any future PES-like initiative should include i) higher payments adjusted to inflation both to avoid currency devaluation (particularly under long period contracts) and to help cover the costs of extra work (particularly in households of predominantly female members); ii) flat payments per hectare of forests and independently of forest type or ecosystem services quantity or quality - to receive the same amount of benefits as other PSAH participants in the country; iii) longer contracts - to assure continuity of forest conservation for present and future generations; and iv) programme activities adapted to the local conditions and their timely supervision - to avoid unnecessary work (e.g., construction of terraces on the exposed slopes to prevent soil erosion; cleaning dry leaves during dry season in May to prevent forest fire, and again during the rainy season in August just for the purpose of passing supervision).

Regarding monetary compensations for PES-like forest conservation, all focus group participants preferred one annual instalment, instead of two. They also agreed that they would invest such money to cover the costs of accomplishing programme requirements and developing other productive activities, e.g., establishing the *milpa* fields and maintaining apiculture production. For these reasons, landowners particularly suggested disbursing payments in April or September, instead of in December, since it is during these months that such aforementioned costs need to be covered.

7.2. Benefit-sharing preferences in Xmaben

7.2.1. Scenarios characteristics

The following four REDD+ scenarios were developed for *Xmaben*: i) reforestation with melliferous trees; ii) reforestation with forage trees for livestock intensification; iii) agricultural mechanisation to reduce the extension of areas under slash-and-burn agriculture; and iv) PES-like forest conservation (see Table 7.2). As in *La Mancolona*, all scenarios include the principle of conditionality, i.e., compensation will be made only if all activities within a contract are met.

Table 7.2: REDD+ scenarios discussed in Xmaben

Scenario 1	Scenario 2	Scenario 3	Scenario 4
<i>Reforestation with melliferous trees</i>	<i>Reforestation with forage trees for livestock intensification</i>	<i>Agricultural mechanisation to reduce the extension of areas under slash-and-burn agriculture</i>	<i>PES-like forest conservation</i>
Activity			
Forest enrichment through reforestation of burnt forest areas with melliferous trees species: jabin (<i>Piscidia piscipula</i>), chaka (<i>Burcera simaruba</i>), majagua (<i>Hampea trilobata</i>), and tsalam (<i>Lysiloma latisiliquum</i>)	Avoided deforestation through livestock production intensification and forest enrichment by planting forage trees: waxim (<i>Leucaena leucocephala</i>) and ramon (<i>Brosimum alicastrum</i>), and forage grass (<i>Pennisetum sp.</i>)	Avoided deforestation through agricultural intensification	Forest conservation through payments for ecosystem services of forest carbon
Details on the activity			
Tree production in community nursery 1 st -3 rd year- planting trees on 50 ha per year 2 nd to 5 th year- area monitoring and cleaning, replanting of dead plants	1 st year planting forage grass on 1 ha, and reforesting of 0.25 ha of pasture 2 nd to 3 rd year organic fertilizer and insecticides	Mechanised soil tillage up to 2 ha in areas used for traditional agriculture	Forest monitoring, cleaning of roads, opening of firebreaks
Potential beneficiaries			
Mainly <i>ejidatarios</i> ; <i>comuneros</i> only as day labourers in tree nursery or in reforestation	Mainly <i>ejidatarios</i> ; <i>comuneros</i> as day labourers	Mainly <i>ejidatarios</i> ; <i>comuneros</i> also but subject to the <i>ejido</i> 's assembly and as day labourers	Mainly <i>ejidatarios</i> ; <i>comuneros</i> only as day labourers
Compensation level			
Collective	Household	Collective and household	Household
Contract duration			
5 years Collective contract	3 years Individual contract	5 years Individual contract	More than 20 years Collective contract
Actor who should implement such activities			
Local NGO	Community	Community	Community
Type of benefits			
Money, plants, and	Money for household	Two tractors for	Money for <i>ejido</i> but

equipment; a community doctor and a pharmacy		<i>ejido</i> , fuel, seeds and organic fertilisers for household	shared among all <i>ejidatarios</i>
Frequency and timing of benefits disbursement			
Once a year 1 st year- 100% plants and equipment in March	1 st year- 50% of the total sum for fodder trees seeding, forage grass seeds, organic fertilisers, pesticides, and a grinder between April and May, 2 nd -3 rd year- tree plants, organic fertilizer and insecticides between April and May	Tractor in advance Once a year 1 st -5 th year- 50% of fuel, seeds and organic fertilisers, tractor maintenance and repair fund in April	Twice a year 1 st payment 50% in May after firebreak work and forest cleaning, 2 nd payment 50% in December
Type of sanctions			
At the individual level: depending on the <i>ejido</i> assembly ranging from payment cancellation to expulsion from the programme At the <i>ejido</i> level: payment cancellation No payback required	Payment will be cancelled	Transfer of fuel, seeds, and fertilisers will be cancelled	Depends on the <i>ejido</i> assembly, but ranging from payment cancellation to expulsion from the programme
Principle of conditionality			
Yes Collective responsibility	Yes Individual responsibility	Yes Individual responsibility	Yes Collective responsibility

Source: own elaboration.

Scenario 1 included a five-year contract for planting melliferous trees produced in the *ejido's* nursery on an area of 150 ha in total located at the collectively managed area. Activities thereafter would include monitoring, cleaning, and replanting. *Comuneros* would benefit only as day labourers. Activities would be implemented with NGO support. The *ejido* would annually receive collective support for tree seedling production in equipment and cash. In addition, the community would benefit from a permanent doctor service and a pharmacy. In case of individual non-compliance, the *ejido* assembly could decide on the type of sanction to be applied. In case of non-compliance at the *ejido* level, future payments would be cancelled.

Scenario 2 would include the reforestation and regeneration of fallow lands by planting fodder tree species on 0.25 ha, as well as forage grass on 1 ha of the pasture areas, with the aim of intensifying livestock production. It would involve an individual three-year contract with *ejidatarios*, where *comuneros* could only benefit as day labourers. Seeds, tree seedlings, organic fertiliser, pesticides, and a grinder would be supplied to each household during the first year. An additional amount of organic fertiliser and insecticides would be disbursed during subsequent years. Non-compliance would be sanctioned with the cancellation of the payments.

Scenario 3 would promote agricultural intensification through mechanisation of areas not larger than 2 ha. Both *ejidatarios* and *comuneros* could sign a five-year contract. Benefits would be disbursed at collective (two tractors plus annual fund for its repair and maintenance) and household levels (50% of the annual amount of fuel, seeds and organic fertilisers). In case of non-compliance, participants would not receive the corresponding individual benefits.

Scenario 4 would involve the conservation of a collectively managed forest area in exchange of payments for forest carbon over a 20-year contract. *Ejidatarios'* would receive monetary benefits for monitoring forest, cleaning roads, and opening firebreaks every six months, while *comuneros* would benefit only as day labourers. Sanctions in case of individual non-compliance would be decided and implemented by the *ejido* assembly. In case of non-compliance at the *ejido* level, further payments would be cancelled, and if recurrent, the *ejido* would be expelled from the programme.

7.2.2. Preferred scenarios

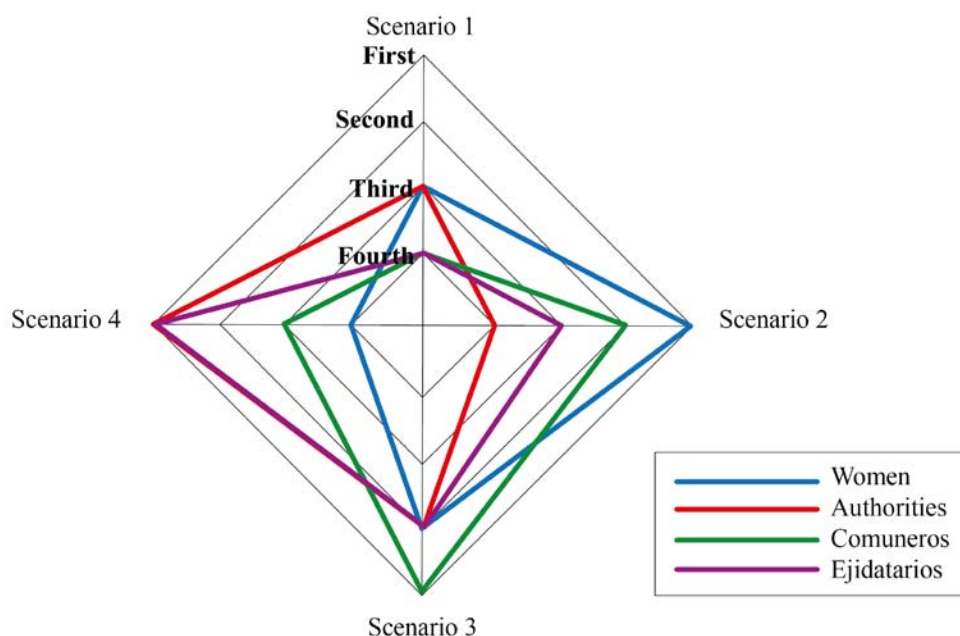
Scenarios 2, 3 and 4 are the most preferred scenarios in *Xmaben*, while *Scenario 1* is the least preferred one (Figure 7.2). The following text explains the reasons behind such preferences focusing on one scenario at a time and following the order of the collective preference of the community.

- *Reforestation with forage trees for livestock intensification (scenario 2)*

Scenario 2 was the most preferred scenario by women, the second most preferred option in the *comuneros'* group, and the third most preferred option by the *ejidatarios'* group. These three groups considered that livestock breeding was very important for local households' subsistence, even if such activity was -erroneously they argued- associated

with deforestation. The groups considered that the supply of a grinder as part of REDD+ activities under *scenario 2* would allow them to optimise the use of residues from mechanised agriculture's as well as of *milpa's* production for livestock breeding. Additionally, women argued that contracts under *scenario 2* should last more than 10 years given the time needed to grow a mature fodder tree, such as ramon. *Comuneros* liked *scenario 2* because they could benefit from intensifying livestock breeding by working on their families' land or as day labourers throughout the year. Furthermore, *ejidatarios* and *comuneros* suggested that under this scenario they could raise dairy cattle for milk and produce and commercialise cheese.

Figure 7.2: Focus group preferences for future REDD+ scenarios in Xmaben



Source: own elaboration.

In contrast, authorities ranked *scenario 2* as their least preferred option for REDD+ implementation. Although they agreed that livestock rearing could be improved by developing cattle stall-feeding and limiting livestock production area to 20 ha per person, they considered such scenario unrealistic given the deeply rooted local practice of grazing cattle on open pastures. Such opinion was nicely depicted in the following statement: “People do not want to change their way of doing thing. Here, if people see you cutting grass on a roadside, they would say you are lazy and you do not grow pasture for your cattle” (F02).

- *Agricultural mechanisation to reduce the extension of areas under slash-and-burn agriculture (scenario 3)*

Only *comuneros* selected *scenario 3* as their most preferred one. They thought that agricultural mechanisation by improving corn production on the 2 ha of the *ejido's* land that they have been allowed to use would help them increase self-sufficiency and reach potential revenues from sales. They considered that the five-year implementation horizon would be sufficient to capitalise enough funds and gain the necessary experience to continue working independently afterwards. Even if they considered the benefits under *scenario 3* sufficiently attractive, they suggested adding irrigation as an additional element of the intervention.

Ejidatarios, authorities, and women ranked *scenario 3* as their second most preferred option. In line with *comuneros*, these groups thought it would contribute to increase *milpa's* productivity and household wellbeing, and potentially to reduce deforestation. *Ejidatarios* agreed that with 2 ha of mechanised agriculture they could produce sufficient corn to cover annual family consumption needs. *Ejidatarios* reported to have experience in mechanised agriculture and considered this activity compatible with other productive (cattle grazing) and conservation activities (PSAH) implemented in the *ejido*. Nonetheless, *ejidatarios* noted that mechanisation might not be as viable as potentially envisaged given that the *ejido's* productive zone (designated by the land use zoning and official management plan) was not large enough to allow all *ejidatarios* to have a mechanised area. Furthermore, they also argued that soil quality is not suitable for mechanisation in all areas of the zone. In addition, some *ejidatarios* occupied more area than others. The *ejido* management plan and land use zoning did not include the possibility of enlarging the productive area, and actually most of the land within the *ejido* was forested and dedicated to conservation and forest harvesting. Therefore, *ejidatarios* were against the idea of allowing *comuneros* to implement mechanised agriculture, as this would potentially increase the competition over the limited productive areas. In fact, *ejidatarios* advocated for the division of the *ejido's* communal land into individual plots; as it was argued: "Many *comuneros* [sons of *ejidatarios*] occupy large areas of the *ejido's* land under the argument that they use the land that corresponds to their fathers. [This would be prevented] if we divide our land, each *ejidatario* would be able to share among his/her sons only the land area that corresponds

to him/her” (F08). In addition to parcelization, some *ejidatarios* opt for the privatisation of the individual plots, as exemplified in the following statement:

“All of these scenarios would fit better in the parcelled land. Each *ejidatario* would protect more his forests, as he would consider it as a family heritage. We could still apply to the programmes together, but each of us should work individually on his land. As the saying goes- “together but not mixed” (*juntos pero no revueltos* in Spanish)” (F08).

In contrast, women considered that people without land rights should be allowed to participate in *scenario 3*, and they suggested an increase of the area for mechanised agriculture of up to 6 ha per person. They were thus keen on enlarging the area dedicated to mechanised agriculture at a rate of at least one hectare per each year of the contract, in order to save enough money from selling corn to be able to continue working independently. Authorities considered that it would be good if *scenario 3* could last 20 years instead of five, in order to cover the risk of low production or lost yields.

- *PES-like forest conservation (scenario 4)*

Authorities and *ejidatarios* preferred PES-like forest conservation because they argued that under such scenarios they would be able to obtain additional revenues for the forest area they were already conserving (through the PSAH programme and the zoning plan). Drawing on such experience, *ejidatarios* complained that it was unclear to them who and how much it is paid for the watershed services they provide. Explicitly, they expressed the following concern: “We only get a small part because most of the money is kept by CONAFOR, who signs a contract with those that provide money” (F08).

Ejidatarios also liked the PES-like scenario because it would be compatible with other on-going productive activities in the forest, such as apiculture. In this regard, however, authorities manifestly complained about the hunting ban accompanying the PSAH programme, and they argued that bush meat represented an important source of food for households. Both *ejidatarios* and authorities demanded that any future REDD+ conservation related activity came with the guarantee that targeted lands would always remain in the hands of the current owners, regardless of compliance levels. As one participant in the authorities’ focus group noted:

“Companies or government cannot take our land. They are paying just for the ecosystem services that our forest produces, but not for our land. It is the same as we have been paying for service of street lighting for 50 years now, but we cannot say that we own a share of the light supply company, because we have been paying just for the service it provides” (F06).

Scenario 4 was the penultimate option for *comuneros* who considered that the PES-like scenario would benefit only *ejidatarios* and would not provide them with job opportunities, as suggested in the following statement:

“PSAH benefits only *ejidatarios* because it is implemented on their land. *Ejidatarios* are well organised in groups and do not need extra-man labour. Even if the programme area is enlarged, we will not benefit from it. Only they [*ejidatarios*] will. It is impossible for us to get involved in the programmes, because they [government] make them for *ejidatarios*. We could only receive benefits when we become *ejidatarios* as the successors of our fathers” (F07).

Women seemingly voted *scenario 4* as their least preferred option, principally because they considered that the community was already protecting forests and other activities could thus be pursued with REDD+ incentives.

- *Reforestation with melliferous trees (scenario 1)*

Scenario 1 was ranked as the third preferred option by women and authorities and as the last one by *ejidatarios* and *comuneros*. Women voted reforestation with melliferous species as the penultimate option because they considered that the other scenarios were likely to be more profitable. This did not mean that they did not like *scenario 1*. For example, women endorsed the fact that all community members, including beekeepers who are *comuneros*, could benefit from the melliferous trees and from working in the *ejido's* nursery. Specifically, women suggested that if *comuneros* were to be allowed to participate in the activities proposed under *scenario 1*, the area for reforestation should then include more than 50 ha.

Authorities explained their low preference for *scenario 1* based on the fact that the *ejido* did not count with a reforestation area large enough to make a collective plantation attractive to all community members, but only with smaller fragments around *milpas* apt only for agroforestry under individual contracts. Nonetheless, they acknowledged that

reforestation could be an important activity to regenerate burnt patches of forests and they welcomed the idea to produce trees in the *ejido's* nursery.

Ejidatarios did not like *scenario 1* due to their past experience with reforestation programmes. As one *ejidatario* explained: “I do not like reforestation because I have never seen its results” (F08). *Ejidatarios* also considered that a REDD+ scenario involving a collective contract would not be successful because people were not enthusiastic about reforestation activities. In their view, it would be more efficient, in the sense of guaranteeing compliance and avoiding conflicts, if each *ejidatario* would be allowed to reforest smaller areas under individual contracts. They also suggested that people would work more committedly in a tree nursery run by a working group, rather than by the *ejido*, and suggested that it would be more efficient to deliver loans to participants instead of direct payments against compliance.

Finally, *comuneros* ranked the reforestation scenario as their least preferred one since they considered that this scenario would not bring them additional job opportunities. *Comuneros*, but also *ejidatarios*, suggested that instead of supporting reforestation with melliferous trees, REDD+ activities could provide apiculture equipment or increasing the number of hives, since melliferous species were not scarce in local forests.

7.2.3. Preferences in REDD+ implementation

Participants in all focus groups in *Xmaben* preferred individual over collective benefits for the implementation of reforestation and conservation activities in the forest commons or elsewhere. In fact, *ejidatarios* advocated for the parcelization and privatisation of the *ejido's* commons, which would allow owners to sign individual contracts, both for REDD+ activities and for other productive activities and programmes implemented on family plots.

For the authorities, the fairest benefit-sharing scheme to be employed in activities developed in the forest commons would be the one currently in place, that is, an *ejidatario's* reward is subject to the accomplishment of an equal share of work in collective tasks, including monitoring, firebreaks opening, and reforestation. The authorities' and the *ejidatarios'* groups agreed that only *ejidatarios* could participate in all scenarios, leaving *comuneros* the option to participate in the scenarios only as day

labourers. *Comuneros* considered they should be allowed to participate in activities that included individual contracts to work on the parcelled land.

Authorities and *ejidatarios* advocated for an increase in the amount of benefits or land area under the future PES-like forest conservation scenario compared to the PSAH current programme, principally because the *ejido* has other well-conserved forest areas apt for the program. They also advocated for the need to receive an equal amount of individual benefits as *ejidatarios* from other *ejidos* with same forest area registered with PSAH, but with a smaller number of *ejidatarios*. In such *ejidos*, *comuneros* help *ejidatarios* to accomplish PSAH programme requirements in return for a share of the programmes' benefits. However, as it has been emphasised, *comuneros* think this would not be the case in *Xmaben* because *ejidatarios* are reluctant to do so. In line with authorities and *ejidatarios*, however, women thought that higher payments -adjusted to inflation- would incentivize conservation and allow households to have more income available.

Compensation in the form of the services of a permanent doctor and a pharmacy, as included in *scenario 1*, was well accepted amongst all groups in *Xmaben*, because it would benefit the entire community. Moreover, participants in the authorities' and women' groups suggested including such collective goods in *scenario 4* as well, because PES-like forest conservation scenario would last longer (20 years). Nevertheless, participants in all groups generally agreed that any non-monetary benefits should represent only 50% of the total value of the reward, while the other 50% should still be provided in cash. *Ejidatarios* stressed that, in any case, a doctor and medical facilities should be provided by the state and should not be dependent on people's participation in REDD+ activities of any kind. Authorities further suggested that monetary rewards associated to PES-like activities should be deposited in banks located in the municipality's capitals in one lump sum to minimise the risk of carrying money several times a year. Women noted that money should be ideally disbursed in May and December, to cover the costs of establishing and harvesting *milpa*, respectively.

In *Xmaben*, unlike in *La Mancolona*, there was no consensus -and thus no shared vision- on who should steer REDD+ activities. Women considered that all scenarios should be promoted by the government administration, but implemented with the help of local NGOs, which could provide better monitoring of activities. Differently,

comuneros thought that REDD+ activities should be promoted and overseen by the state government. *Ejidatarios* and authorities, in turn, stressed their negative experiences with the state authorities and preferred that the federal government promoted the activities. Influenced by bad past experiences working with NGOs, all groups except the women's group considered that the activities should be implemented individually or in groups at the *ejido* level and without further involvement of external actors.

7.3. Comparative analysis of benefit-sharing preferences

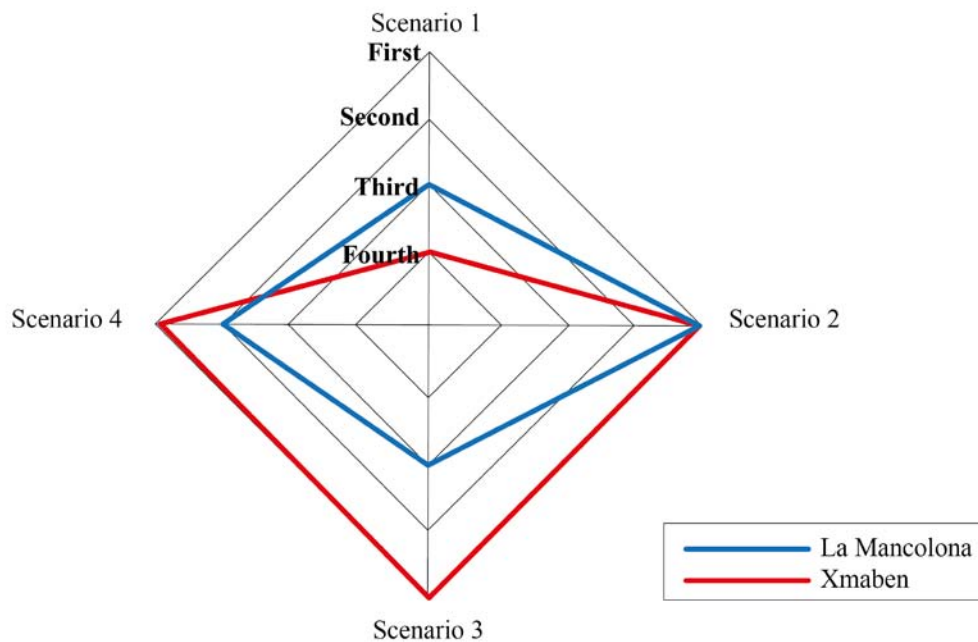
Findings in the previous sections show that the two communities are rather similar when it comes to prioritise future REDD+ scenarios. Both communities preferred combining productive and conservation activities, which were considered potentially complementary as they could be simultaneously performed a) in the same areas of the community -reforestation with melliferous trees and apiculture production and PES-like forest conservation in *La Mancolona*-, or b) in different areas of the *ejido* -livestock intensification, agricultural mechanisation, and PES-like forest conservation in *Xmaben*- (Figure 7.3).

Both communities demonstrated a higher preference towards PES-like forest conservation (*scenarios 4*) which resulted from their previous good experience in implementing the PSAH programme. In *La Mancolona*, in particular, the PSAH programme is perceived as beneficial and easily implementable. Likewise, in *Xmaben*, focus group participants perceived the PSAH programme as the best way to benefit from the conservation of large forest areas.

Reforestation was the least preferred activity in both communities owing to the demonstrated ineffectiveness of previous tree planting initiatives. In *La Mancolona*, however, low preference was only attributed to reforestation for timber (*scenario 1*), while reforestation with melliferous trees (*scenario 2*) was highly ranked. Interestingly, and although apiculture is also one of the most profitable activities in *Xmaben*, reforestation with melliferous trees (*scenario 1*) was the least preferred scenario in this community. The low ranking of this scenario seems to be explained by the fact that local people think melliferous trees are not scarce, and because apiculture is performed exclusively by men. Focus groups' participants in *Xmaben* considered other productive

activities, such as livestock breeding, more profitable than beekeeping, which explains people's interest in *scenario 2*.

Figure 7.3: Preferences' comparison between the two communities



Source: own elaboration.

The preferences toward mechanisation of agriculture (*scenario 3*) drastically differed in the studied communities. The reasons for the low preference attributed to mechanised agriculture in *La Mancolona* were the unfavourable land and scenario-development supporting conditions (i.e., funding of only half of the amount of fuel, seeds and organic fertilisers needed during one year). The fact that *La Mancolona* is located near the Calakmul Biosphere Reserve, which constrains the expansion of their agricultural development activities, could have also influenced its low preference for mechanised agriculture. Differently, agricultural mechanisation was among the most preferred scenarios in *Xmaben*, arguably due to the favourable conditions for and the previous positive experience with this type of agriculture.

Regarding the type of benefits, both communities preferred individual over collective, as well as monetary over non-monetary benefits from REDD+. They also reclaimed higher payments, which they preferred to be disbursed in one annual instalment. The communities considered that only individuals that invested their work and time in the activity should benefit from REDD+. Most participants in both communities (except

women in *Xmaben*) also agreed that these scenarios should be promoted by the government and implemented without external actors' assistance.

7.4. Learning about equity and benefit-sharing in REDD+

This section extends the findings from the previous three sections to address the research questions under the third research topic of the thesis directed to understand how equity and benefit-sharing from REDD+ are conceptualised at local level. The first sub-section focuses on how local actors' preferences on REDD+ equity and benefit-sharing have been influenced by their social identity, including property rights, gender and social status. It also examines the factors that mediate the differences in preferences between the two case study communities. The second sub-section interprets how these local preferences are addressed in the decisions regarding equity and benefit-sharing in the two most advanced REDD+ related documents in Mexico (see Section 6.3.2). The same sub-section also elaborates on the implications of the findings within the broader literature.

7.4.1. Factors influencing preferences on equity and benefit-sharing

The results presented in sections 7.1 and 7.2 suggest that the stratified focus groups captured the existence of distinct preferences over potential REDD+ scenarios and the reasons behind such preferences. Property rights were found to influence local people's preferences on plausible REDD+ scenarios. For example, although, rightholders could potentially benefit from all REDD+ scenarios, when asked to rank them they preferred those that could potentially bring them the highest economic benefits and would result in the lowest costs. Therefore, landowners in *La Mancolona* chose reforestation with melliferous trees because this scenario supports honey production, while *ejidatarios* in *Xmaben* liked PES-like forest conservation because of previous positive experiences with similar projects. Differently, non-rightholders supported scenarios they could directly participate in and benefit from. Thus, *pobladores* in *La Mancolona* preferred the scenario of reforestation with melliferous trees because they were allowed to do apiculture. In turn, *comuneros* in *Xmaben* liked agricultural mechanisation given that some of them are currently allowed to use a portion of the *ejido's* land dedicated to farming. Non-rightholders in both communities ranked PES-like forest conservation very low because of their previous exclusion from the PSAH programme.

Participants' social status in the village was also found to be an important factor in defining individuals' preferences in the communities. The authorities' groups from the two communities coincided in their ranking. They placed the highest those activities that would potentially bring the most economic benefit, such as PES-like forest conservation and mechanised agriculture. Preference for PES-like forest conservation was also likely influenced by the fact that authorities in both communities have participated in training, courses and seminars with government and NGOs, where conservation activities have been promoted. In addition, authorities' representatives might have deliberately cited more pro-conservation opinions just because they perceived that I was interested in forest conservation. The named reasons could have also influenced the *Xmaben* authority's demonstrated opposition to the *ejido's* land parcelization and privatisation.

Gender also turned to be an important factor determining a person's choice, but only to a certain extent. Non-rightholders (mostly men) and women demonstrated many similarities in their preferences, which can probably be explained by the fact that most of women in the sample were non-rightholders themselves and by the fact that women in both communities were interested in the scenarios that would positively affect the wellbeing of the entire community. However, there are also differences between women's groups in the two studied communities. In *La Mancolona* women opted for scenarios supporting apiculture because they could implement and benefit directly from that activity. They also suggested manual mechanisation to be able to participate directly in improvement of agriculture. In contrast, women in *Xmaben* did not have problems with supporting activities mostly controlled by men. This could be partly attributed to the fact that none of the proposed scenarios promoted activities performed predominantly by women. However, women in *Xmaben* did not suggest either how they could be more directly involved in REDD+ activities.

The findings that property rights largely affect local actors' preferences on equity and benefit-sharing from REDD+ dovetail with previous research suggesting that land tenure can be considered the principal factor guiding preferences toward potential REDD+ activities (Enright, 2013; Eastman et al., 2013). Clear tenure rights are not only a precondition to participate and benefit from REDD+, but are also important because they might influence the extent to which REDD+ broadens the existing inequalities in access to development benefits between rightholders and non-rightholders. Such

differences have already been identified in empirical studies of PES schemes (Corbera et al., 2007; García-Amado, 2012; Calvet-Mir et al., 2015). Therefore, clarifying rights over vacant state-owned land, as requested by non-rightholders in *La Mancolona*, could be a first step to consider prior to REDD+ implementation in this village (Gebara, 2010; Mohammed, 2011). However, it is important to stress that clear land rights should not be considered as a sufficient precondition to benefit from REDD+, as there are other important factors that affect forest owners' possibility to benefit from REDD+. These other factors include, for example, carbon rights ownership, characteristics of local forest resources, level of community social organization, and internal power relations, among others (Skutsch et al., 2015).

It is known that in Mexico, and elsewhere, community authorities and leaders have the highest impact on how to manage natural resources and how to share benefits from land-use activities, including REDD+ (Merino-Pérez, 2004; Paasgard, 2013; Pasgaard and Chea, 2013). Therefore, the findings that social status influences people's preferences goes in line with the idea that power shapes the way a person can access information about a policy programme and understands the activities and benefits promoted under such a programme. This has important implications for the practice of REDD+, since local authorities -who communicate with formal institutions on behalf of the community- likely prefer to maintain the *status quo*. Understanding their preferences and being sensitive to the priorities of others should help prevent elite capture, thus allowing designing REDD+ activities that include and benefit most community members. It is important to understand that the changes in the design of local intervention usually include changes in current power relations. However, given that power is rarely voluntarily shared (Baynes et al., 2015), any changes in the community's internal power relations could have a negative impact on the legitimacy of REDD+ in the eyes of local authorities (Corbera, 2005).

The findings that gender affects local actors' preferences on equity and benefit-sharing from REDD+ resonates with the abundant literature discussing the role of gender in natural resources management (for example Rocheleau et al., 1996; Agarwal, 1994, 2001, 2009; Agrawal and Gibson, 2001). My findings suggest that in both communities women preferred scenarios that supported productive activities with a monetary income-generating stream regardless of who controls it, which contradicts established ideas that women prefer in-kind benefits over cash flows managed by men (see e.g.,

Agarwal, 1997b, 2003; Enright, 2013). It could be that women were happy to delegate responsibilities over money generating activities to men, given that they have other function, such as taking care of the household and children (Agarwal, 1997b; Zwarteveen and Meinzen-Dick, 2001).

Furthermore, women did not discuss about land tenure rights and related conflicts during focus groups. This could be explained by the fact that, in the studied communities, women do not play an active role in decision-making on forest resources and land use as is also the case elsewhere in Mexico and throughout Latin America (Balderas Torres and Skutsch, 2014; Larson et al., 2015). Lack of discussion on property rights can be also attributed to gender differences in property rights, given that both *La Mancolona*, with one third of female landowners, and *Xmaben*, with only 5% of *ejidatarios* being women, can be classified as male-dominated communities (Sun et al., 2011). Gender inequality is often an ingrained factor resistant to change (Bayne, 2015) and it is related to the fact that women often do not hold land rights and therefore have no power to decide on land use (Sun et al., 2011; Nhantumbo and Chiwona-Karlton, 2012). Only about 20% of rightholders in Mexico are women (PROIGUALDAD, 2013 in Balderas Torres and Skutsch, 2014). The finding that, despite the fact that most of the women respondents lived in households with land rights, women were more concerned than men about including all community members in the REDD+ process suggested that they were more sensitive to inclusion and participation issues (for similar findings see e.g., Grieg-Gran et al., 2014).

Results also suggest that, in both communities and among all groups, the most preferred benefits from REDD+ were individual and monetary payments. Most focus group participants considered that it would be unfair for individuals who have not invested time and money in certain activities to benefit from collective goods. Previous research has argued that, in common property regimes, the low amount of compensation available in relation to the number of participants might influence the preference toward collective benefits (Mohammed, 2011; Yang et al., 2015). However, the results of this investigation suggest that participants from both communities would still prefer individual payments to an investment in collective goods even if compensation is low. Although not directly stated in the focus groups, I argue that such acute preference towards individual payments, could relate, on the one hand, to the lack of trust in community leaders, as people might fear that authorities might retain, mismanage or

misuse collective investments or goods and, on the other hand, to people's willingness to avoid free riding in collective efforts (Pulhin et al., 2007; Pham et al., 2014; Dissanayake et al., 2015).

Preference towards cash flows can also be explained by the fact that, over the past few decades, money has been the most commonly used mean to compensate efforts in productive, reforestation or conservation activities in Mexico. Over the years, a variety of subsidies and policy programmes, including PES, have contributed to the development of communal land ownership's dependency on external monetary flows (Sarukhán and Larson, 2001). In addition, changes to Article 27 of the constitution have induced further weakening of communal land tenure by allowing the privatisation of land (López-Nogales and López-Nogales, 1999; Leigh Taylor, 2005 in Corbera et al., 2011; Sarukhán and Larson, 2001). My findings suggest that *ejidatarios* in *Xmaben* consider that parcelization would allow each of them to have an equal share of the *ejido's* land, and that land privatisation would provide them with more security against being deprived of their rights under the pretext of forest conservation through PES. In addition, *ejidatarios* considered that such change in land tenure type would not diminish their chances to participate in conservation activities under REDD+. However, this perspective masks the likely negative impacts that the division of the forest commons might have on forest continuity -as a result of potential individually driven deforestation- and on property alienation and concentration in the hands of large landowners (see e.g., Baland and Platteau, 1996; Bollier and Helfrich, 2012).

The results presented in section 7.3 also suggest that previous experience in the implementation of similar land-use activities was a key decisive factor in explaining the focus groups' rankings. Additional factors included the convenience and low cost to implement the required activities, the likely distribution of benefits, and the type of support to be perceived. In addition, soil quality, the economic status of the community, and its proximity to protected area also turned to be critical for understanding differences in communities' preferences.

In sum, local people's preferences over benefits and over distribution systems largely hinge on their access to land resources, determined in turn by their de jure land rights, social status, and gender. This implies that future REDD+ benefit-sharing mechanisms should take into account inter- and intra-community differences, as well as to account

for context-specific environmental and historical factors that may position local communities in line with or against available REDD+ options.

7.4.2. Contrasting local preferences with government decisions on equity and benefit-sharing

The comparison of local communities' preferences (sections 7.1 to 7.3) with the decisions included in the Mexico's REDD+ national strategy and the Emissions Reduction Project Idea Note (section 6.3.2) reveals differences in the ways in which equity and benefit-sharing in REDD+ are conceptualised at local and national levels. These differences, I argue, are predominantly grounded in different perspectives on the main objective of REDD+, as it is reflected in the analysis of national REDD+ governance and its hypothetical local manifestations.

Namely, the national REDD+ design is largely focused on achieving effectiveness of carbon emissions reduction from forests. Mexico has adopted the Cancun Agreements' safeguards and follows the FCPF operational procedures laid down for REDD+ development, which both implicitly promote equity goals to "*do no harm*" to indigenous peoples and local communities, but make no references on distributive equity (ENAREDD+, 2014, p. 68). The national REDD+ strategy indirectly suggests a potential move towards a "*do good*" approach to equity by stating that safeguards could "identify, analyse and manage risk and opportunities, because their implementation will contribute to potentiate the social and environmental benefits and positive impacts" (ENAREDD+, 2014, p. 68). In addition, the fifth country's safeguard call for an equitable distribution of benefits (ENAREDD+, 2014, p. 70, principle V).

Conversely, and logically, local communities principally expect to be better off with REDD+ and stress less the goals of reducing emissions. The results of sections 7.1 and 7.2 suggest that when making their preferences, local people place more emphasis on REDD+ activities contribution to income and social development than on activities contribution to reduce emissions or on its conservation-related effectiveness. In addition, in order to receive a major share of REDD+, the studied communities suggest that those benefits should come directly through the government, thus excluding intermediaries that -they fear- could pocket a certain portion of REDD+ revenues. However, such preferences do not coincide with national decisions on benefit-sharing

design, which contemplate involvement of so called “local implementing agents” as intermediaries between government and local communities (ER-PIN, 2013, p. 34).

As it has been emphasised in the previous section, local people preferred individual monetary benefits to be disbursed *ex-post* and in one annual instalment. They were also willing to accept non-monetary investments but only as a means to support agriculture and livestock rearing activities. The current national documents do not respond to such local preferences given that the REDD+ incentives will be disbursed *ex-ante* to cover incremental costs⁵¹ and induce changes in local people activities that should result in a reduction of deforestation (ER-PIN, 2013, pp. 34-35, 61-62; ENAREDD+, 2014, pp. 36, 90). Therefore, as it is designed now, REDD+ will not bring further economic benefits to local people, such as compensations or rents, except of those that would potentially accrue from REDD+ activities. These activities should be selected from a readymade menu of the so called “special programmes” (ER-PIN, 2014, pp. 19, 33, 61). On the positive side, the special programme for the Yucatán Peninsula (ER-PIN, 2013, pp. 32-33) includes PES-like forest conservation and the establishment of agroforestry and silvopastoral system, scenarios preferred by the local communities analysed in this research. However, the programmes do not account for sustainable agricultural practices. Still, I argue, that such predetermined list of activities can be considered as part of a blueprint approach which fails to take into account local differences and will therefore reduce REDD+ effectiveness and equity at the local level (Larson et al., 2010b; Quesada-Aguilar et al., 2013).

It is also important to highlight that, despite local REDD+ activities will theoretically be implemented through community-based “investment plans”, carbon emission baselines will only be calculated at regional/landscape level in order to lower the costs of REDD+ implementation and to diminish the risk of carbon leakage (ER-PIN, 2014, p. 34). This implies that any potential amount of payments to local communities will not be based on their carbon emissions reduction achievements, but rather on inputs (e.g., forest management tasks performed or hectares of forest under prescribed activities) and probably on a flat rate. According to the local investigation results, such input based payments will be well accepted by local communities. Namely, and reflecting on the

⁵¹ Neither the ENAREDD+ nor the ER-PIN explicitly consider the potential costs of REDD+ actions. The only costs implicitly mentioned in the documents, except “incremental costs”, relate to the negative effects of deforestation, i.e., loss of economic opportunities, loss of ecosystem functioning, and biodiversity and ecosystem services degradation (ENAREDD+, 2014, p. 20).

experience with implementing the PES programme, participants from *La Mancolona* argued that each community participating in REDD+ should be paid per hectare of forest under the REDD+ activities and on a flat rate. Similarly, participants from *Xmaben* suggested adjusting the size of the area allowed to be registered under the programme in relation to the number of *ejidatarios*, so each individual participant in the country receives the same amount of benefit under a flat rate price.

Horizontal distribution of benefits at the regional level, or *inter-community* benefit-sharing, is critical to incentivise local communities' participation in REDD+. If a landscape approach is implemented, communities' cooperation in REDD+ will also have a relevant impact on the activities' effectiveness (Hoang et al., 2010; Eastman, 2013). In turn, the willingness of one community to participate and cooperate depends on local peoples' perceptions of distributive equity, i.e., on the fairness of benefit-sharing from REDD+ between the various communities living in a given landscape. As in the national approach, in the landscape approach to REDD+, good performance of one community can be offset by another community low performance (Balderas Torres and Skutsch, 2014). However, the national REDD+ documents do not state how the principle of conditionality will be respected, i.e., how non-compliance by a community or landowner will be accounted and what type of sanctions will be used (Pagiola, 2008). In this regard, the studied communities suggested their interest in articulating such conditionality on an individual basis, i.e., developing gradual sanctions for free-riders, instead of making all participants accountable in case of non-compliance. However, this might also be problematic to operationalise since, as argued earlier, the government's analysis of emission reduction contributions will be pursued at regional and national levels, while on-the-ground monitoring is unlikely to cover neither all the communities involved in REDD+ activities nor the targeted lands and forests within each community. In addition, it is not clear how any potentially carbon emissions accrued by local communities that might voluntarily decide not to participate in REDD+ will be accounted for in the regional carbon balance.

The issue of shared responsibility is also relevant at the local level, and it is equally important in incentivising local communities to participate in REDD+. Although some have suggested that a communal tenure system is more compatible than individual private tenure with collective responsibilities (e.g., Pham, 2014), the results of this research suggest that this might not always be the case. The community of *La*

Mancolona can be considered a collective formed by individual landowners who are willing to accept a shared responsibility toward REDD+ implementation, at least from the perspective of their involvement in the PSAH programme. In contrast, people from *Xmaben* share a common property regime but have shown signs of disillusion in sharing responsibility and working collectively, which explains why several households are pursuing the privatisation of the commons.

The basis for *intra-community* benefit-sharing is important to enhance local communities' interest in REDD+. The national documents recognise that the potential beneficiaries from REDD+ are only those holding legal land titles, either individual or collective (e.g., *ejidatarios*) (ENAREDD+, 2014, p. 73). Therefore, Mexico's REDD+ design follows the "legal rights" benefit-sharing rationale informed by the "libertarian" principle of social justice (Luttrel et al., 2013). In addition, the REDD+ documents do not state the basis for benefit-sharing and equity from REDD+ at the community level. Such decision is justified on the basis of respecting local communities' autonomy and local institutions (ENAREDD+, 2014, p. 72; ER-PIN, 2013, Appendix 4, p. 10). It is also based on the assumption that local institutions will guarantee that benefits are fairly divided to community members following internal rules, thus neglecting the power relations embedded in those institutions (Setyowati, 2012; Poudel et al., 2015).

In line with the national REDD+ design, right holders considered that only them -as the actors with legal land rights- should be eligible to participate in REDD+, while all eligible participants should contribute equally in the collective activities and therefore receive the same amount of benefits. Conversely, non-rightholders suggested that all local actors, independently of their rights, should be able to participate and benefit from REDD+ according to their time and work invested in the activities, therefore promoting the "merit-based" principle of social justice (Mohammed, 2011; McDermott et al., 2011). However, even if revenues were distributed equally across community members, the latter would not necessarily result in all households benefiting equitably, due to the differences in individuals characteristics such as gender, social status, but probably also others such as age and economic power (Jakobsen, 2008; Pini and Leach, 2011).

It is worth noting, however, that the national REDD+ documents contemplate the development of policies and measures to assure gender equity in REDD+, although no

particular PAMs have been planned for other disadvantaged categories. Therefore, the national REDD+ strategy can be classified as gender sensitive, but neutral or even harmful to other marginalised groups (Franks and Quesada-Aguilar, 2014). Even though the design and implementation of specific PAMs for women, and potentially other disadvantaged groups, is highly recommended if REDD+ is to successfully respond to different groups' preferences on benefit-sharing and equity, such activities and measures might induce changes in the existing local power relations and in turn undermine REDD+ legitimacy at local level (Corbera, 2005; Krause et al., 2013).

In sum, the national documents do not account for the multiple dimensions of benefit-sharing in REDD+ and they do not account either for the conflicting perspectives that exist at the local level regarding who should benefit and how. Given that distributive equity is subject to procedural equity, ensuring that REDD+ activities result in fair benefits throughout participating communities will first require that the decision-making processes regarding the design and implementation of such activities are considered legitimate and that free, prior and informed consent of local communities and each of their social groups is sought. To date, the lack of engagement in national REDD+ documents with critical procedural issues such as conditionality, the envisioned system of sanctions in case of non-compliance, and a grievance mechanism that should ultimately protect local community rights, such as the right not to participate or to withdraw from REDD+, are important policy gaps that need to be urgently filled in if REDD+ is to succeed.

7.5. Summary

This chapter has outlined the findings addressing the research questions under the third research topic of this thesis focused on people' preferences on equity and benefit-sharing for future REDD+ activities. The chapter has reflected upon the factors mediating such preferences. It has also contrasted the local preferences with the national decisions on REDD+ benefit-sharing design.

The chapter highlights that local people would prefer combined productive and conservation activities with governmental support, in exchange for direct payments. It also reveals that differences in individual preferences for REDD+ implementation and benefit-sharing are mediated by land tenure, gender and social status. Furthermore, the

chapter sheds light on the inconsistencies between national decisions and local peoples' preferences. The chapter has stressed that the fact that the national documents do not account for the multiple dimensions of benefit-sharing from REDD+ might have important repercussions on equity and effectiveness in the foreseeable future REDD+ implementation phase.

Chapter 8. Conclusions

This chapter outlines the research conclusions. The first two sections discuss the theoretical and policy contributions of the thesis. The third section outlines limitations faced and caveats found during the research. The final section provides ideas and recommendations for further research.

8.1. Theoretical contributions

The main motivation of this thesis was to broaden our understanding of the REDD+ readiness process in Mexico and to contribute to the growing body of literature examining REDD+ governance in developing countries (e.g., May et al., 2011; Peterson St-Laurent et al., 2013; Rantala, 2014; Rantala and Di Gregorio, 2014; Quan et al., 2014; Agung et al., 2014; Bernard et al., 2014; Alemagi et al., 2014; Somorin et al., 2014; Luttrell et al., 2014; Saito-Jensen et al., 2015). With this main focus, the research has specifically looked at the characteristics of the different actors involved in the country's REDD+ readiness process, how and why they have (or not) participated in such process to date, and their perceptions on its legitimacy (Chapter Five). Findings from this analysis suggest that the federal forestry authorities concentrate most of REDD+'s decision-making power and that, based on their views about the legitimacy of the decision-making process, participants can be divided in two broad stakeholder groups: the supporters and the detractors.

The thesis has also examined the discourse coalitions around REDD+ and their relative influence in the readiness process (Chapter Six). The analysis has helped to identify three discourse coalitions that differ in their conceptualisation of the idea of REDD+ and in their preferences of the national REDD+ strategy design. The three discourses have been unevenly institutionalised in official REDD+ policy documents.

Finally, the thesis has also examined the preferences of two rural communities regarding REDD+ implementation and benefit-sharing, including what type of activities should be developed on the ground and how the benefits and costs of such activities should be distributed (Chapter Seven). The analysis has shown that differences in local people's preferences on these two issues are strongly mediated by property rights, social

status, and gender, while the national REDD+ design does not take into account these influential socio-political factors in the procedures of future policy implementation.

This thesis has approached REDD+ as a form of environmental governance (Corbera and Schroeder, 2011) making its theoretical and policy implications relevant for other countries developing REDD+ or even for other projects of environmental governance. Mexico, as many other developing countries, has followed a nested approach in the design and implementation of REDD+ (Stanley et al., 2013; Sunderlin et al., 2014b; Jagger et al., 2014), which should in principle guarantee land-use policy coherence across administrative levels, both vertically (between jurisdictional scales) and horizontally (across sectors or spatial scales) (Watts, 2012). The results of this thesis, however, make evident the centralisation of the decision-making process and the poor cross-sectoral integration of land-use policies, which have a negative influence on the overall political legitimacy of Mexico's REDD+ readiness process (Chapter Five).

The research findings also suggest that Mexico's nested approach is being designed following a rather top-down approach, which has constrained the ability of local stakeholders to meaningfully participate in REDD+ readiness. They thus contribute to a growing discussion on the importance, as well as the challenges, of adopting a polycentric approach to REDD+, given that deforestation and forest degradation involve multiple stakeholders and relate to a wide array of political and economic processes. A polycentric REDD+ design should allow for independent yet overlapping decision-making authorities to affect and contribute to REDD+ governance at a scale meaningful to them (Ostrom, 1972; Andersson and Ostrom, 2008; Nagendra and Ostrom, 2010; Jagger et al., 2014). Such polycentric approach would require that state authorities develop locally adequate and acceptable REDD+ activities in "early action" areas, or inter-community associations to organise monitoring patrols at the landscape level.

In Mexico, one can envision at least two challenges that need to be overcome in order to develop a successful polycentric REDD+ regime. First, the country suffers from a persistent paternalistic approach to rural development (Sarkuhán and Larson in Burger et al., 2001), which has so far resulted in weak sub-national authorities lacking incentives to invest in natural resources, in lack of meaningful participation by local communities in natural resources management (Corbera et al., 2011), and in the weakening of communal forest ownership. Second, the country's government

institutions suffer from certain political inertia, i.e., the readiness process is still led and dominated by the federal forestry agency as if REDD+ would only concern forest-based activities (Rosenschöld et al., 2014).

REDD+, as an idea and as a land-use governance approach, has been the subject of an intense, decade-long international debate that has divided actors with a stake in the world's forests in two broad groups. The first group generally consists of civil society organisations that criticize REDD+ for diverting climate negotiations away from options to reduce fossil fuel based emissions. The second group mostly involves governments and international environmental NGOs that consider REDD+ a useful framework to mitigate climate change by protecting the world's forests (Suiseeya, 2015). The research presented in this thesis has shown that Mexico's REDD+ discussions mirror such international debates to the extent that it has identified two broad groups of actors that resemble the two international groups, i.e., the rejectionists who oppose the idea of REDD+ and the advocates who accept REDD+ implementation. In addition, this thesis has identified a third group of reformist's actors who accept REDD+ but have a different perspective than the advocates on issues related to REDD+ design, and particularly on the question of who should own carbon emission reductions. The two most antagonistic discourses, the advocates and the rejectionists, have been the most asymmetrically represented in official REDD+ documents. Certain ideas of the reformists' discourse have found their way in the formulation of national REDD+ design.

Differences in the level of discourse institutionalisation also reflect the dominance of scientific and technical over local and traditional knowledge in environmental governance processes (Gallemore et al., 2014; Aicher, 2014). I have further argued that such dominance has been aggravated with REDD+, since this initiative supports the idea of placing an economic value on the carbon sequestration function of forest ecosystems, while largely neglecting other forest values and functions important to local people, such as habitat, cultural and spiritual values. Research institutions have produced REDD+ knowledge using a technical language that does not have a counterpart in local and traditional knowledge systems (Hiraldo and Tanner, 2011; Osborn et al., 2014). Furthermore, in REDD+ discourses, scientific and local knowledge stay largely unconnected given that the rejectionists' discourse is deliberately absent from REDD+ national discussions. Some authors have argued, however, that the

reformists' discourse, which use both scientific arguments and those based on local and indigenous people's visions of the forest and their desired forest management options, holds potential to help overcoming such discursive divide in REDD+ (Burt, 2005 in Gallemore et al., 2014; Sikor, 2013; Long, 2013).

There are two main narratives as regards REDD+ distribution of potential costs and benefits: the effectiveness and the equity narrative. The first narrative promotes REDD+ as a means to achieve effective climate change mitigation, guaranteeing it would "*do no harm*" to local forest owners. The second narrative, equity, suggests that for REDD+ to succeed, one needs to "*do good*" to local people by bringing net social benefits to them (McDermott and Schreckenber, 2009; McDermott et al., 2011; Mustafa Bayrak, 2014). In Mexico, the national REDD+ design adopts the effectiveness narrative. The official policy documents define REDD+ benefits as monetary incomes that will be used to cover incremental costs of REDD+ activities implemented by local people, which should in turn contribute to avoid deforestation in the regions with higher deforestation rates.

Chapter Seven, however, brings to the front the importance of accounting for equity in REDD+ implementation, as well as confirms the contested nature of such concept, i.e., what is considered fair by some community individuals or groups is not by others (Mahanty et al., 2006). Such divergent views would not represent a threat for REDD+ effectiveness, if the national REDD+ design would account for equity impacts at different scales. However, the national REDD+ documents do not make references on distributional equity at sub-national and local implementation levels, considering benefit distribution issues to be an internal affair of each implementing region or community (Chapter Six).

It is worth noticing that findings from my work reflect well the on-going global debate around justice and equity in REDD+. REDD+ was originally conceived as an incentive-based international climate change mitigation mechanism and distributional issues at the national level were not an integral concern of its original design (Ribot and Larson, 2012; Di Gregorio et al., 2013). Although an increasing attention to the social and environmental outcomes of REDD+ have resulted in a list of safeguards at international policy levels, such safeguards are of voluntary adoption at the national level and do not make reference on distributional equity (Sikor, 2013). Justice and equity concerns have

to be institutionalised at the global level in order to be able to permeate through national and local REDD+ design. In other words, equity, including procedural equity, has to be promoted as a criterion as important as effectiveness and efficiency for achieving REDD+ success. This could be achieved by further emphasizing the negative effects that distributional conflicts can have on REDD+ effectiveness on the ground (Peskett et al., 2011; Di Gregorio et al., 2013).

8.2. Policy recommendations

From a policy perspective, this research has contributed to a better understanding of the nature of emerging REDD+ governance at national level. The research has identified a series of weaknesses in REDD+ design that would need to be addressed during the mechanism's implementation phase in order to make of REDD+ an effective but also an inclusive and equitable approach to climate change mitigation. In particular, the thesis has suggested that the design of decision-making processes and benefit-sharing approaches should respond to the changing national circumstances, promote cooperation across government and civil society organisations, and include stakeholders' suggestions when designing and implementing REDD+ activities on-the-ground.

The dissertation has investigated the capacity of the readiness processes to identify and involve a multiplicity of stakeholders in the definition of REDD+ goals and in crafting solutions regarding technical and procedural implementation challenges, such as the development of a MRV system and implementation of safeguards, among others. Specifically, the research has remarked that on-going REDD+ readiness activities and future implementation should make sure that i) the federal environmental ministry and the correspondent forestry authority, as well as large NGOs, become more accountable to forest owners and rural communities; ii) the federal ministries of agriculture, tourism and energy, as well as any relevant private sector actor, are further incentivised to participate in REDD+; iii) the cross-sectoral integration among land-use sectors agencies is enhanced; and iv) the local communities are more significantly involved in decision-making processes at sub-national level.

The findings suggest that although Mexico is approaching the REDD+ implementation phase, it continues to suffer from a lack of input legitimacy in the decision-making

processes. Nonetheless, the research has also shown that such perceived lack of legitimacy has also led to the emergence of new consultative fora at national and sub-national levels, which might over time weaken rather than strengthen the process. I would argue that the existence of a variety of fora at the same level of governance could result in stakeholders' division, thus potentially limiting the quality of deliberation on REDD+ design. Therefore, these parallel REDD+ decision-making fora should be assigned with clear roles and responsibilities and should improve their coordination and communication strategies, both across and between scales, in order to prevent the government from prioritising one forum over the others.

The discourse analysis presented in Chapter Six has also contributed towards a better understanding of different REDD+ perspectives and it has shown that the attribution of carbon rights has probably been the most socially polarising issue in REDD+ design. The analysis has also shown that the rejectionists' discourse introduces potential alternatives to fund REDD+ activities (i.e., a climate debt fund as an alternative to carbon markets) and centrally highlights the risks that REDD+ might entail in practice, including the establishment of monoculture tree plantations, bio-piracy, cultural extinction, alienation of local communities' legal rights, and moral manipulations. Although their views have been largely absent in the decision-making fora, I argue that they should still be taken into account and considered by the government in both design and implementation, thus limiting the scope of social contestation.

In Chapter Seven, it was noted that Mexico's current design of REDD+ benefit-sharing is built on a landscape approach, the involvement of intermediaries in the REDD+ value chain, and on REDD+ payments that should cover the incremental cost of activities' implementation, all of which might not be well accepted by the local communities. In addition, the national REDD+ documents do not include information on policies and measures that should respond to different equity perspectives and that can transform potential negative impacts into positive REDD+ outcomes.

Not only would the direct approach to local communities and understanding of local social, environmental and economic contexts benefit the performance of REDD+ as regards legitimacy and equity, but it would also improve REDD+ acceptance among local people. Local consultations could for example provide information on how to sensitise the local authorities about the importance of defining fair and legitimate rules

of implementation at local level. It might also help to design locally acceptable ways of benefiting women and other marginalised groups in the community. In addition, consultations could contribute to mainstream better and more detailed information about REDD+ means and ends, potentially resulting in higher local knowledge and consent. In doing so, consultations can also be aimed at incorporating local ecological and forest management knowledge into REDD+ implementation.

The formulation of good protocols and guidelines for REDD+ consultations with local communities is a critical first step toward including local preferences in national decisions. In order to overcome the burden of the high costs associated with a comprehensive and inclusive planning process, local consultations could be performed by the independent researchers using standardised procedures. Consider, for example the focus groups protocols developed for this research, which are both scientifically rigorous but also adaptable to a variety of local contexts. In addition, local consultations should be designed in a way that it allow for the identification of different local interests based on their gender, property rights, and social status in communities. The fact that the local results presented in Chapter Seven cannot be generalised to other far-away locations elsewhere suggests that each community has its own internal dynamics and that the government should engage with every potential participant community individually.

8.3. Limitations and caveats

This research has faced some limitations and caveats. First, the legitimacy analysis (Chapter Five) would have benefited from an additional analysis evaluating the level of cross-sectoral integration of land-use policies relevant to REDD+. Such analysis would empirically support the claims made about the likely impact of interplays between land-use sector policies on the future effectiveness of REDD+. Second, the discourse analysis developed in Chapter Six would have benefited from an ex-post qualitative verification of such discourses with stakeholders. As Hajer (2006) argues, discourses are derived from the real world by the investigator and, as such, the discussion of any identified narratives with their corresponding actors can help finding hidden structures and confirming if the results reflect reality. For example, representatives of relevant stakeholder groups could have been asked to rank (using a Likert scale for example) a

series of statements corresponding to the identified storylines and to explain their answers, which would have in turned helped validating each identified discourse. These two limitations have not been addressed due to lack of time and resources.

Third, community-based research could have been enriched with quantitative data collected at the household level. A more systematic data collection would have allowed testing hypotheses regarding the importance of individual level characteristics (e.g., age, gender, economic status and education) in local people's preferences regarding REDD+ benefit-sharing. Fourth, only two communities were included in this research. Organising a larger study involving more communities spread throughout a given landscape would have made the research findings more generalisable, at least for that particular geographic area. Furthermore, the process of preference elicitation would have benefited from a longer preparation period in which information on climate change, forest carbon and REDD+, could have been more thoroughly and repeatedly communicated to maximize local people's understanding of REDD+ and how its implementation might look like in the future and in the selected communities. Budget and time constraints prevented me from pursuing these additional methods and research procedures.

8.4. Further research

The design of REDD+'s architecture in Mexico and beyond raises many questions that deserve further scrutiny. First, it is important to further examine the input and output legitimacy of the country's *REDD+ strategy consultation process*. In Mexico, the REDD+ readiness process currently continues through the Indigenous and Peasant Roundtable that has been recently established to foster local people's inclusion in the national REDD+ strategy consultation process. The input legitimacy of such consultation process could be evaluated using the framework used in Chapter Five, while output legitimacy could be examined exploring if local people are likely to accept and endorse the decisions adopted in the latest ENAREDD+ draft (Bäckstrand, 2006).

Second, it is critical to *evaluate the potential effectiveness of REDD+ looking at institutional interplays*. Such enquiry should be directed towards identifying synergistic and antagonistic policy interactions between laws, policies and programmes within and beyond the land-use sectors relevant to REDD+ governance. REDD+ effectiveness will

be partly contingent on its ability to promote synergistic policy interplays that would result in certain level of policy integration in the land-use sector. In addition to the establishment of cross-sectoral and cross-scale institutional linkages for REDD+ implementation, evidence of policy integration would become reflected in the modification of old or the design and implementation of new laws, policies, and programmes (Young, 2002; Berkes, 2002; Aquino and Guay, 2013).

Finally, if large-scale and sustainably funded policies, programs and projects that incentivise responsible land use are broadly implemented in Mexico (and elsewhere) under the REDD+ framework, it will be paramount to *analyse the social and economic impacts of such activities on local communities*. Both qualitative and quantitative research will be needed to explore how different groups within rural communities benefit or suffer from REDD+ activities, and to identify how fair or unfair such activities result for local community members. Particular attention will have to be placed on understanding if REDD+ activities align with other on-going land-use practices and if they contribute to positive carbon balance (effectiveness) and to overcome existing economic and social inequalities (equity). It is my view that REDD+, if ever significantly implemented, will only succeed if it becomes a vehicle for socially just and economically profitable rural development.

References

- Achard, F., DeFries, R., Eva, H., Hansen, M., Mayaux, P. and Stibig, H.J. (2007). Pan-tropical monitoring of deforestation. *Environmental Research Letters* 2, 045022.
- Adams, W.M. and Hutton, J. (2007). People, parks and poverty: political ecology and biodiversity conservation. *Conservation and Society* 5(2), 147-183.
- Adger, W.N., Arnell, N.W. and Tompkins, E.L. (2005). Successful adaptation to climate change across scales. *Global Environmental Change*, 15(2): 77-86.
- Adger, W.N., Benjaminsen, T.A., Brown, K. and Svarstad, H. (2001). Advancing a political ecology of global environmental discourses. *Development and Change*, 32: 681-715.
- Adger, W.N., Brown, K., Fairbrass, J., Jordan, A., Paavola, J., Rosendo, S. and Seyfang, G. (2003). Governance for sustainability: Towards a 'thick' analysis of environmental decision-making. *Environment and Planning A*, 35(6): 1095-1110.
- Agarwal, B. (1994). Gender, resistance and land: Interlinked struggles over resources and meanings in South Asia. *The Journal of Peasant Studies*, 22(1): 81-125.
- Agarwal, B. (1997a). "Bargaining" and gender relations: within and beyond the household. *Feminist Economics*, 3(1): 1-51.
- Agarwal, B. (1997b). Environmental Action, Gender Equity and Women's Participation. *Development and Change*, 28: 1-44.
- Agarwal, B. (2001). Participatory exclusions, community forestry, and gender: An analysis for South Asia and a conceptual framework. *World Development*, 29(10): 1623-1648.
- Agarwal, B. (2003). Gender and Land Rights Revisited: Exploring New Prospects via the State, Family and Market. *Journal of Agrarian Change*, 3(1-2):184-224.
- Agarwal, B. (2009). Rulemaking in community forestry institutions: The difference women make. *Ecological Economics*, 68: 2296-2308.
- Agbeja, B.O. and Derkyi, M.A.A. (2011). Assessment of Conflicts between Forestry and Agricultural Land Uses in Nigeria and Ghana. *Journal of Agricultural Science and Technology*, 5(4) (Serial 35): 462-471
- Agrawal, A., Chhatre, A., and Hardin, R. (2008). Changing governance of the world's forests. *Science* 320, 1460-1462.
- Agrawal, A. and Gibson, C. (2001). The role of community in natural resource conservation. In Agrawal, A. and Gibson, C. (eds.), *Communities and the Environment: Ethnicity, Gender, and the State in Community-Based Conservation*, New Brunswick, NJ: Rutgers University Press, p. 1-31.
- Agrawal A., and Redford, K. (2009). Conservation and Displacement: An Overview. *Conservation and Society* 7(1), 1-10.
- Agrawal, A. and Ribot, J.C. (1999). Accountability in Decentralization: A Framework with South Asian and African Cases. *Journal of Developing Areas*, 33: 473-502.
- Agung, P., Galudra, G., Van Noordwijk, M. and Maryani, R. (2014). Reform or reversal: the impact of REDD+ readiness on forest governance in Indonesia. *Climate Policy*, 14(6): 748-768.
- Aicher, C. (2014). Discourse practices in environmental governance: the social and ecological safeguards of REDD. *Biodiversity Conservation*, 23: 3543-3560.
- Alemagi, D., Minang, P.A., Feudjio, M. and Duguma, L. (2014). REDD+ readiness process in Cameroon: an analysis of multi-stakeholder perspectives. *Climate Policy*, 14(6): 709-733.
- Alix-Garcia, J.M., Shapiro, E.N. and Sims K.R.E. (2012). Forest Conservation and Slippage: Evidence from Mexico's National Payments for Ecosystem Services Program. *Land Economics*, 88(4): 613-638.
- Alston, L.J., Libecap, G.D. and Schneider, R.R. (1995). Property Rights and the Preconditions for Markets: The Case of the Amazon Frontier. *Journal of Institutional and Theoretical Economics*, 15: 89-107.

- Angelsen, A. (ed.) (2008). *Moving ahead with REDD: Issues, options and implications*. Center for International Forestry Research (CIFOR), Bogor, Indonesia.
- Angelsen, A., Ainembabazi, J.H., Bauch, S.C., Herold, M., Verchot, L., Hänsel, G., Schueler, V., Toop, G., Gilbert, A. and Eisbrenner, K. (2013). Testing methodologies for REDD+: Deforestation drivers, costs and reference levels. Technical Report. Ecofys, CIFOR, UMB, University of Wageningen by order of: UK Department for Energy and Climate Change, DECC.
- Angelsen, A., Bockhaus, M., Kanninen, M., Sills, E., Sunderlin, W.D., Wertz-Kanounnikoff, S. (eds.) (2009). *Realising REDD+. National strategy and policy options*. Center for International Forestry Research (CIFOR), Bogor, Indonesia.
- Angelsen, A., Brockhaus, M., Sunderlin, W.D. and Verchot, L.V. (eds.) (2012). *Analysing REDD+: Challenges and choices*. Center for International Forestry Research (CIFOR), Bogor, Indonesia.
- Angelsen, A. and Kaimowitz, D. (1999). Rethinking the Causes of Deforestation: Lessons from Economic Models. *The World Bank Research Observer*, 14(1), 73-98.
- Angelsen, A. and McNeill, D. (2012). The evolution of REDD+. In Angelsen, A., Brockhaus, M., Sunderlin, W.D. and Verchot, L.V. (eds.). *Analysing REDD+: Challenges and Choices*. Center for International Forestry Research (CIFOR), Bogor, Indonesia, pp. 31-49.
- Andersson, K. and Ostrom, E. (2008). Analyzing Decentralized Resource Regimes from a Polycentric Perspective. *Policy Sciences*, 41(1): 71-93.
- Aquino, A. and Guay, B. (2013). Implementing REDD+ in the Democratic Republic of Congo: An analysis of the emerging national REDD+ governance structure. *Forest Policy and Economics*, 36: 71-79.
- Ariza-Montobbio, P. and Farrell, K.N. (2012). Wind Farm Siting and Protected Areas in Catalonia: Planning Alternatives or Reproducing 'One-Dimensional Thinking'? *Sustainability*, 4(12): 3180-3205.
- Armsworth, P.R., Chan, K.M.A., Daily, G.C., Kremen, C., Ricketts, T. H. and Sanjayan, M.A. (2007). Ecosystem-service science and the way forward for conservation. *Conservation Biology* 21: 1383-1384.
- Arriagada, E.R. (2014). In Campeche, Mexico: Overcoming major governance challenges for REDD+. Forest Climate Change, Center for International Forestry Research (CIFOR). http://www.gcftaskforce.org/news/category:gcf_member_updates/article:2014-q2-campeche_interview
- Arriagada, R., Sills E.O., Pattanayak, S.K., and Ferraro, P.J. (2009). Combining Qualitative and Quantitative Methods to Evaluate Participation in Costa Rica's Program of Payments for Environmental Services. *Journal of Sustainable Forestry*, 28(3): 343-367.
- Arts, B.J.M. (2010). Discourses, actors and instruments in international forest governance. In: Rayner J., Buck, A., and Katila, P. (eds.) (2010). *Embracing complexity: Meeting the challenges of international forest governance. A global assessment report*. Prepared by the Global Forest Expert Panel on the International Forest Regime. IUFRO World Series Volume 28, Vienna, pp.57-73.
- Arts, B.J.M and Buizer, M. (2009). Forests, discourses, institutions: A discursive-institutional analysis of global forest governance. *Forest Policy and Economics*; 11(5-6): 340-347.
- Asner, G.P., Knapp, D.E., Broadbent, E.N., Oliveira, P.J.C., Keller, M., and Silva, J.N.M. (2005). Selective logging in the Brazilian Amazon. *Science*, 310, pp. 480-482.
- Aspinwall, M. (2013). *Side Effects: Mexican Governance Under NAFTA's Labor and Environmental Agreements*. Stanford University Press.
- Assies, W. (2008). Land tenure and tenure regimes in Mexico: An overview. *Journal of Agrarian Change*, 8: 33-63.
- Babbie, E. (2006). *The Practice of Social science Research*. Belmont, CA: Wadsworth, 11TH Edition.
- Backer, K. (2014). *Facilitating Indigenous Involvement in REDD+: Early Engagement and Consultation in Costa Rica*. Bank Information Center (BIC), the Mesoamerican Alliance of People and Forests, and the Tropical Agricultural Research and Higher Education Center (CATIE). <http://www.bankinformationcenter.org/wp-content/uploads/2014/03/CaseStudy-IndigenousInvolvementCostaRicaREDD-English-March2014-WebVersion.pdf>

- Bäckstrand, K. (2013). The Democratic Legitimacy and Legitimation of Global Climate Governance. Paper presented at the 8th Pan-European Conference on International Relations, Warsaw, September 18-21, 2013.
- Bäckstrand, K. and Lövbrand, E. (2006). Planting trees to mitigate climate change: Contested discourses of ecological modernization, green governmentality and civic environmentalism. *Global Environmental Politics*, 6(1): 50-75.
- Badibanga, T., Ragasa, C. and Ulimwengu, J. (2013). Assessing the Effectiveness of Multistakeholder Platforms. Agricultural and Rural Management Councils in the Democratic Republic of the Congo. International Food Policy Research Institute (IFPRI), Discussion Paper 01258.
- Baland, J-M. and Platteau, J-P. (1996). *Halting degradation of natural resources - Is there a Role for Rural Communities?* Oxford: Clarendon Press.
- Balderas Torres, A. and Skutsch, M. (2014). *Challenges for pro-poor benefit sharing schemes in the implementation of REDD+ in Mexico*. Technical Series: Forest Governance and Economics, No. 2. IUCN, San Jose, Costa Rica.
- Barrow, E. and Murphree, M. (2001). Community conservation: from concept to practice. In Hulme, D. and Murphree, M. (eds.) *African Wildlife and Livelihoods - The Promise and Performance of Community Conservation*. James Curry Ltd., London.
- Baynes, J., Herbohn, J., Smith, C., Fisher, R. and Bray, D. (2015). Key factors which influence the success of community forestry in developing countries. *Global Environmental Change*, 35: 226–238.
- Bayon, R., Hawn, A. and Hamilton, K. (2006). *Voluntary carbon markets: an international business guide to what they are and how they work*. London, UK: Earthscan.
- Beardsworth, A. and Keil, T. (1992). The vegetarian option: varieties, conversions, motives, and careers. *The Sociological Review*, 40: 253-293.
- Beisheim, M. and Dingwerth, K. (2008). Procedural Legitimacy and Private Transnational Governance. Are the Good Ones Doing Better? SFB-Governance Working Paper Series, 14.
- Berkes, F. (2002). Cross-scale institutional linkages: perspectives from the bottom up. In: National Research Council Drama of the Commons. National Academy Press, Washington, DC, pp. 263-292.
- Bellinghausen, H. (2014). Indígenas de la selva Lacandona acuerdan defender sus tierras ante el embate neoliberal. La Jornada, 29 de enero de 2014, p. 23.
<http://www.jornada.unam.mx/2014/01/30/politica/020n1pol>
- Bernard, F., Minang, P.A., Adkins, B. and Freund, J.T. (2014). REDD+ projects and national-level Readiness processes: a case study from Kenya. *Climate Policy*, 14(6): 788-800.
- Bernard, H.R. (2006). *Research Methods in Anthropology: Qualitative and Quantitative Approaches*. Fourth edition. Walnut Creek, CA: Altamira Press, pp.186-210.
- Bernstein, S. (2005). Legitimacy in global environmental governance. *Journal of International Law and International Relations* 1, 139-166.
- Beymer-Farris, B.A. and Bassett, T.J. (2012). The REDD menace: Resurgent protectionism in Tanzania's mangrove forests. *Global Environmental Change*, 22: 332-341.
- Biermann, F., Betsill, M.M., Gupta, J., Kanie, N., Lebe, L., Liverman, D., Schroeder, H. and Siebenhüner, B. (2009). *Earth System Governance: People, Places and the Planet*. Science and Implementation Plan of the Earth System Governance Project. Earth System Governance Report 1, IHDP Report 20. Bonn, The Earth System Governance Project.
- Biermann, F., Betsill, M.M., Gupta, J., Kanie, N., Lenel, L., Liverman, D., Schroeder, H., Siebenhüner, B. and Zondevan, R (2010). Earth system governance: a research framework. *International Environmental Agreements*, 10: 277–298.
- Biermann, F. and Pattberg, P.H. (2008). Global Environmental Governance: Taking Stock and Moving Forward. *Annual Review of Environment and Resources*, 33: 277-294.
- Blanco, G., Gerlagh, R., Suh, S., Barrett, J., de Coninck, H. C., Diaz Morejon, C. F., Mathur, R., Nakicenovic, N., Ahenkora, A.O., Pan, J., Pathak, H., Rice, J., Richels, R., Smith, S. J., Stern, D. I., Toth, F. L., and Zhou, P. (2014). *Drivers, Trends and Mitigation*. In: Edenhofer, O., Pichs-Madruga, R.,

- Sokona, Y., Farahani, E., Kadner, S., Seyboth, K., Adler, A., Baum, I., Brunner, S., Eickemeier, P., Kriemann, B., Savolainen, J., Schlömer, S., von Stechow, C., Zwickel, T. and Minx, J.C. (eds.). *Climate Change 2014: Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.
- Blaser, J., Sarre, A., Poore, D. and Johnson, S. (2011). *Status of Tropical Forest Management*. International Tropical Timber Organization (ITTO) Technical Series No.38, Yokohama, Japan.
- Blom, B., Sunderland, T.C.H. and Murdiyarso, D. (2010). Getting REDD to work locally: lessons learned from Integrated Conservation and Development Projects. *Environmental Science and Policy*, 13(2): 164-172.
- Boedeltje, M., and Cornips, J. (2004). Input and output legitimacy in interactive governance, NIG Annual Work Conference, Rotterdam (No. NIG2-01). <http://hdl.handle.net/1765/1750>
- Bolin, A. and Tassa, D.T. (2012). Exploring Climate Justice for Forest Communities Engaging in REDD: Experiences from Tanzania. *Forum for Development Studies*, 39(1): 5-29.
- Bollier, D. and Helfrich, S. (eds.) (2012). *The Wealth of the Commons. A World Beyond Market and State*. Amherst MA: Levellers Press.
- Bond, I., Grieg-Gran, M., Wertz-Kanounnikoff, S., Hazlewood, P., Wunder, S. and Angelsen, A. (2009). Incentives to sustain forest ecosystem services: A review and lessons for REDD. Natural Resource Issues No. 16. International Institute for Environment and Development, London, UK, with Center for International Forestry Research (CIFOR), Bogor, Indonesia, and World Resources Institute, Washington D.C., USA.
- Borrini-Feyerabend, G. (2008). Governance as Key for Effective and Equitable Protected Area Systems. Briefing Note 8. IUCN WCPA-CEEP, Theme on Governance, Equity and Rights, Gland, Switzerland.
- Boström, M. and Tamm Hallström, K. (2013). Global multi-stakeholder standard setters: how fragile are they? *Journal of Global Ethics*, 9(1): 93-110.
- Boyd, E. (2009). Governing the Clean Development Mechanism: Global rhetoric versus local realities in carbon sequestration projects. *Environment and Planning A*, 41: 2380-2395.
- Bradley, A. (2011). Review of Cambodia's REDD Readiness: Progress and challenges, Forest and Conservation Project (Occasional Paper No. 4). Kanagawa: Institute for Global Environmental Studies.
- Bray, D.B. (2010). Toward 'post-REDD+ landscapes' Mexico's community forest enterprises provide a proven pathway to reduce emissions from deforestation and forest degradation. Infobrief No.30, Center for International Forestry Research (CIFOR), Bogor, Indonesia.
- Bray, D.B., Antinori, C. and Torres-Rojo, J.M. (2006). The Mexican model of community forest management: The role of agrarian policy, forest policy and entrepreneurial organization. *Forest Policy and Economics*, 8: 470 - 484.
- Bray, D. B., Ellis, E. A., Armijo-Canto, N. and Beck, C. T. (2004). The institutional drivers of sustainable landscapes: a case study of the 'Mayan Zone' in Quintana Roo, Mexico. *Land Use Policy*, 21(4): 333-346.
- Bray, D.B. and Klepeis, P. (2005). Deforestation, forest transitions, and institutions for sustainability in south-eastern Mexico, 1900-2000. *Environment and History*, 11: 195-223.
- Bray, D. and Merino-Pérez, L. (2004). *La experiencia de las comunidades forestales en México. Veinticinco años de silvicultura y construcción de empresas forestales comunitarias*. Instituto Nacional de Ecología, México.
- Brockington, D. and Igoe, J. (2006). Eviction for Conservation: A Global Overview. *Conservation and Society*, 4(3): 424-70.
- Brown, K., Adger, W.E., Boyd, E., Corbera-Elizalde, E. and Shackley, S. (2004). How do CDM projects contribute to sustainable development? Tyndall Centre Technical Report No.16.
- Brown, K. and Corbera, E. (2003). Exploring equity and sustainable development in the new carbon economy. *Climate Policy*, 3(S1):41-S56.

- Brown, D. and Peskett, L. (2009). International Forest Policy: Integrated Climate and Forestry options. Report prepared for the European Parliament.
- Brown, D., Seymour, F. and Peskett, L. (2008). How do we achieve REDD co-benefits and avoid doing harm? In Angelsen, A. (ed.) *Moving ahead with REDD*. Center for International Forestry Research (CIFOR), Bogor, Indonesia: 107–118.
- Bryman, A. (2008). Of methods and methodology, *Qualitative Research in Organizations and Management: An International Journal*, 3(2): 159-168
- Buchanan, A. and Keohane, R.O. (2006). The legitimacy of global governance institutions. *Ethics and International Affairs*, 20(4): 405-437.
- Burger, D., and Mayer, C. (2003). *Making Sustainable Development a Reality: The Role of Social and Ecological Standards*. Kessel, p. 50.
- Burt, R. S. (2005). *Brokerage and closure: an introduction to social capital*. Oxford University Press, Oxford, UK.
- Bushley, B. R. (2010). Seeing the communities for the carbon: governance challenges of reducing emissions from deforestation and forest degradation in Nepal. *Reconsidering Development 1*(1).
- Bushley B.R. and Khatri, D.B. (2011). REDD+: Reversing, Reinforcing or Reconfiguring Decentralized Forest Governance in Nepal? Discussion Paper Series 11:3. Forest Action Nepal.
- Cabello, J. and Gilbertson, T. (2012). A colonial mechanism to enclose lands: A critical review of two REDD+-focused special issues. *Ephemera*, 12(1/2):162-180.
- Cadman, T., and Maraseni, T. (2011). The governance of climate change: evaluating the governance quality and legitimacy of the United Nations REDD-plus Programme. *International Journal of Climate Change: Impacts and Responses* 2(3): 103-124.
- Calvet-Mir, L., Corbera, E., Martin, A., Fisher, J. and Gross-Camp, N. (2015). Payments for ecosystem services in the tropics: a closer look at effectiveness and equity. *Current Opinion in Environmental Sustainability*, 14:150-162.
- Cashore, B. (2002). Legitimacy and the Privatization of Environmental Governance: How Non State Market-Driven (NSMD) Governance Systems Gain Rule Making Authority. *Governance*, 15(4): 503-529.
- Caviglia-Harris, J.L. (2004). Household Production and Forest Clearing: The Role of Farming in the Development of the Amazon. *Environment and Development Economics*, 9(2): 181-202.
- CCMSS (2011). Nota de Idea del Proyecto1 REDD+ comunitarian en la zona maya de José María Morelos, Quintana Roo. http://www.ccmss.org.mx/descargas/pin_jmm_140711.pdf
- Cernea, M. and Schmidt-Soltau, K. (2006). Poverty Risks and National Parks: Policy Issues in Conservation and Resettlement. *World Development*, 34(10): 1808-1830.
- Che Piu, H. and García, T. (2011). Estudio REDD+ Perú: La Situación de REDD+ en el Perú. Derecho, Ambiente y Recursos Naturales (DAR), Lima. http://www.fao.org/fileadmin/user_upload/rome2007/docs/REDD_peru01_2.pdf
- Chhatre, A. and Agrawal, A. (2009). Trade-offs and synergies between carbon storage and livelihood benefits from forest commons. *Proceedings of the National Academy of Sciences*, 106 (42): 17667-17670.
- Chhotray, V. and Stoker, G. (2009). *Governance theory and practice: a cross-disciplinary approach*. Basingstoke [England], Palgrave Macmillan.
- Christensen, J. (2004). Win-win illusions. Over the past two decades, efforts to heal the rift between poor people and protected areas have foundered. So what next? *Conservation in Practice*, 5(1):12-19.
- CIEL (2015). A heavy burden to bear: REDD+ is “complete” but now the work begins, <http://www.ciel.org/a-heavy-burden-to-bear-redd-is-complete-but-now-the-work-begins/>
- Clapp, J. and Dauvergne, P. (2005). *Path to a Green World: The Political Economy of the Global Environment*. London, MIT Press.
- Climate Focus (2011). CP16/CMP 6: The Cancun Agreements. Summary and Analysis. http://theredddesk.org/sites/default/files/resources/pdf/2011/Cancun_Briefing_Jan_2011_v.1.0.pdf

Climate Law and Policy (2014). Unpacking the UNFCCC Framework for REDD+. The requirements for implementing REDD+ under the United Nations Framework Convention on Climate Change. Briefing note.

Coad, L., Burgess, N.D., Fish, L., Ravilious, C., Corrigan, C., Pavese, H., Granziera, A., and Besancon, C. (2008). Progress towards the Convention on Biological Diversity terrestrial 2010 and marine 2012 targets for protected area coverage. *PARKS* 17. Gland, Switzerland: IUCN.

Colchester, M. (2003). *Salvaging Nature - Indigenous Peoples, Protected Areas and Biodiversity Conservation*. World Rainforest Movement and Forests Peoples Programme, Moreton in Marsh, UK.

Colfer, C.J.P. (2011). Marginalized Forest Peoples' Perceptions of the Legitimacy of Governance: An Exploration. *World Development*, 39(12): 2147-2164.

Combes-Motel, P., Picard, R., and Combes, J.L. (2009). A methodology to estimate impacts of domestic policies on deforestation: compensated successful efforts for 'avoided deforestation' (REDD). *Ecological Economics*, 68, 680-691.

Commission on Global Governance (CGG): *Our Global Neighbourhood*; p.2.

Conant, J. (2011a). Do Trees Grow on Money? *Earth Island Journal*
http://www.earthisland.org/journal/index.php/eij/article/do_trees_grow_on_money

Conant, J. (2011b). A Broken Bridge to the Jungle: The California-Chiapas Climate Agreement Opens Old Wounds. Global Justice Ecology Project. *Climate Connections*. <http://climate-connections.org/2011/04/07/a-broken-bridge-to-the-jungle-the-california-chiapas-climate-agreement-opens-old-wounds/>

CONABIO (2015). Corredor Biológico Mesoamericano.
<http://www.biodiversidad.gob.mx/corredor/corredorbiomeso.html>

CONAF (2010). Reglamento Interno Consejo Nacional Forestal.

CONAF (2013). Consejo Nacional Forestal Grupo de Trabajo ENA-REDD+. Meeting minutes. 30th of July 2013.

CONAF (2014). Memoria de Gestión de la Renovación del Consejo Nacional Forestal para el periodo 2013-2014.

CONAFOR (2008). The Forest Carbon Partnership Facility (FCPF). Readiness Plan Idea Note (R-PIN) Mexico.
https://www.forestcarbonpartnership.org/sites/forestcarbonpartnership.org/files/Mexico_FCPF_R-PIN.pdf

CONAFOR (2010a). Forest Carbon Partnership Facility (FCPF). Readiness Preparation Proposal (R-PP) Mexico. http://forestcarbonpartnership.org/sites/fcp/files/Documents/tagged/Mexico_120211_R-PP_Template_with_disclaimer.pdf

CONAFOR (2010b). Visión de México sobre REDD+. Hacia una estrategia nacional.
http://www.conafor.gob.mx:8080/documentos/docs/35/2521Visi%C3%B3n%20de%20M%C3%A9xico%20para%20REDD_.pdf

CONAFOR (2011a). Ecosystem services and climate change.
<http://www.conafor.gob.mx:8080/documentos/docs/24/2731DOSSIER.pdf>

CONAFOR (2011b) Estrategia nacional para REDD+ (ENAREDD+). Primer borrador.
http://www.conafor.gob.mx:8080/documentos/docs/35/4859Elementos%20para%20el%20dise%C3%B1o%20de%20la%20Estrategia%20Nacional%20para%20REDD_.pdf

CONAFOR (2012a). Estrategia nacional para REDD+ (ENAREDD+). Borrador Octubre de 2012.
http://www.conafor.gob.mx:8080/documentos/docs/35/5303Elementos%20para%20el%20dise%C3%B1o%20de%20la%20Estrategia%20Nacional%20para%20REDD_.pdf

CONAFOR (2012b). The ENAREDD+ Communication Strategy.

CONAFOR (2013a). Estrategia nacional para REDD+ (ENAREDD+). Borrador Julio de 2013.
http://www.conafor.gob.mx:8080/documentos/docs/35/4861Estrategia%20Nacional%20para%20REDD_.pdf

- CONAFOR (2013b). Forest Carbon Partnership Facility (FCPF) Carbon Fund. Emission Reductions Program Idea Note (ER-PIN) Mexico. <http://www.conafor.gob.mx:8080/documentos/docs/4/6170Propuesta%20de%20Nota%20de%20Idea%20de%20la%20Iniciativa%20de%20Reduccion%20de%20Emisiones%20de%20ERPIN%29%20de%20M%C3%A9xico.pdf>
- CONAFOR (2014a), Estrategia nacional para REDD+ (ENAREDD+). Borrador Abril de 2014. http://www.conafor.gob.mx:8080/documentos/docs/35/5559Elementos%20para%20el%20dise%C3%B1o%20de%20la%20Estrategia%20Nacional%20para%20REDD_.pdf
- CONAFOR (2014b), Estrategia nacional para REDD+ (ENAREDD+). (para consulta pública). [http://www.conafor.gob.mx:8080/documentos/docs/35/6462Estrategia%20Nacional%20para%20REDD_%20\(para%20consulta%20p%C3%BAblica\)%202015.pdf](http://www.conafor.gob.mx:8080/documentos/docs/35/6462Estrategia%20Nacional%20para%20REDD_%20(para%20consulta%20p%C3%BAblica)%202015.pdf)
- CONAFOR (2014d). Estrategia de Comunicación para el proceso preparatorio del mecanismo REDD+ en México. Octubre 2014. <http://www.enaredd.gob.mx/wp-content/uploads/2014/11/Estrategia-de-Comunicacion-REDD+.pdf>
- CONAFOR (2015a). Participación. CTC-REDD+ Nacional. <http://www.conafor.gob.mx/web/temas-forestales/bycc/redd-en-mexico/participacion/>
- CONAFOR (2015b). Participación. CTC-REDD+ Estatales. <http://www.conafor.gob.mx/web/temas-forestales/bycc/redd-en-mexico/participacion/>
- CONAPO (2010). Capítulo 1. Concepto y dimensiones de la marginación. Índice absolute de marginación 2000-2010. <http://www.conapo.gob.mx/work/models/CONAPO/Resource/1755/1/images/01Capitulo.pdf>
- CONSERVCOM (2010). Informe del proyecto. http://ddd.uab.cat/pub/butcoodesfas/butcoodesfas_a2011m9/index.html
- Corbera, E. (2005). Interrogating development in carbon forestry activities: A case study from Mexico, PhD thesis, University of East Anglia.
- Corbera, E., Estrada, M., May, P., Navarro, G. and Pacheco, P. (2011). Rights to land, forests and carbon in REDD+: insights from Mexico, Brazil and Costa Rica. *Forests*, 2(1): 301-342.
- Corbera, E., Kosoy, N., and Martínez-Tuna, M. (2007). The equity implications of marketing ecosystem services in protected areas and rural communities: case studies from Meso-America. *Global Environmental Change*, 17: 365-380.
- Corbera, E. and Schroeder, H. (2011). Governing and implementing REDD+. *Environmental Science and Policy*, 14: 89-99.
- Cornelius, W. and Myhre, D. (eds.) (1998). *The Transformation of Rural Mexico: Reforming the Ejido Sector*. University of California, San Diego/La Jolla, CA.
- Cornwall, A. (2008). Deliberating Democracy: Scenes from a Brazilian Municipal Health Council. *Politics and Society*, 36(4): 508-531.
- Costenbader, J. (2011). REDD+ benefit sharing: A comparative assessment of three national policy approaches. Washington, DC: FCPF and UN-REDD.
- Cotula, L. and Mayers, J. (2009). Tenure in REDD - Start-point or afterthought? Natural Resource Issues No. 15. International Institute for Environment and Development. London, UK.
- Cronkleton, P., Barton Bray, D., and Medina, G. (2011). Community Forest Management and the Emergence of Multi-Scale Governance Institutions: Lessons for REDD+ Development from Mexico, Brazil and Bolivia. *Forests*, 2: 451-473.
- CTC (2010). Reglamento para el funcionamiento del Comité Técnico Consultivo para la Reducción de Emisiones por Deforestación y Degradación y su función en la conservación, el manejo sustentable de los bosques e incremento de las reservas forestales de carbono (CTC-REDD+).
- CTC (2013). Resumen de la sesión del CTC-REDD+ México. 14 de junio del 2013.
- Cuppen, E. (2012). Diversity and constructive conflict in stakeholder dialogue: considerations for design and methods. *Policy Sciences*, 45: 23-46.
- Daily, G.C. (ed.). (1997). *Nature's services. Societal dependence on natural ecosystems*. Island Press, Washington, DC: Island Press.

- Davis, C., Nakhoda, S. and Daviet, F. 2010a Getting ready. A review of the World Bank Forest Carbon Partnership Facility readiness preparation proposals, v 1.3. WRI Working Paper. World Resources Institute, Washington DC. <http://www.wri.org/gfi>
- Davis C., Nogueron, R., Veit, P. and Javelle, A-G. (2012) Analysis of Institutional Mechanisms for Sharing REDD+ Benefits: Property Rights and Resource Governance Project, USAID, Washington D.C., US.
- DeFries, R., Achard, F., Brown, S., Herold, M., Murdiyarso, D., Schlamadinger, B. and de Souza Jr, C. (2007). Earth observations for estimating greenhouse gas emissions from deforestation in developing countries. *Environmental Science and Policy*, 10(4): 385-394.
- De Ita, A. (2008). Land concentration in Mexico after PROCEDE. In *Promised Land: Competing Visions of Agrarian Reform*; Rosset, P.M., Patel, R. and Courville, M. (eds.). Institute for Food and Development Policy: Oakland, CA, USA.
- de la Plaza Esteban, C., Visseren-Hamakers, I.J. and De Jong, W. (2014). The legitimacy of certification standards in climate change governance. *Sustainable Development*, 22: 420-432.
- Diefenbach, T. and Sillince J.A.A. (2011). Formal and Informal Hierarchy in Different Types of Organization. *Organization Studies*, 32(11): 1515-1537.
- Di Gregorio, M., Brockhaus, M., Cronin, T., Muharrom, E., Mardiah, S. and Santoso, L. (2014). Talking the talk of change: REDD+ discourse in the national media April 2014 Sustainability Research Institute Paper No. 57 Centre for Climate Change Economics and Policy Working Paper No. 172, Center for International Forestry Research (CIFOR), the Sustainability Research Institute (SRI).
- Di Gregorio, M., Brockhaus, M., Cronin, T., Muharrom, E., Santoso, L., Mardiah, S. and Büdenbender, M. (2013). Equity and REDD+ in the media: a comparative analysis of policy discourses. *Ecology and Society*, 18(2): 39.
- Dingwerth, K. and Pattberg, P. (2009). *Actors, Arenas and Issues in Global Governance?* In *Palgrave Advances in Global Governance*, edited by Jim Whitman, Basingstoke: Palgrave Macmillan.
- Dissanayake, S.T.M., Prakash, J., Adhikari, B., Bista, R., Bluffstone, R., Luintel, H., Martinsson, P., Paudel N.S., Somanathan, E. and Toman, M. (2015). Community Managed Forest Groups and Preferences for REDD+ Contract Attributes: A Choice Experiment Survey of Communities in Nepal. *Journal of Forest and Livelihood*, 13(1): 8-19.
- Doherty, E. and Schroeder, H. (2011). Forest Tenure and Multi-level Governance in Avoiding Deforestation under REDD+. *Global Environmental Politics*, 11(4): 66-88.
- Dryzek, J. (1997) *The Politics of the Earth: Environmental Discourses*, Oxford university press.
- Dryzek, J. (2012). *The Politics of the Earth: Environmental Discourses*, 3rd Ed. Oxford university press.
- Dryzek, J.S. and Niemeyer, S.J. (2008). Discursive Representation. *American Political Science Review*, 102(4): 481-494.
- Duchelle, A., Cromberg, M., Gebara, M.F., Guerra, R., Melo, T., Larson, A., Cronkleton, P., Borner, J., Sills, E., Wunder, S., Bauch, S., May, P. and Selaya, G. (2013). Linking forest tenure reform, environmental compliance, and incentives: Lessons from REDD+ initiatives in the Brazilian Amazon. *World Development*, 55: 53-57.
- Dudley, N. and Phillips, A. (2006). *Forests and Protected Areas: Guidance on the use of the IUCN protected area management categories*. Best Practice Protected Area Guidelines Series No. 12. Gland and Cambridge: IUCN.
- Duraiappah, A. K. (2006). *Markets for Ecosystem Services A Potential Tool for Multilateral Environmental Agreements*, The International Institute for Sustainable Development.
- Dúran-Medina, A., Mas, J.F. and Velazquez, A. (2005) Land-use/cover change in community-based forest management regions and protected areas in Mexico. In: Bray, D.B., Merino-Pérez, L., Barry, D. (eds.), University of Texas Press: Austin, TX, USA, pp. 215-238.
- Eastman, D., Catacutan, D.C., Hoan, D.T., Guarnaschelli, S., Bac, D.V. and Bishaw, B. (2012). Stakeholder preferences over rewards for ecosystem services: implications for a REDD+ benefit distribution system in Viet Nam. Working Paper 171. Bogor, Indonesia: World Agroforestry Centre (ICRAF) Southeast Asia Regional Program. 17p.

- EDF Talks Climate (2011). REDD+: Durban agrees on key issues. <http://blogs.edf.org/climatetalks/2011/12/06/redd-durban-countries-agree-on-key-issues/>
- Edmunds, D. and Wollenberg, E. (2001), A strategic approach to multi-stakeholder negotiations. *Development and Change*, 32: 231-53.
- Edmunds, D. and Wollenberg, E. (2002). Disadvantaged Groups in Multi-Stakeholder Negotiations, Center for International Forestry Research (CIFOR) report. http://www.mspguide.org/sites/default/files/resource/disadvantaged_groups_in_multistakeholder_negotiation_edmunds_wollenberg_cifor_2002_0.pdf
- Edwards, D.P., Koh, L.P., Laurance, W.F. (2012). Indonesia's REDD+ pact: Saving imperilled forests or business as usual? *Biological Conservation*, 151: 41-44.
- Eliasch, J. (2008). The Eliasch Review - Climate Change: Financing Global Forests. U.K.: Office of Climate Change.
- Elias, P., Leonard, S., Cando, L., Fedele, G., Gaveau, D., Locatelli, B., Martius, C., Murdiyarto, D., Sunderlin, W. and Verchot, L. (2014). Synergies across a REDD+ Landscape - Non-Carbon Benefits, Joint Mitigation and Adaptation and an Analysis of Submissions to the SBSTA. Infobrief, No. 71. Center for International Forestry Research (CIFOR), Bogor, Indonesia.
- Ellis, E.A. and Porter-Bolland, L. (2008). Is community-based forest management more effective than protected areas? A comparison of land use/land cover change in two neighbouring study areas of the Central Yucatan Peninsula, Mexico. *Forest Ecology and Management*, 256: 1971-1983.
- Engel, S., Pagiola, S. and Wunder, S. (2008). Designing payments for environmental services in theory and practice: An overview of the issues. *Ecological Economics*, 65: 663-674.
- Enright, A. (2013). REDD+ compensation packages in Lam Dong Province, Vietnam: Assessing the preferences of forest communities, IIED, London.
- Environmental Investigation Agency (2014). Permitting crime: How palm oil expansion drives illegal logging in Indonesia, EIA. <file:///D:/Mexico%202011/Other%20countries%20experience/EIA%20Report%202013%20Indonesia.pdf>
- EU-REDD+ (2015). Combatting tropical deforestation: the REDD+ initiative. European Commission. http://ec.europa.eu/clima/policies/forests/deforestation/index_en.htm
- European Commission (1998). The Aarhus convention. Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters, done at Aarhus, Denmark, on 25 June 1998.
- European Commission (2009). The Malmo Declaration (2009) Ministerial Declaration on eGovernment, approved in Malmö, Sweden, on 18 November 2009 in 5th Ministerial eGovernment Conference.
- European Union (2013). The EU Emissions Trading System (EU ETS). Factsheet. http://ec.europa.eu/clima/publications/docs/factsheet_ets_en.pdf
- Evans, K., de Jong, W. and Cronkleton, P. (2008). Future scenarios as a tool for decision making in forest communities. SAPIENS 1(2). <http://sapiens.revues.org/index209.html>
- Evans, K., Murphy, L. and de Jong, W. (2014). Global versus local narratives of REDD: A case study from Peru's Amazon. *Environmental Science and Policy*, 35: 98-108.
- Fearnside, P. M. (2003). Conservation policy in Brazilian Amazonia: understanding the dilemmas. *World Development*, 31:757-779.
- Ferraro, P. (2001). Global habitat protection: limitations of development interventions and a role for conservation performance payments. *Conservation Biology*, 15(4): 990-1000.
- Ferraro, P. and Kiss, A. (2002). Direct payments to conserve biodiversity. *Science*, 298(5599): 1718-9.
- Ferraro, P. and Simpson, D. (2002). The cost-effectiveness of conservation payments. *Land Economics*, 78(3): 339-53.
- Foli, E.G. and Dumenu, W.K. (2013). Background Paper for Ghana's REDD+ Benefit Sharing Dialogue. Paper prepared for the REDD+ Benefit Sharing Dialogue: 2-5 December, 2013. Elmina, Ghana.

- Food and Agriculture Organization (2001). Global Forest Resources Assessment 2000 - main report. FAO Forestry Paper No. 140. Rome.
- Food and Agriculture Organization (2002). Land tenure and rural development. FAO Land tenure studies. <ftp://ftp.fao.org/docrep/fao/005/y4307E/y4307E00.pdf>
- Food and Agriculture Organization (2006). Global Forest Resources Assessment 2005 - progress towards sustainable forest management. FAO Forestry Paper 147. Rome.
- Food and Agriculture Organization (2009). State of the World's Forests 2009. Rome.
- Food and Agriculture Organization (2010a). Global Forest Resources Assessment 2010. Main report. FAO, Rome. <http://www.fao.org/docrep/013/i1757e/i1757e.pdf>
- Food and Agriculture Organization (2010b). Evaluación de los Recursos Forestales Mundales. Informe Nacional, México, 2010; FAO, Rome. <http://www.fao.org/forestry/20262-1-176.pdf>
- Food and Agriculture Organization (2013). Forest Conservation in Mexico Ten years of Payments for Ecosystem Services, FAO, Rome. http://www.fao.org/fileadmin/user_upload/pes-project/docs/FAO_RPE-PES_PSAH-Mexico.pdf
- Food and Agriculture Organization (2015). Global Forest Resources Assessment 2015. How are the world's forests changing? FAO, Rome.
- Forest Carbon, Markets and Communities (2013). Social and Environmental Soundness (SES). Forest Carbon, Markets and Communities. <https://rmpportal.net/library/content/fcmc/task-areas/ses>
- Forest Carbon Partnership Facility (2008). Forest Carbon Partnership Facility (FCPF): Readiness Plan Idea Note (R-PIN) - External Review Form, Mexico. https://www.forestcarbonpartnership.org/sites/forestcarbonpartnership.org/files/Mexico_TAP_Consolidated.pdf
- Forest Carbon Partnership Facility (2013). ER-PIN template. <http://www.bankinformationcenter.org/wp-content/uploads/2013/12/FCPF-Carbon-Fund-ER-PIN-v4.pdf>
- Forest Carbon Partnership Facility (2014). REDD Readiness Progress Fact Sheets, Mexico. <https://forestcarbonpartnership.org/mexico>.
- Forest Carbon Partnership Facility (2015a). REDD+ countries. <https://www.forestcarbonpartnership.org/redd-countries-1>
- Forest Carbon Partnership Facility (2015b). The carbon fund. ER-PINs in FCPF Pipeline. <https://www.forestcarbonpartnership.org/er-pins-fcpf-pipeline>
- Franks, P. and Quesada-Aguilar, A. (2014). Equitable REDD+ Exploring concepts and strategies. IIED Discussion Paper. IIED, London.
- Fraser, N. (1997). From Redistribution to Recognition? Dilemmas of Justice in a 'Postsocialist' Age. In *Justice Interruptus: Critical Reflections on the "Postsocialist Condition"*. New York and London: Routledge, pp. 11-40.
- Friedlingstein, P., Houghton, R.A., Marland, G., Hackler, J., Boden, T.A., Conway, T.J., Canadell, J.G., Raupach, M.R., Ciais, P., and Le Quéré, C. (2010). Update on CO₂ emissions, *Nature Geoscience*, 3: 811-812.
- Frost, P.G.H. and Bond, I. (2006). CAMPFIRE and payments for environmental services. Markets for Environmental Services Report Number 9. IIED, London.
- FSC (2015). Who We Are. <https://us.fsc.org/who-we-are.176.htm>
- Funder, M. (2010). The social shaping of participatory space: Evidence from community development from Southern Thailand. *Journal of Development Studies*, 46 (10): 1708-1728.
- Fung, A. (2006). Varieties of participation in complex governance. *Public Administration Review*, 66: 66-75.
- Gallemore, C.T., Prasti, H. and Moeliono, M. (2014). Discursive barriers and cross-scale forest governance in Central Kalimantan, Indonesia. *Ecology and Society*, 19(2).
- Galopin, G. (2002). Planning for Resilience: Scenarios. In Gunderson, L. H. (ed.), *Panarchy: Understanding Transformations in Human and Natural Systems*. Island Press, pp. 361-394.

- Galván, Y. (2008). Transiciones forestales en países en desarrollo: Un análisis crítico para México. Master's thesis. Universidad Nacional Autónoma de México, México.
- García-Amado, R., Ruiz Pérez, M., Iniesta-Arandia, I., Dahringer, G., Reyes, F. and Barrasa, S. (2012). Building ties: social capital network analysis of a forest community in a biosphere reserve in Chiapas, Mexico. *Ecology and Society*, 17(3): 3.
- García-Barrios, L., Galván-Miyoshi, Y.M., Valdivieso-Pérez, I.A., Masera, O., Bocco, G. and Vandermeer, J. (2009). Neotropical Forest Conservation, Agricultural Intensification, and Rural Out-migration: The Mexican Experience. *BioScience*, 59: 863-873.
- Garibay, C. and Bocco, G (2007). Situación actual en el uso del suelo en comunidades indígenas de la Región Purépecha 1976–2005. Centro de Investigaciones en Geografía Ambiental, Universidad Nacional Autónoma de México.
- Gebara, M.F. (2010). Benefit-Sharing Mechanisms for REDD: How to Equitably Share Benefits Among Forest Managers? Oxford Centre for Tropical Forests (OCTF) and Center for International Forestry Research (CIFOR).
- Gebara, M.F. (2013). Importance of local participation in achieving equity in benefit sharing mechanisms for REDD+: a case study from the Juma Sustainable Development Reserve. *International Journal of the Commons*, 7(2): 473-497.
- Gerez-Fernández, P. and Alatorre-Guzmán, E. (2007). Los retos de la certificación forestal en la silvicultura comunitaria de México' in Bray, D., Merino-Pérez, L. and Barry, D. (eds.). *Los bosques comunitarios de México. Manejo sustentable de paisajes forestales*, México: Instituto Nacional de Ecología- Secretaría de Medio Ambiente y Recursos Naturales, 99-120.
- Ghai, D. and Vivian, J. (1992). Grassroots Environmental Action: People's Participation in Sustainable Development. New York.
- Ghazoul, J., Butler, R., Mateo-Vega, J. and Koh, L.P. (2010). REDD: a reckoning of environmental and development implications. *Trends in Ecology and Evolution*, 25: 396-402.
- GOFC-GOLD (2008). Reducing greenhouse gas emissions from deforestation and degradation in developing countries: a sourcebook of methods and procedures for monitoring, measuring and reporting, GOFCGOLD Report version COP13-2. GOFC-GOLD Project Office, Natural Resources Canada, Alberta, Canada.
- Gómez-Baggethun, E., de Groot, R., Lomas, P. and Montes, C. (2010). The history of ecosystem services in economic theory and practice: From early notions to markets and payment schemes. *Ecological Economics*, 69: 1209-1218.
- Graham, G. (2007). *Analysing Qualitative Data* (Qualitative Research Kit). London: Sage.
- Grieg-Gran, M., Mohammed, E.Y. and Nhantumbo, I. (2014). What people want from REDD+: assessing local views and preferences. IIED Briefing. <http://pubs.iied.org/pdfs/17217IIED.pdf?>
- Grimble, R.J. and Wellard, K. (1997). Stakeholder methodologies in natural resource management: A review of principles, contexts, experiences and opportunities. *Agricultural Systems Journal*, 55(2): 173-193.
- Guerrero, G, Masera, O. and Mas, J.F. (2008). Land use/land cover change dynamics in the Mexican highlands: Current situation and long-term scenarios. In Paegelow, M. and Camacho, M. (eds.) *Modelling Environmental Dynamics*. Springer, pp. 57-76.
- Gustafsson, K.M. (2013). Environmental discourses and biodiversity: the construction of a storyline in understanding and managing an environmental issue. *Journal of Integrative Environmental Sciences*, 10(1): 39-54.
- Guthiga, P. and Mburu, J. (2006). Local communities' incentives for forest Conservation: case of Kakamega Forest in Kenya. Paper presented at 11th Conference of the International Association for the Study of Common Property. Bali, Indonesia.
- Hajer, M.A. (1993). Discourse Coalitions and the Institutionalisation of Practice: The Case of Acid Rain in Great Britain. In: Fischer, F. and Forester, J. (Hrsg.) *The Argumentative Turn in Policy Analysis and Planning*. Durham/London, pp. 43-67.

- Hajer, M.A. (1995). *The Politics of Environmental Discourse: Ecological Modernization and the Policy Process*. Oxford University Press, New York, NY, pp. 9-44.
- Hajer, M.A. (2006). Doing discourse analysis: coalitions, practices, meaning. In Margo van den Brink (ed.): *Words matter in policy and planning. Discourse theory and method in the social sciences*. Utrecht: Koninklijk Nederlands Aardrijkskundig Genootschap (Nederlandse geografische studies, 344), pp. 65-74.
- Hall, A. (2012) *Forests and climate change: The social dimensions of REDD in Latin America*. Cheltenham: Edward Elgar.
- Hamrick, K., and Goldstein, A. (2015). *Ahead of the State of The voluntary carbon markets 2015*. Ecosystem Marketplace Forest Trends Initiative.
- Han, Y.O. (2013). Microblogging the Environment: How Generation Y Talks About Sustainability on Tumblr. Microblogging the Environment. http://nature.berkeley.edu/classes/es196/projects/2013final/HanO_2013.pdf
- Hartman, I. (1998). De andere kant van politieke participatie. Kanttekeningen bij de huidige democratisering van bovenaf [The other side of political participation. Some comments on the current democratization from above]. *Vorming*, 14, 7-18. <http://hdl.handle.net/1765/1750>
- Hassan, R., Scholes, R., and Ash, N. (eds.) (2005). *Ecosystems and human well-being: current state and trends*, vol 1. Findings of the condition and trends working group of the Millennium Ecosystem Assessment. Washington, DC: Island Press.
- Hamilton, K., Sjardin, M., Shapiro, A. and Marcello, T. (2009). *Fortifying the Foundation: State of the Voluntary Carbon Markets*. Ecosystem Marketplace and New Carbon Finance.
- Hatanak, M. and Konefal, F. (2012). Legitimacy and Standard Development in Multi-stakeholder Initiatives: A Case Study of the Leonardo Academy's Sustainable Agriculture Standard Initiative. *International Journal of Sociology of Agriculture and Food*, 20(2): 155-173.
- Hemmati, M. (2002). *Multi-stakeholder Processes for Governance and Sustainability Beyond Deadlock and Conflict*. Earthscan Publications Ltd. London, Sterling, VA.
- Hendrickson, C. and Corbera, E. (2015). Participation Dynamics and Institutional Change in the Scolel Té carbon forestry project, Chiapas, Mexico. *Geoforum*, 59: 63-72.
- Heyman, J. and Ariely, D. (2004). Effort for payment. A tale of two markets. *American Psychological Society*, 15 (11): 787-793.
- Hiraldo, R. and Tanner, T. (2011). Forest Voices: Competing Narratives over REDD+. *Institute of Development Studies (IDS) Bulletin*, 42(3): 42-51.
- Hite, K. (2015). Benefit Sharing and REDD+: Considerations and Options for Effective Design and Operation. USAID-supported Forest Carbon, Markets and Communities Program. Washington, D.C., USA.
- Hoang, M.H., Do, T.H., van Noordwijk, M., Pham, T.T., Palm, M., To, X.P., Doan, D., Nguyen, T.X. and Hoang, T.V.A. (2010). An Assessment of Opportunities for Reducing Emissions from All Land Uses: Vietnam Preparing for REDD. ASB Partnership for the Tropical Forest Margins, Nairobi. http://worldagroforestry.org/sea/publications?do=view_pub_detail&pub_no=RP0267-10
- Holmes, T. and Scoones, I. (2000). Participatory environmental policy processes: experiences from North and South, IDS Working Paper Series, No 113. IDS: Brighton. <https://www.ids.ac.uk/files/Wp113.pdf>
- Honey-Roses, J., Baylis, K. and Ramirez, M.I. (2011). A spatially explicit estimate of avoided forest loss. *Conservation Biology*, 25: 1032-1043.
- Hosonuma, N., Herold, M., De Sy, V., De Fries, R.S., Brockhaus, M., Verchot, L., Angelsen, A. and Romijn, E. (2012). An assessment of deforestation and forest degradation drivers in developing countries. *Environmental Research Letters*, 7(4): 4009.
- Hou, X. (2013). Background Paper for REDD+ Benefit Sharing Dialogue. The Forests Dialogue, Washington D.C., U.S. <http://theforestdialogue.org/sites/default/files/redd-dc-bs-background-paper-final.pdf>
- Houghton, R.A. (2007). Balancing the global carbon budget. *Annual Review of Earth and Planetary Sciences*, 35: 313-347.

- Huckel, C. (2005): Legitimacy and Global Governance in Managing Global Public Health (Paper presented at the conference 'Organizing the World: Rules and Rule-Making among Organizations', 13-15 October), Stockholm.
- Hufty, M., Brightman M. and Orsini Bled, A. (2011). Reduced Emissions from Deforestation and Degradation: taking stock of the social and governance dimensions. XIII Annual Bioecon conference, Resource Economics, Biodiversity Conservation and Development Geneva, 11-13 September 2011, Draft paper.
- Humphreys, D. (2006). *Logjam: Deforestation and the Crisis of Global Governance*. London: Earthscan.
- Huppe, H. (2008). The Forests of Mexico: Sustaining Mexico's Cultural, Biological and Economic Values for the Future. Forestryencyclopedia
<https://sites.google.com/site/forestryencyclopedia/Home/Mexico>
- INEGI (2011). Censo de población y vivienda 2010: tabulados del cuestionario básico. INEGI, Aguascalientes, México.
- IPCC (2000). Land Use, Land-Use Change, and Forestry Special Report of the IPCC. Watson, R., Noble, I., Bolin, B., Ravindranath, H., Verardo, D.J. and Dokken, D.J., Cambridge University Press, UK.
- IPCC (2007). The IPCC's Fourth Assessment Report: Climate Change 2007 (AR4).
- IPCC (2013). The IPCC's Fifth Assessment Report (AR5).
- IUCN (2009). REDD-plus and Benefit sharing. Experiences in forest conservation and other resource management sectors. https://cmsdata.iucn.org/downloads/benefit_sharing_english.pdf
- Jagger, P., Brockhaus, M., Duchelle, A.E., Gebara M.F., Lawlor, K., Resosudarmo I.A.P. and Sunderlin W.D. (2014). Multi-Level Policy Dialogues, Processes, and Actions: Challenges and Opportunities for National REDD+ Safeguards Measurement, Reporting, and Verification (MRV). *Forests*, 5, 2136-2162.
- Kapos, V., Kurz, W.A., Gardner, T., Mansourian, S., Parotta, J.A., Sasaki, N., and Schmitt, C.B. (2012). Impacts of forest and land management on biodiversity and carbon. In Parrotta, J.A., Wildburger, C. and Mansourian, S. (eds.), *Understanding Relationships between Biodiversity, Carbon, Forests and People: The Key to Achieving REDD+ Objectives. A Global Assessment Report*. Prepared by the Global Forest Expert Panel on Biodiversity, Forest Management, and REDD+, pp. 53-80. IUFRO World Series Volume 31: Vienna, Austria.
- Kashwan, P. and Holahan, R. (2014). Nested governance for effective REDD+: Institutional and political arguments. *International Journal of Commons*, 8: 554-575.
- Kill, J. (2015). REDD in Brazil. Two case studies on early forest carbon offset Projects. Heinrich Böll Foundation Brazil.
- Klein, J. (2006). Fiddling while Madagascar burns. Deforestation discourses and highland history. *Norsk Geografisk Tidsskrift - Norwegian Journal of Geography*, 58(1): 11-22.
- Kollmuss A., Zink, H. and Polycarp, C. (2008). Making Sense of the Voluntary Carbon Market. A Comparison of Carbon Offset Standards. The Stockholm Environment Institute and Tricorona, WWF Germany.
- Kosoy, N., Martinez-Tuna, M., Muradian, R. and Martinez-Alier, J. (2007). Payments for environmental services in watersheds: insights from a comparative study of three cases in Central America. *Ecological Economics*, 61(2-3): 446-455.
- Krause, T., Collen, W. and Nicholas, K.A. (2013). Evaluating safeguards in a conservation incentive program: participation, consent, and benefit sharing in indigenous communities of the Ecuadorian Amazon. *Ecology and Society*, 18(4): 1.
- Kremen, C., Merenlender, A.M. and Murphy, D.D. (1994). Ecological monitoring: A vital need for integrated conservation and development programs in the tropics. *Conservation Biology*, 8: 388-397.
- Kuemmerle, T., Kaplan, J.O., Prishchepov, A., Rylsky, I., Chaskovskyy, O., Tikunov, V.S. and Müller, D. (2015). Forest transitions in Eastern Europe and their effects on carbon budgets. *Global Change Biology*, 21(8): 3049-61.
- Labatt, S. and White, R. (2007). *Carbon Finance: The Financial Implications of Climate Change*. John Wiley and Sons, Inc., New Jersey.

- Lafferty, W. and Hovden, E. (2002). Environmental policy integration: towards an analytical framework. *Environmental Politics*, 12:3, 1-22.
- Lambin, E.F., Geist, H.J. and Lepers, E. (2003). Dynamics of land-use and land-cover change in tropical regions. *Annual Review on Environment and Resources*, 28: 205-241.
- Lambin, E.F. and Meyfroidt, P. (2011). Global land use change, economic globalization, and the looming land scarcity. *Proceeding of National Academy of Science USA*, 108: 3465-3472.
- Landell-Mills, N., and Porras, I.T. (2002). Silver bullet or fool's gold? A global review of markets for forest environmental services and their impact on the poor. International Institute for Environment and Development (IIED), London, UK.
- Lang, C. (2013). COONAPIP, Panama's Indigenous Peoples Coordinating Body, withdraws from UN-REDD. REDD-Monitor.
- Larsen, G., Rey, D. and Daviet, F. (2012). Map of SBSTA Submissions: REDD+ Safeguard Information System. WRI Working Paper. World Resources Institute, Washington DC. http://www.wri.org/sites/default/files/map_of_sbsta_submissions.pdf
- Larson, A.M. (2005). Democratic decentralisation in the forestry sector: Lessons learned from Africa, Asia and Latin America, in Colfer, C.J.P. and Capistrano, D. (eds.) *The politics of decentralization: Forest, power and people*. Earthscan, London and Sterling, VA, Chapter 2, pp. 33-62.
- Larson, A.M. (2011). Forest tenure reform in the age of climate change: lessons for REDD+. *Global Environmental Change* 21(2): 540-549.
- Larson, A.M., Barry, D. and Dahal, G.R. (2010a). New rights for forest based communities? Understanding processes of forest tenure reform. *International Forestry Review*, 12: 78-96.
- Larson, A.M., Corbera, E., Cronkleton, P., van Dam, C., Bray, D., Estrada, M., May, P., Medina, G., Navarro, G. and Pacheco, P. (2010b). Rights to forests and carbon under REDD+ initiatives in Latin America. Infobrief, No.33, Center for International Forestry Research (CIFOR), Bogor, Indonesia.
- Larson, A.M., Dokken, T., Duchelle, A.E., Atmadja, S., Resosudarmo, I.A.P., Cronkleton, P., Cromberg, M., Suderlin, W., Awono, A. and Selaya, G. (2015). The role of women in early REDD+ implementation: lessons for future engagement. *International Forestry Review*, 17(1): 43-65.
- Lasgorceix, A., and Kothari, A. (2009). Displacement and relocation of protected areas: a synthesis and analysis of case studies. *Economic and Political Weekly*, 44: 37-47.
- Laurance, W. (2015). Emerging Threats to Tropical Forests. *Annals of the Missouri Botanical Garden*, 100(3):159-169.
- Lawlor, K., Olander, L. and Weinthal, E. (2009). *Sustaining livelihoods while reducing emissions from deforestation: Options for policymakers*. Nicholas Institute for Environmental Policy Solutions, Duke University: Durham, NC, USA.
- Lawrence, D. and Vandecar, K. (2014). Effects of tropical deforestation on climate and agriculture. *Nature Climate Change*, 5: 27-36.
- Lederer, M. (2011). From CDM to REDD+ - What do we know for setting up effective and legitimate carbon governance? *Ecological Economics*, 70: 1900-1907.
- Lederer, M. (2012). REDD+ governance. *WIREs Clim Change*, 3:107-113.
- Lee, E. and Mahanty, S. (2009). Payments for Environmental Services and Poverty Reduction: Risks and Opportunities. RECOFTC, Bangkok.
- Leigh Taylor, P. (2005). New organizational strategies in community forestry in Durango, Mexico. In Bray, D.B., Merino-Pérez, L., Barry, D. (eds.), *The community forests of Mexico: managing for sustainable landscapes*. University of Texas Press: Austin, TX, USA, pp. 125-150.
- Leipold, S. (2014). Creating forests with words - A review of forest-related discourse studies. *Forest Policy and Economics*, 40: 12-20.
- Lemos, M.C. and Agrawal, A. (2006). Environmental Governance. *Annual Review of Environment and Resources*, 31: 297-325.

- Le Quéré, C., Raupach, M.R., Canadell, J.G., Marland, G., Bopp, L., Ciais, P., Conway, T.J., Doney, S. C., Feely, R.A., Foster, P., Friedlingstein, P., Gurney, K., Houghton, R.A., House, J.I., Huntingford, C., Levy, P.E., Lomas, M.R., Majkut, J., Metzl, N., Ometto, J.P., Peters, G.P., Prentice, I.C., Randerson, J.T., Running, S.W., Sarmiento, J.L., Schuster, U., Sitch, S., Takahashi, T., Viovy, N., von der Werf, G.R., and Woodward, F.I.: Trends in the sources and sinks of carbon dioxide, *Nature Geoscience*, 2: 831–836.
- LFFAROSC (2012). Ley Federal de Fomento a las Actividades Realizadas por Organizaciones de la Sociedad Civil. El Diario Oficial de la Federación el 9 de febrero de 2004 (Última reforma DOF 25-04-2012). Estados Unidos Mexicanos.
- LGDFS (2012). Ley General de Desarrollo Forestal Sustentable. El Diario Oficial de la Federación el 25 de febrero de 2003 (Última reforma DOF 04-06-2012). Estados Unidos Mexicanos.
- LGEEPA (2012). Ley General del Equilibrio Ecológico y la Protección al Ambiente. El Diario Oficial de la Federación el 28 de enero de 1988 (Últimas reformas DOF 05-11-2013). Estados Unidos Mexicanos.
- Lindhjem, H., Aronsen, I., Bråten, K.G. and Gleinsvik, A. (2010). Experiences with benefit sharing: issues and options for REDD-plus. Commissioned by International Union for Conservation of Nature (IUCN) for discussion at COP 15, Copenhagen.
- Litfin, K. (1994). *Ozone discourses. Science and politics in global environmental cooperation*. New York: Colombia University Press.
- Long, A. (2013). REDD+, Adaptation, and sustainable forest management: toward effective polycentric global forest governance. *Tropical Conservation Science*. Special Issue, 6(3): 384-408.
- López, I. (2013). Suspendido el programa REDD Plus, dice Semahn. El Heraldo de Chiapas, 8 de julio de 2013. <http://www.oem.com.mx/elheraldodechiapas/notas/n3045308.htm>
- López-Nogales, A. and López-Nogales, R. (1999). R. Ley Agraria Comentada; Editorial Porrúa: Ciudad de México, México.
- Lövbrand, E., Rindeljäll, T. and Nordqvist, J. (2009). Closing the Legitimacy Gap in Global Environmental Governance? Lessons from the Emerging CDM Market. *Global Environmental Politics*, 9(2), 74-100.
- Luttrell, C., Loft, L., Gebara, M.F. and Kweka, D. (2012). Who should benefit and why? Discourses on REDD+ benefit sharing, In Angelsen, A., Brockhaus, M., Sunderlin, W.D. and Verhot, L.V. (eds.) (2012). *Analysing REDD+: Challenges and choices*. Center for International Forestry Research (CIFOR), Bogor, Indonesia, pp.129-152
- Luttrell, C., Loft, L., Gebara, M.F., Kweka, D., Brockhaus, M., Angelsen, A., and Sunderlin, W. D. (2013) Who should benefit from REDD+? Rationales and realities. *Ecology and Society*, 18(4): 52.
- Luttrell, C., Resosudarmo, I.A.P., Muharrom, E., Brockhaus, M. and Seymour, F. (2014). The political context of REDD+ in Indonesia: constituencies for change. *Environmental Science and Policy*, 35: 67-75.
- Lyster, R. (2011). REDD+, transparency, participation and resource rights: the role of law. *Environmental science and policy*, 14(2), 118-126.
- Mahanty, S., Gronow, J., Nurse, M. and Malla, Y. (2006). Reducing Poverty through Community Based Forest Management in Asia. *Journal of Forest and Livelihood*, 5(1): 78-89.
- Mahanty, S., Guernier, J. and Yasmi, Y. (2009). A Fair Share? Sharing the benefits and costs of collaborative forest management. *International Forestry Review*, 11(2): 268-280.
- Manson, R.H. (2004). Los servicios hidrológicos y la conservación de los bosques de México. *Madera y Bosques*, 10(1): 3-10.
- Manyika, K.F.K., Kajembe, G.C., Silayo, D.A. and Vatn, A. (2013). Strategic power and power struggles in the national REDD+ governance process in Tanzania: Any effect on its legitimacy? *Tanzania Journal of Forestry and Nature Conservation*, 83(1): 69-82.
- Marine Stewardship Council (2015). About us. <http://www.msc.org/about-us>
- Martínez Cobo, J.R. (1987). Study of the problem of discrimination against indigenous populations. Volume 5. Conclusions, proposals and recommendations. New York: United Nations, p. 29.
- Mathbor G. (2008) *Effective community participation in coastal development*. Liceum books.

- Mather, A., 1992. The forest transition. *Area* 24, 367-379.
- Mathews, A.S. (2011). *Instituting Nature: Authority, Expertise and Power in Mexican Forests*. Cambridge, Massachusetts, MIT Press.
- Matson, P. A. and Vitousek, P. M. (2006). Agricultural intensification: will land spared from farming be land spared for nature? *Conservation Biology*, 20: 709-710.
- May, P. H., Millikan, B. and Gebara, M. F. (2011). The context of REDD+ in Brazil: drivers, agents and institutions. Occasional paper 55, revised edition. Center for International Forestry Research, Bogor, Indonesia.
- Mayers, J. (2005). Stakeholder power analysis. International Institute for and Environment Development (IIED), London, UK.
- McAfee, K. and Shapiro, E.N. (2010). Payments for Ecosystem Services in Mexico: Nature, Neoliberalism, Social Movements, and the State. *Annals of the Association of American Geographers*, 100(3): 579-599.
- McDermott, C.L., Coad, L., Helfgott, A. and Schroeder, H. (2012). Operationalizing social safeguards in REDD+: actors, interests and ideas. *Environmental science and policy*, 21: 63-72.
- McDermott, M., Mahanty, S. and Schreckenberg, K. (2011). Defining Equity: A framework for evaluating equity in the context of ecosystem services. A working paper prepared for the project 'Safeguarding local equity as global values of ecosystem services rise'. Ecosystem Services for Poverty Alleviation Programme (ESPA).
- McDermott, M., Mahanty, S. and Schreckenberg, K. (2013). Examining equity: A multidimensional framework for assessing equity in payments for ecosystem services. *Environmental science and policy*, 33: 416 - 427.
- McDermott, M. and Schreckenberg, K., (2009). Equity in Community Forestry: Insights from North and South. *International Forestry Review*, 11(2): 157-170.
- McKean, M.A. (2000). Common property: what is it, what is it good for, and what makes it work? In Gibson, C. C., McKean, M. A. and Ostrom, E. (eds.) *People and forests: communities, institutions, governance*. MIT Press, Cambridge, Massachusetts, USA, pp. 27-56
- McShane, T.O. and Wells, M.P. (2004). Integrated conservation and development? Pages 3-9 in McShane, T.O. and Wells, M.P. (eds.) *Getting biodiversity projects to work: towards better conservation and development*. Columbia University Press, New York, New York, USA.
- Méndez- López, M.E., García-Frapolli, E., Pritchard, D.J., Sánchez González, M.C., Ruiz-Mallen, I., Porter-Bolland, L. and Reyes-Garcia, V. (2014). Local participation in biodiversity conservation initiatives: A comparative analysis of different models in South East Mexico. *Journal of Environmental Management*, 145: 321-329.
- Méndez-López, M.E., García-Frapolli, E., Ruiz-Mallen, I., Porter-Bolland, L. and Reyes-Garcia, V. (2015). From Paper to Forest: Local Motives for Participation in Different Conservation Initiatives. Case Studies in Southeastern Mexico. *Environmental Management*, 56(3): 695-708.
- Mendoza, E. (2013). México cede su bosque y selvas a REDD+. Conralinea. <http://contralinea.com.mx/archivo-revista/index.php/2013/08/04/mexico-cede-sus-bosques-selvas-redd/>
- Merino-Pérez, L. (2004). *Conservación o deterioro. El impacto de las políticas públicas en las instituciones comunitarias y en los bosques en México*. INE-Semarnat, Consejo Civil Mexicano para la Silvicultura Sostenible, México.
- Merino-Pérez, L. and Hernández-Apolinar, M. (2004). Destrucción de Instituciones Comunitarias y de los Bosques en la Reserva de la Biósfera de la Mariposa Monarca, Michoacán, México. *Revista Mexicana de Sociología*, 66(2): 261–309.
- Merino-Pérez, L. and Segura-Warnholtz, G (2005) Forest and conservation policies and their impact on forest communities in Mexico. In Bray, D.B., Merino-Pérez, L., Barry, D. (eds.) *The Community Forests of Mexico. Managing for Sustainable Landscapes*. University of Texas Press, Austin, TX, USA, pp. 49–70.
- Millennium Ecosystem Assessment (2003). *Ecosystems and Human Well-being: A Framework for Assessment*. Island Press, Washington, DC.

- Millennium Ecosystem Assessment (2005). *Ecosystems and Human Well-Being: Synthesis*. Island Press, Washington, DC.
- Milne, S. and Adams, W. (2012). Market masquerades: Uncovering the politics of community-level payments for environmental services in Cambodia. *Development and Change*, 43(1): 133-158.
- Minang, P.A., Van Noordwijk, M., Duguma, L.A., Alemagi, D., Do, T.H., Bernard, F., Agung, P., Robiglio, V., Catacutan, D., Suyanto, S., Armas, A., Aguad, C.S., Feudjio, M., Galudra, G., Maryani, R., White, D., Widayati, A., Kahurani, E., Namirembe, S. and Leimona, B. (2014). REDD+ Readiness progress across countries: time for reconsideration. *Climate Policy*, 14(6): 685-708.
- Mohammed, E.Y. (2011). Pro-poor benefit distribution in REDD+: who gets what and why does it matter? REDD Working Paper. IIED, London.
- Molnar, A., Liddle, M., Bracer, C., Khare, A., White, A. and Bull, J. (2007). Community-based forest enterprises in tropical forest countries: status and potential. International Tropical Timber Organization (ITTO), Rights and Resources Initiative (RRI) and Forest Trends, Washington, D.C., USA.
- Morgan, D.L. (1997). *Focus groups as qualitative research*. 2nd Edition London: Sage.
- Muñoz-Piña, C., Guevara, A., Torres, J.M. and Braña, J. (2008). Paying for the hydrological services of Mexico's forests: Analysis, negotiations and results. *Ecological Economics*, 65(4): 725-736
- Mulder, M.B. and Coppolillo, P. (2005). *Conservation: Liking Ecology, Economics and Culture*. New Jersey: Princeton University Press.
- Multipart (2008). Multi-stakeholder partnership in post-conflict reconstruction: the role of EU, Theoretical and methodological framework and guidance for the project.
- Mulyani, M. and Jepson, P.R. (2013). REDD+ and Forest Governance in Indonesia: A Multistakeholder Study of Perceived Challenges and Opportunities. *The Journal of Environment and Development*, 22 (3): 261-283.
- Murdiyarto, D., Skutsch, M., Guariguata, M., Kanninen, M., Luttrell, C., Verweij, P. and Stella, O. (2008). Measuring and monitoring forest degradation for REDD Implications of country circumstances. Info brief Nov 2008, Center for International Forestry Research (CIFOR), Bogor, Indonesia. <http://riffecac.org/IMG/pdf/016-infobriefb23.pdf>
- Mustafa Bayrak, M., Tu, T.N. and Marafa, L.M. (2014). Creating Social Safeguards for REDD+: Lessons Learned from Benefit Sharing Mechanisms in Vietnam. *Land*, 3: 1037-1058.
- Mustalahti, I., Bolin, A., Boyd, E. and Paavola, J. (2012). Can REDD+ Reconcile Local Priorities and Needs with Global Mitigation Benefits? Lessons from Angai Forest, Tanzania. *Ecology and Society*, 17(1): 16.
- Mwayafu, D. and Kimbowa, R. (2011). Benefit sharing in the Trees for Global Benefit (TGB) Initiative - Bushenyi District (Uganda). REDD-net. <http://www.ugandacoalition.or.ug/sites/default/files/Benefit%20sharing%20in%20the%20Trees%20for%20Global%20Benefit.pdf>
- Nabuurs, G.J., Masera, O., Andrasko, K., Benitez-Ponce, P., Boer, R., Dutschke, M., Elsiddig, E., Ford-Robertson, J., Frumhoff, P., Karjalainen, T., Krankina, O., Kurz, W., Matsumoto, M., Oyhantcabal, W., Ravindranath, N.H., Sanz Sanchez, M.J., Zhang, X. (2007). Forestry. In *Climate Change 2007: Mitigation. Contribution of Working group III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* edited by Metz, B., Davidson, O.R., Bosch, P.R., Dave, R., Meyer, L.A.. Cambridge and New York: Cambridge University Press.
- Nagendra, H. and Ostrom, E. (2010). Polycentric governance of multifunctional forested landscapes. *International Journal of the Commons*, 6(2):104-133.
- Nagothu, U.S., (2001). Fuelwood and fodder extraction and deforestation: mainstream views in India discussed on the basis of data from the semi-arid region of Rajasthan. *Geoforum*, 32(3): 319-332.
- Nájera, M., Rodríguez, Y. and Zorrilla, M. (2011) Strategic approach, institutional arrangements and key corridors for REDD+ and biodiversity conservation in the state of Campeche.
- Nelson, A. and Chomitz, K.M. (2011). Effectiveness of strict vs. multiple use protected areas in reducing tropical forest fires: A global analysis using matching methods. *PLoS ONE*, 6(8): e22722.

- Nelson, K. and de Jong, B. (2003). Making global initiatives local realities: carbon mitigation projects in Chiapas, Mexico. *Global Environmental Change*, 13: 19–30
- Neumann, R.P. (1997). Primitive ideas: protected area buffer zones and the politics of land in Africa. *Development and Change*, 28: 559-582.
- Newell, P. and Wheeler, J. (eds) (2006) *Rights, Resources and the Politics of Accountability*. London: Zed books, pp. 1-37.
- Newing, H. (2011). *Conducting Research in Conservation: A Social Science Perspective*. Routledge. pp. 98-186.
- Newmark, W.D. and Hough, J.L. (2000). Conserving Wildlife in Africa: Integrated Conservation and Development Projects and Beyond. *Bioscience*, 50(7): 585-592.
- Nhantumbo, I. and Chiwona-Karlton, L. (2012). His REDD+, her REDD+: how integrating gender can improve readiness. IIED Briefing. <http://pubs.iied.org/pdfs/17136IIED.pdf?>
- Nielsen, T.D. (2013). The role of discourses in governing forests to combat climate change. *International Environmental Agreements*, 13(3): 1-18.
- Nielsen, T.D. and Thompson, M. (2013). REDD+ a Clumsy Solutions to a Complex problem: How Cultural Theory can Aid the Emerging REDD+ Governance Architecture. Presented at the Tokyo conference on Earth System Governance, 28-31 January 2013.
- Noor, M., Douma, N., van der Haar, G., Hilhorst, D., van der Molen, I. and Stel, N. (2010). Multi-Stakeholder Processes, Service Delivery and State Institutions: Theoretical framework and Methodologies. Working paper. The Peace, Security and Development Network.
- OECD (2013). Evaluaciones de la OCDE sobre el desempeño ambiental: México 2013, OECD Publishing.
- Osborne, T., Bellante, L. and von Hedemann, N. (2014). Indigenous Peoples and REDD+: A Critical Perspective. Indigenous People's Biocultural Climate Change Assessment Initiative. Indigenous Peoples' Biocultural Climate Change Assessment Initiative (IPCCCA), Cusco, Peru.
- Okereke, C., and Dooley, K. (2010). Principles of justice in proposals and policy approaches to avoided deforestation: towards a post-Kyoto climate agreement. *Global Environmental Change*, 20: 82-95.
- Onwuegbuzie A.J., Dickinson, W.B., Leech, N.L., Zoran A.G. (2009). A Qualitative Framework for Collecting and Analyzing Data in Focus Group Research. *International Journal of Qualitative Methods*, 8(3).
- Ostrom, E. and Schlager, E. (1996). The formation of property rights. In Hanna, S., Folke, C. and Mäler, K.G. (eds.) *Rights to Nature: Ecological, Economic, Cultural and Political Principles of Institutions for the Environment*; Island Press: Washington, DC, USA, 1996; pp. 127-156.
- Ostrom, V. (1972). Polycentricity. Presented at 1972 Annual Meeting of the American Political Science Association, Washington, DC.
- Owens S., and Drifill, L. (2008). How to change attitudes and behaviours in the context of energy. *Energy Policy*, 36: 4412-4418.
- Paavola, J. (2003). Environmental decisions and theories of justice: Implications for economic analysis and policy practice, *Forum for Social Economics*, 33: 33-43.
- Paavola, J. (2004). Protected Areas Governance and Justice: Theory and the European Union's Habitats Directive, *Environmental Sciences*, 1: 59-77.
- Paavola, J. (2007). Institutions and environmental governance: A reconceptualization, *Ecological economics*, 63: 93-103.
- Pagiola, S. (2008). Payments for environmental services in Costa Rica. *Ecological Economics*, 65(4): 712-724.
- Pagiola, S., Arcenas, A., and Platais, G. (2005). Can payments for environmental services help reduce poverty? An exploration of the issues and the evidence to date. *World Development*, 33 (2): 237-253.
- Pagiola, S., Bishop, J. and Landell-Mills N. (eds.) (2002). *Selling forest environmental services. Market-based mechanisms for conservation and development*. London and Sterling: Earthscan.

- Pagiola, S., Landell-Mills, N. and Bishop, J. (2002). Making Market-based Mechanisms Work for Forests and People. In Pagiola, S., Bishop, J. and Landell-Mills, N. (eds.) *Selling Forest Environmental Services: Market-based Mechanisms for Conservation and Development*, London, Earthscan.
- Pandey, D.N. (2002). Carbon Sequestration in Agroforestry Systems. *Climate Policy*, 2, 367-377.
- Parker, C. (2009). *The Little REDD+ Book: An updated guide to governmental and non-governmental proposals for reducing emissions from deforestation and degradation*. Oxford, U.K.: Global Canopy Programme.
- Parkinson, J. (2006). *Deliberating in the real world: Problems of legitimacy in deliberative democracy* (Oxford: Oxford University Press).
- Parkinson, J. (2003). Legitimacy problems in deliberative democracy. *Political Studies*, 51 (1): 180-196.
- Pasgaard, M. (2013). The challenge of assessing social dimensions of avoided deforestation: Examples from Cambodia. *Environmental Impact Assessment Review*, 38, 64-72.
- Pasgaard, M. and Chea, L. (2013). Double inequity? The social dimensions of deforestation and forest protection in local communities in Northern Cambodia. *Austrian Journal of South-East Asian Studies*, 6(2), 330-355.
- Pattberg, P. (2005). The institutionalization of private governance: how business and nonprofit organizations agree on transnational rules. *Governance: An international journal of policy, administration and institutions*, 18: 589–610.
- Pearce, D.W. (2000). Save the Planet: Sell Carbon. *World Economics*, 1(3), 61-79.
- PECC (2014). Programa Especial de Cambio Climático 2014 - 2018 (PECC). DOF Lunes 28 de abril de 2014.
- Persha, L., Agrawal, A. and Chhatre, A. (2011). Social and ecological synergy: local rulemaking, forest livelihoods, and biodiversity conservation. *Science*, 331: 1606-1608.
- Persson, U.M., Nordén, A., Alpizar, F. (2012). Realizing REDD+: what role for Payments for Environmental Services? Focali Brief: 02.
- Peskett, L. (2011). Benefit-sharing in REDD+: exploring the implications for poor and vulnerable people. World Bank and REDD-net.
- Peskett, L. and Brodnig, G. (2011). Carbon rights in REDD+: exploring the implications for poor and vulnerable people. World Bank and REDD-net.
- Peskett, L., Brown, J. and Schreckenberg, K., (2010). Carbon offsets for forestry and bioenergy: researching opportunities for poor rural communities. ODI Research Report.
- Peskett, L., Huberman, D., Bowen-Jones, E., Edwards, G. and Brown, J. (2008). Making REDD work for the poor. Prepared on behalf of the Poverty Environment Partnership. London: ODI.
- Peskett, L., Luttrell, C., and Iwata, M. (2007). Can standards for voluntary carbon offsets ensure development benefits? ODI forestry briefing 14.
- Peskett, L. and Todd, K. (2013). Policy Brief. (Vol. 3). Geneva: UN-REDD. 2013. Putting REDD+ Safeguards and Safeguard Information Systems into Practice.
- Peskett, L., Vickers, B. and Graham, K. (2011). Equity issues in REDD+. Working paper produced for the project: "Safeguarding local equity as global values of ecosystem services rise".
- Peters-Stanley, M., Hamilton, K. and Yin, D. (2012). Leveraging the landscape: state of the forest carbon markets 2012. Ecosystem Marketplace, Washington, DC.
- Peterson St-Laurent, G., Gélinas, N. and Potvin, C. (2013). Diversity of Perceptions on REDD+ Implementation at the Agriculture Frontier in Panama. *International Journal of Forestry Research*, 2013: 657846.
- Pham, T.T., Brockhaus, M., Wong, G., Dung, L.N., Tjajadi, J.S., Loft, L., Luttrell C. and Mvondo, S.A. (2013). Approaches to benefit-sharing: A preliminary comparative analysis of 13 REDD+ countries. Working Paper 108. Center for International Forestry Research (CIFOR), Bogor, Indonesia.

- Pham, T.T., Moeliono, M. and Dung, L.N. (2014) REDD+ policy networks in Vietnam. Infobrief, No.78, Center for International Forestry Research (CIFOR), Bogor, Indonesia. http://www.cifor.org/publications/pdf_files/infobrief/5088-infobrief.pdf
- Pham, T.T., Moeliono, M., Nguyen, T.H., Nguyen, H.T. and Vu, T.H. (2012). The context of REDD+ in Vietnam: Drivers, agents and institutions. Occasional Paper 75. Center for International Forestry Research (CIFOR), Bogor, Indonesia.
- Phelps, J., Webb, E.L. and Agrawal, A. (2010). Does REDD+ threaten to recentralize forest governance? *Science*, 328(5976): 312 - 313.
- Pini, B. and Leach, B. (2011). Transformations of class and gender in the globalized countryside: An introduction. In Pini, B. and Leach, B. (eds). *Transforming Gender and Class in Rural Spaces*. Aldershot: Ashgate. pp. 1-23.
- Platteau, J-P. and Gaspart, F. (2004). *Disciplining Local Leaders in Community-Based Development*, Centre for Research on the Economics of Development (CRED), Department of Economics, Belgium.
- Porter-Bolland, L., Ellis, E.A. and Gholz, H.L. (2007). The Maya landscape at La Montaña region, Campeche, México: drivers of deforestation. *Landscape and Urban Planning*, 82: 198-207.
- Porter-Bolland, L., Ellis, E.A., Guariguata, M.R., Ruiz-Mallén, I., Negrete-Yankelevich, S. and Reyes-García, V. (2012). Community managed forests and forest protected areas: an assessment of their conservation effectiveness across the tropics. *Forest Ecology and Management*, 268: 6-17.
- Porter-Bolland, L., Ruiz-Mallén, I., Camacho-Benavides, C.I. and McCandless, S. (eds.) (2013). *Community Action for Conservation: Mexican Experiences*. New York: Springer, pp. 25-44.
- Poudel, M., Thwaites, R., Race, D. and Dahal, G.R. (2015). Social equity and livelihood implications of REDD+ in rural communities - a case study from Nepal. *International Journal of the Commons*, 9 (1).
- PROIGUALDAD (2013). Programa Nacional para la Igualdad de Oportunidades y no Discriminación contra las Mujeres 2013-2018. (PROIGUALDAD 2013-2018). Diario Oficial de la Federación 30/08/2013.
- PRONATURA (2015). El Zapotal. <http://www.pronatura-ppy.org.mx/seccion.php?id=5>
- Pskowski, M. (2013). Mother Earth is not for sale - love and defend her: Forest Carbon in Chiapas, Mexico. Hampshire College, School of Critical Social Inquiry Amherst, Massachusetts.
- Pulhin, J.M., Inoue, M. and Enters, T. (2007). Three Decades of Community-Based Forest Management in the Philippines: Emerging Lessons for Sustainable and Equitable Forest Management. *International Forestry Review*, 9(4): 865-883.
- Puppim de Oliveira, J., Cadman, T., Maraseni, T., Koli, A., Jadhav, Y.D. and Prabowo, D. (2013). *Governing the Forests: An Institutional Analysis of REDD+ and Community Forest Management in Asia*, United Nations University Institute of Advanced Studies (UNU-IAS) and the International tropical Timber Organization (ITTO), Yokohama. www.ias.unu.edu/resource_centre/Governing_the_forests_e-ver.pdf
- Putz, F.E. and Romero, C. (2014). Futures of Tropical Forests (sensu lato). *Biotropica*, 46(4): 495-505.
- Quan, J., Naess, L.O., Newsham, A., Siteo, A. and Fernandez, M.C. (2014). Carbon Forestry and Climate Compatible Development in Mozambique: A Political Economy Analysis. IDS Working paper No. 448.
- Quesada-Aguilar, A., Blomstrom E. and Jarrah, R. (2013). From research to action, leaf by leaf: getting gender right in the REDD+ Social and Environmental Standards. The Women's Environment and Development Organization (WEDO) and the REDD+ Social and Environmental Standards (SES) Secretariat.
- Rantala, S. and Di Gregorio, M. (2014). Multistakeholder environmental governance in action: REDD+ discourse coalitions in Tanzania. *Ecology and Society*, 19(2): 66.
- REDD monitor (2013). The Warsaw Framework for REDD Plus: The decision on finance. <http://www.redd-monitor.org/2013/11/29/the-warsaw-framework-for-redd-plus-the-decision-on-redd-finance/>
- Reed, M.S. (2008). Stakeholder participation for environmental management: A literature review. *Biological Conservation*, 141: 2417-2431.

- Reyes-Garcia, V., Ruiz-Mallen, I., Porter-Bolland, L., Garcia-Frapolli, E., Ellis, E., Mendez, M.E., Pritchard, D.J. and Sanchez-Gonzalez, M.C. (2013). Local Understandings of Conservation in Southeastern Mexico and Their Implications for Community-Based Conservation as an Alternative Paradigm. *Conservation Biology*, 27(4): 856-865.
- Ribeiro, S. (2011). REDD: nombres para el despojo. La Jornada, 21 de Mayo 2011.
- Ribot, J. (2002). Democratic Decentralization of Natural Resources: Institutionalizing Popular Participation. World Resources Institute, Washington, DC.
- Ribot, J., Agrawal, A. and Larson, A. (2006). Recentralizing while decentralizing: how national governments reappropriate forest resources. *World Development* 34(11): 1864-1886.
- Ribot, J. and Larson A.M. (2012). Reducing REDD risks: affirmative policy on an uneven playing field. *International Journal of Commons*, 6(2): 233-254.
- Roberge, A., Bouthillier, L. and Mercier, J. (2011). The Gap Between Theory and Reality of Governance: The Case of Forest Certification in Quebec (Canada), *Society and Natural Resources: An International Journal*, 24(7): 656-671.
- Robles, F.F. and Peskett, L. (2011). Carbon Rights in REDD+: The Case of Mexico. REDD net.
- Robson, C. (2002). *Real World Research*, Blackwell Publishing, Oxford.
- Rocheleau, D., Thomas-Slayter, B. and Wangari, E. (1996). Gender and environment: a feminist political ecology perspective. In Rocheleau, D., Thomas-Slayter, B. and Wangari, E. (eds.), *Feminist Political Ecology: Global Issues and Local Experiences*, Routledge, New York, pp. 3-26.
- Rosenau, J.N. (1995). Governance in the Twenty-First Century. *Global Governance*, 1(1): 13-43.
- Rosenschöld, J.M., Rozema, J.G. and Frye-Levine, L.A. (2014). Institutional inertia and climate change: a review of the new institutionalist literature. *Climate Change*, 5(5): 639-648.
- Rowe, G. and Frewer, L.J. (2000). Public participation methods: A framework for evaluation. *Science, Technology, and Human Values*, 25(1): 3-29.
- Roy Chowdhury, R. (2006). Landscape change in the Calakmul Biosphere Reserve, México: Modeling the driving forces of smallholder deforestation in land parcels. *Applied Geography*, 26: 129–152.
- Rudel, T.K., Coomes, O.T., Moran, E., Achard, F., Angelsen, A., Xu, J. and Lambin, E. (2005). Forest transitions: towards a global understanding of land use change. *Global Environmental Change Part A*, 15(1): 23-31.
- Saito-Jensen, M., Sikor, T., Kurniawan, Y., Eilenberg, M., Setyawan, E.P. and Kustini, S.J. (2015). Policy Options for Effective REDD+ Implementation in Indonesia: the Significance of Forest Tenure Reform. *International Forestry Review*, 17(1): 86-97.
- Samii, C., Lisiecki, M., Kulkarni, P., Paler, L. and Chavis, L. (2014). Effects of Payment for Environmental Services and Decentralized Forest Management on Deforestation and Poverty in Low- and Middle-Income Countries Systematic Review Protocol. CEE 13-015a. Collaboration for Environmental Evidence. http://www.environmentalevidence.org/wp-content/uploads/2015/01/Samii_DFM_Review-formatted-for-CEE.pdf
- Sandker, M., Crete, P., Lee, D. and Sanz-Sanchez, M. (2015). FAO Technical considerations for Forest Reference Emission Level and/or Forest Reference Level construction for REDD+ under the UNFCCC.
- Sarukhán, J. and Larson, J. (2001). *When commons become less tragic: Land tenure, social organisation and fair trade in Mexico*. In Burger, J. *Protecting the Commons: A Framework for Resource Management in the Americas*. Washington, D.C.: Island Press, 2001, pp. 45-71.
- Sasaki, N. and Putz, F.E. (2009). Critical need for new definitions of “forest” and “forest degradation” in global climate change agreements. *Conservation Letters*, 2 (5): 226-232.
- Saward, M. (2003). Enacting democracy. *Political Studies*, 51 (1): 161–79.
- SCBD (2008). The Convention on Biological Diversity. Year in Review 2008. Montreal.
- Schlager, E. and Ostrom, E. (1992). Property-Rights Regimes and Natural Resources: A Conceptual Analysis. *Land Economics*, 68: 249-262.

- Schroeder, H. (2010). Agency in international climate negotiations: the case of indigenous peoples and avoided deforestation. *International Environmental Agreements*, 10: 317–332.
- Segal, I. and Whinston, M.D. (2013). Property rights. In Gibbons, R. and Roberts, J. (eds.). *The handbook of organizational economics*. Princeton University Press, Princeton, New Jersey, USA, pp.100-158.
- Sen, A. (2009). *The idea of justice*. Penguin, London, UK.
- Setyowati, A. (2012). Ensuring that women benefit from REDD+. *Unasylva*, 239, 63, 2012/1.
- Sikor, T. (ed.) (2013). *The Justices and Injustices of Ecosystem Services*. Abingdon, UK, Routledge.
- Sills, E.O., Madeira, E.M., Sunderlin, W.D. and Wertz-Kanounnikoff, S. (2009). The evolving landscape of REDD+ projects. In Angelsen, A. (Ed.), *Realising REDD+: National strategy and policy options*. Center for International Forestry Research (CIFOR), Bogor, Indonesia, pp. 265-279.
- Skutsch, M. (2013). Slicing the REDD+ pie: controversies around the distribution of benefits. Review.
- Skutsch, M., Borrego, A., Morales-Barquero, L., Paneque-Gálvez, J., Salinas-Melgoza, M., Ramirez, M.I., Perez-Salicipup, D., Benet, D., Monroy, S. and Gao, Y. (2015). Opportunities, constraints and perceptions of rural communities regarding their potential to contribute to forest landscape transitions under REDD+: case studies from Mexico. *International Forestry Review*, 17(S1): 65-84.
- Skutsch, M., McCall, M.K., Karky, B., Zahabu, E. and Peters-Guarin, G. (2009). Case studies on measuring and assessing forest degradation: community measurement of carbon stock change for REDD. *FAO Forest Resources Assessment Working Paper 156*. Rome, FAO.
- Skutsch, M., Vickers, B., Georgiadou, Y. and McCall, M. (2011). Alternative models for carbon payments to communities under REDD+: A comparison using the Polis model of actor inducements. *Environmental science and policy*, 14: 140 - 151.
- Smith, P., Bustamante, M., Ahammad, H., Clark, H., Dong, H., Elsiddig, E.A., Haberl, H., Harper, R., House, J., Jafari, M., Maser, O., Mbow, C., Ravindranath, N. H., Rice, C. W., Robledo Abad, C., Romanovskaya, A., Sperling, F. and Tubiello, F. (2014). Agriculture, Forestry and Other Land Use (AFOLU). In: *Climate Change 2014: Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*. In Edenhofer, O., Pichs-Madruga, R., Sokona, Y., Farahani, E., Kadner, S., Seyboth, K., Adler, A., Baum, I., Brunner, S., Eickemeier, P., Kriemann, B., Savolainen, J., Schlömer, S., von Stechow, C., Zwickel, T. and Minx, J.C. (eds.). Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.
- Somorin, O.A., Visseren-Hamakers, I.J., Arts, B., Sonwa, D.J. and Tiani, A-M. (2014). REDD+ policy strategy in Cameroon: actors, institutions and governance. *Environmental Science and Policy* 35: 87-97.
- Speer, J. (2012). Participatory governance reform: A good strategy for increasing government responsiveness and improving public services? *World Development*, 40(12): 2379–2398.
- Steffek, J. (2003). The legitimation of international governance: a discourse approach. *European Journal of International Relations*, 9 (2), 249–275.
- Steffek, J. and Hahn, K. (2010). *Evaluating transnational NGOs: Legitimacy, accountability, representation*. Houndmills: Palgrave.
- Steinman, A., Havens, K. and Hornung, L. (2002). The managed recession of Lake Okeechobee, Florida: integrating science and natural resource management. *Conservation Ecology*, 6(2): 17.
- Suiseeya, K.R.M. (2015). A Retreat from Justice in Global Forest Governance: REDD+ and the ‘Do No Harm’ Principle. Presented at the 3rd Annual UCSB Environmental Politics Conference UC Santa Barbara June 5, 2015.
- Sun, Y., Mwangi, E. and Meinzen-Dick, R. (2011). Is gender an important factor influencing user groups’ property rights and forestry governance? Empirical analysis from East Africa and Latin America. *International Forestry Review*, 13(2): 205-219.
- Sunderlin, W.D., Dewi, S., Puntodewo, A., Müller, D., Angelsen, A., Epprecht, M. (2008). Why forests are important for global poverty alleviation: A spatial explanation. *Ecology and Society*, 13(2): 24.
- Sunderlin, W.D., Ekaputri, A.D., Sills, E.O., Duchelle, A.E., Kweka, D., Diprose, R., Doggart, N., Ball, S., Lima, R., Enright, A, et al. (2014a). The challenge of establishing REDD+ on the ground: Insights

from 23 subnational initiatives in six countries. Occasional Paper 104, Center for International Forestry Research (CIFOR), Bogor, Indonesia:

Sunderlin, W.D., Hatcher, J., Little, M. (2008). From Exclusion to Ownership. Rights and Resources Initiative, Washington, DC.

Sunderlin W.D., Larson, A., Duchelle, A.E., Resosudarmo, I.A.P., Huynh, T.B., Awono, A. and Dokken, T. (2014b). How are REDD+ proponents addressing tenure problems? Evidence from Brazil, Cameroon, Tanzania, Indonesia, and Vietnam. *World Development*, 55: 37-52.

Sunderlin, W.D. and Sills, E.O. (2012). REDD+ Projects as a Hybrid of Old and New Forest Conservation Approaches. In Angelsen, A., Brockhaus, M., Sunderlin, W.D. and Verchot, L.V. (eds.). *Analysing REDD+: Challenges and choices*. Center for International Forestry Research (CIFOR), Bogor, Indonesia.

Suzuki, R. (2011). REDD-Net Bulletin for Asia-Pacific. Carbon rights and REDD+.

Symons, J. (2011). The legitimization of international organisations: examining the identity of the communities that grant legitimacy. *Review of International Studies*, 37: 2557-2583.

Szarka, J. (2004). Wind power, discourse coalitions and climate change: Breaking the stalemate? *European Environment*, 14(6): 317–330.

Tamm Hallström, K. and Boström, M. (2010). Transnational MultiStakeholder Standardization. Organizing Fragile Non-State Authority. Cheltenham, UK and Northampton, MA, USA: Edward Elgar.

Takacs, D. (2009). Forest Carbon: Law and Property Rights. Conservation International, Arlington VA, U.S.

Thompson, M.C., Baruah, M. and Carr, E.R. (2011). Seeing REDD+ as a Project of Environmental Governance. *Environmental Science and Policy*, 14: 100–110.

Thompson, M. and Rayner, S. (1998). Cultural discourses. In Rayner S. and Malone E.L., *Human Choices and Climate Change*, Battle Press: Columbus. http://tokyo2013.earthsystemgovernance.org/wp-content/uploads/2013/01/0353-NIELSEN_Tobias.pdf

The Nature Conservancy (2015). In Greenpeace (2015). Denuncian destrucción acelerada de la última selva Mexicana. http://m.greenpeace.org/mexico/es/high/Prensa1/2015/Agosto/DENUNCIAN-DESTRUCCION-ACELERADA-DE-LA-ULTIMA-SELVA-MEXICANA---

Tyler, T.R. (2006). Psychological perspectives on legitimacy and legitimation. *Annual Review of Psychology*, 57: 375–400.

Tyrrell, M. and Clark, D.A. (2014). What happened to climate change? CITES and the reconfiguration of polar bear conservation discourse. *Global Environmental Change*, 24: 363–372.

United Nations (2000). The Millennium Development Goals. UN Millennium Declaration.

United Nations (2012). The future we want. Rio+20 summit. Rio de Janeiro, Brazil. http://www.un.org/disabilities/documents/rio20_outcome_document_complete.pdf

United Nations Collaborative Programme on REDD+ (2011). UN-REDD Project Activity Monitoring Report in Central Sulawesi, the Central Sulawesi REDD+ Monitoring Working Group.

United Nations Collaborative Programme on REDD+ (2012). Mexico Adopts Landmark REDD+ Legal Reforms. By: Robles F.F., Akerberg, A.A. and Stephens, C. http://www.un-redd.org/Newsletter28/Mexico_REDD_Legal_Reforms/tabid/104165/Default.aspx

United Nations Collaborative Programme on REDD+ (2015). UN-REDD Programme Regions and Partner Countries. http://www.un-redd.org/Partner_Countries/tabid/102663/Default.aspx

United Nations Conference on Environment and Development (1992). Agenda 21 of the Rio Declaration. Rio de Janeiro, Brazil. <https://sustainabledevelopment.un.org/content/documents/Agenda21.pdf>

United Nations Framework Convention on Climate Change (1992). The Rio Declaration. <https://unfccc.int/resource/docs/convkp/conveng.pdf>

United Nations Framework Convention on Climate Change (1995). Document FCCC/CP/1995/7/Add.1, Report of the Conference of the Parties on its first session, held at Berlin from 28 March to 7 April 1995. <https://unfccc.int/resource/docs/cop1/07a01.pdf>

- United Nations Framework Convention on Climate Change (1997). The Kyoto Protocol. <http://unfccc.int/resource/docs/convkp/kpeng.pdf>
- United Nations Framework Convention on Climate Change (2001). The Marrakesh Accords. <http://unfccc.int/resource/docs/cop7/13a01.pdf#page=54>
- United Nations Framework Convention on Climate Change (2007). Document FCCC/SBSTA/2007/3, Report on the second workshop on reducing emissions from deforestation in developing countries. <http://unfccc.int/resource/docs/2007/sbsta/eng/03.pdf>
- United Nations Framework Convention on Climate Change (2010a). The Cancun Agreements. <http://unfccc.int/resource/docs/2010/cop16/eng/07a01.pdf>
- United Nations Framework Convention on Climate Change (2010b). Document FCCC/CP/2010/7/Add.1, Report of the Conference of the Parties fifteenth session, held in Copenhagen from 7 to 19 December 2009. <http://unfccc.int/resource/docs/2010/cop16/eng/07a01.pdf>
- United Nations Framework Convention on Climate Change (2011). Document FCCC/CP/2011/9/Add.2, Decision 12/CP.17, Report of the Conference of the Parties on its seventeenth session, held in Durban from 28 November to 11 December 2011. <http://unfccc.int/resource/docs/2011/cop17/eng/09a02.pdf>
- United Nations Framework Convention on Climate Change (2012). Document FCCC/CP/2013/10/Add.1, Report of the Conference of the Parties on its nineteenth session, held in Warsaw from 11 to 23 November 2013. <http://unfccc.int/resource/docs/2013/cop19/eng/10a01.pdf#page=31>
- United Nations Environment Programme (2015). CDM projects by type. <http://www.cdmpipeline.org/cdm-projects-type.htm#2>
- United Nations Human Settlements Programme (2005). Law, Land Tenure and Gender Review: Latin America (Mexico). UN.
- Usher, M. (2013). Defending and transcending local identity through environmental discourse. *Environmental Politics*, 22(5): 811-831.
- U'yool'che (2011). Plan Vivo Project Design Document (PDD), Name of the project: Much Kanan K'aax.
- Vallejo, N. and Hauselmann, P. (2004). Governance and Multistakeholder Processes, IISD.
- van den Hove, S. (2000), Participatory approaches to environmental policy-making: the European Commission Climate Policy Process as a case study. *Ecological Economics*, 33 (3), 457-472.
- van der Hoff, R., Rajão, R., Leroy, P. and Boezeman, D. (2015). The parallel materialization of REDD+ implementation discourses in Brazil. *Forest Policy and Economics*, 55: 37-45.
- van der Werf, G.R., Morton, D.C., DeFries, R.S., Olivier, J.G.J., Kasibhatla P.S., Jackson, R.B., Collatz, G.J. and Randerson, J.T. (2009). CO₂ emissions from forest loss. *Nature Geoscience*, 2: 737-738.
- Vatn, A. (2011). Environmental Governance - A Conceptualization. In Kjosavik, D. and P. Vedeld (eds.): *The Political Economy of Environment and Development in a Globalized World. Exploring the Frontiers*. Trondheim, Tapir Academic Press, pp. 131-152.
- Vatn, A. and Angelsen, A. (2009). Options for a national REDD+ architecture. In Angelsen, A., Bockhaus M., Kanninen M., Sills, E., Sunderlin W.D., Wertz-Kanounnikoff S. (eds.). *Realising REDD+. National strategy and policy options*. Center for International Forestry Research (CIFOR), Bogor, Indonesia, pp. 57-74.
- Vatn, A. and Vedeld, P. (2011). Getting Ready! A Study of National Governance Structures for REDD+. Noragric Report No. 59, Department of International Environment and Development Studies, Norwegian University of Life Sciences, UMB.
- Vatn, A. and Vedeld, P. (2013). National governance structures for REDD+. *Global Environmental Change*, 23: 422-43.
- Veierland, K. (2011). Inclusive REDD+ in Indonesia? A study of the participation of indigenous people in the making of the national REDD+ strategy in Indonesia. University of Oslo.
- Vignola, R., Guerra, L., Trevejo, L. and Aymerich, J.P. (2012). REDD+ Governance across scales in Latin America. Perceptions of the opportunities and challenges from the Model Forest platform. REDD-Net Publications, ODI, London.

- Walzer, M. (1983). *Spheres of Justice: a defense of pluralism and equality*. New York: Basic Books.
- Waldman, R.L. (2008). The Experience of Porto Alegre's Participatory Budget. In Bosselmann, K., Engel, R. and Taylor, P. (2008). *Governance for Sustainability - Issues, Challenges, Successes*. IUCN, Gland, Switzerland, pp. 185-190.
- Warner, J. F. (2006). More Sustainable Participation? Multi-Stakeholder Platforms for Integrated Catchment Management. *International Journal of Water Resources Development*, 22(1): 15-35.
- Warner, J. (2007). The Beauty of the Beast: Multi-stakeholder participation for integrated catchment management, in Warner, J (ed.), *Multi-stakeholder platforms for integrated water management*. Hampshire: Ashgate, pp. 1-20.
- Watson, R.T., Zinyowera, M.C., Moss, R.H. (eds.) (1997). *The Regional Impacts of Climate Change: An Assessment of Vulnerability*. Cambridge University Press, Cambridge.
- Watts, R. (2012). Exploring Multi-Level Governance for Low Carbon Climate Resilient Development. Case study 02. https://www.ids.ac.uk/files/dmfile/LHcasestudy02_multilevelgov.pdf
- Wells, M., Guggenheim, S., Khan, A., Wardojo, W. and Jepson, P. (1998). *Investing in Biodiversity: A Review of Indonesia's Integrated Conservation and Development Projects*. World Bank, Washington, DC.
- Wells, M.P. (2003). Protected area management in the tropics: can we learn from experience? *Journal of Sustainable Forestry*, 17: 67-79.
- West, P., Igoe, J. and Brockington, D. (2006). Parks and peoples: the social impact of protected areas. *Annual Review of Anthropology*, 35: 251-77.
- White, A. and Martin, A. (2002). *Who Owns the World's Forests? Forest Tenure and Public Forests in Transition*. Washington DC: Forest Trends and Center for International Environmental Law.
- Wilkinson, S. (2004). Focus group research. In D. Silverman (ed.), *Qualitative research: Theory, method, and practice* (pp. 177–199). Thousand Oaks, CA: Sage.
- Williams, L.G. (2013). Putting the pieces together for good governance of REDD+: an analysis of 32 REDD+ country readiness proposals. World Resources Institute (WRI), Washington DC, USA.
- Williams, L.G. and Davis, C. (2012). Getting Ready with Forest Governance: A Review of the Forest Carbon Partnership Facility Readiness preparation Proposal and the UN-REDD National Programme Documents, version 1.9', World Resource Institute (WRI) Working Paper, Washington DC.
- Wollenberg, E. and Springate-Baginski, O. (2009). Incentives + How Can REDD Improve Well-being in Forest Communities? InfoBrief No. 21., Center for International Forestry Research (CIFOR), Bogor, Indonesia.
- Wood, L. (2008). *Community-Based Natural Resource Management: Case Studies from Community Forest Management Projects in Ghana, Mexico and United States of America*. NRES 525. International Resource Management.
- World Bank, (2014). *State and Trends of Carbon Pricing 2014*. Washington, DC: World Bank.
- World Bank (2015). Data. Mexico. <http://data.worldbank.org/country/mexico>
- World Resources Institute (2010). The Bottom Line on Offsets, Issue 17. http://www.wri.org/sites/default/files/pdf/bottom_line_offsets.pdf
- Wunder, S. (2005). Payments for Environmental Services: Some Nuts and Bolts. Occasional Paper No.42, Center for International Forestry Research (CIFOR), Bogor, Indonesia
- Wynberg, R. and Hauck, M. (2014). People, power, and the coast: a conceptual framework for understanding and implementing benefit sharing. *Ecology and Society*, 19(1): 27.
- Yang, L.A., Pham, T.T., Hang, D., Wong, G., Dung, L.N., Tjajadi, J.S. and Loft, L. (2015). Lessons from the perceptions of equity and risks in payments for forest environmental services (PFES) fund distribution. A case study of Dien Bien and Son La provinces in Vietnam. Brief No.36, Center for International Forestry Research (CIFOR), Bogor, Indonesia.
- Young, I. M. (1990). *Justice and the Politics of Difference*. Princeton: Princeton University Press.
- Young, I.M. (2000). *Inclusion and Democracy*. Oxford University Press, Oxford.

- Young, O.R. (2002). *The Institutional Dimensions of Environmental Change: Fit, Interplay, and Scale*. Cambridge, MA: MIT Press
- Yosie, T. and Herbst, T. (1998). Using stakeholder processes in environmental decision making: an evaluation of lessons learned, key issues, and future challenges. Ruder Finn Washington, Washington, DC.
- Zackey, J. (2006). The deforestation discourse of Southwest China: Issues of state legitimacy and strategies of blame. *Asian Geographer*, 25 (1-2): 5-19.
- Zannakis, M. (2009). *Climate Policy as a Window of Opportunity Sweden and Global Climate Change*. PhD Thesis, Department of Political Science, University of Gothenburg.
- Zelli, F., Erler, D., Frank, S., Hein, J.I., Hotz, H. and Cruz-Melgarejo, A.M.S. (2014). Reducing Emissions from Deforestation and Forest Degradation (REDD) in Peru: A Challenge to Social Inclusion and Multi-level Governance. German Development Institute, Bonn.
- Zhao, S., Peng, C., Jiang, D.T., Lei, X. and Zhou, X. (2006). Land use change in Asia and ecological consequences. *Ecological Research*, 21(6): 890-896.
- Zwarteveen, M. and Meinzen-Dick, R. (2001). Gender and property rights in the commons: Examples of water rights in South Asia. *Agriculture and Human Values*, 18: 11–25.
- Zwick, S. (2015). It's Official! REDD+ Is Now Ready For Paris. Ecosystem Marketplace. The AntropoZine. <http://anthropozine.com/ecosystem-marketplace/breaking-redd-contact-group-begins-final-meeting-to-review-draft-text/>

Appendix

A. Main sources of funding for REDD+ readiness in Mexico

Organisation	Amount pledged (US\$ million)		Amount delivered (US\$ million)		Activities supported
	Donation	Loan	Donation	Loan	
Programme, fund or recipient					
CONAFOR					
Public budget, the Mexico's Forest Fund	333	/	2.36	/	Different type of activities; The National Forestry Programme (PRONAFOR)
World Bank					
Special Investment Loan (SIL) and Development Policy Loan (DPL)	/	350	/	31	Institutional and technical capacity building across jurisdictional levels
Forest Investment Programme (FIP) - Climate Investment Funds (CIF)	25.7	16.3	0	0	Special programs in REDD+ early action states
FCPF-Readiness Fund	3.8	/	0	/	ENAREDD+ design and REDD+ safeguards
FCPF-Carbon fund	60	/	0	/	Compensation of results from REDD+ pilots
The Inter-American Development Bank Group					
Forest Investment Programme (FIP) - Climate Investment Funds (CIF)	5	10	0	0	Financiera rural and 38 community forest enterprises in the early action states
CIF-FIP and Multilateral Investment Fund (MIF)	4.2	1.8	0	0	Mexican Fund for the Conservation of Nature (FMCN) y FINDECA support for CFM enterprises
The Global Environment Facility					
CONAFOR and IFAD	5.61	/	5.61	/	MRV system and sustainable forest management project in Campeche, Oaxaca, Chiapas
PNUMA and GLOBE Mexico	1.10	/	1.10	/	Legal reforms for REDD+ through the GLOBE

					Legislator Forest Initiative
USAID					
Mexico's REDD+ project, M-REDD+ Alliance	29.1	/	0.73	/	Pilot projects, awareness raising and promotion of participation of civil society
AMBIO	0.19	/	0.19	/	Regional REDD+ pilot projects in the El Ocote Biosphere Reserve, Chiapas
NORAD					
Reinforcing REDD+ and South-South Cooperation	15.3	/	7.5	/	Establishment of reference levels and development of MRV
The French Development Agency					
AFD/GEF to UNAM	0.3	/	0.3	/	JIRA inter-municipal associations
The Spanish Agency for International Development Cooperation					
50% by CONAFOR	0.05	/	0.05	/	JIRA inter-municipal associations and its replication in the Yucatan Peninsula
The European Union					
Latin American Investment Facility	2.8	/	0.278	/	CONABIO and CONAFOR
Oxfam	RITA	0.25	/	0.15	REDD+ workshops with local communities
The Christensen Fund		0.25	/	0.25	
AECID		0.10	/	0.10	
Climate Works					
Interchurch Organisation for Development Cooperation support to the Mesoamerican Alliance for Peoples and Forests	0.04	/	0.04	/	Organisation of the National Community Conference on Forests and Climate Change, workshops on REDD+
CFH Foundation					
Red MOCAF	0.025	/	0.025	/	Organisation of the National Community Conference on Forests and Climate Change, REDD+ workshops
Conservation International					

AMBIO	0.009	/	0.009	/	Elaboration of guide for community forest monitoring, elaboration of REDD+ feasibility study for Chiapas
The Moor Foundation					
Mexican Fund for the Conservation of Nature (FMCN)	2	/	0	/	
Mexican Fund for the Conservation of Nature					
AMBIO	0.0025	/	0.0025	/	Community REDD+ pilot project in the municipality of Marqués De Comillas, Chiapas
The Ford Foundation					
CCMSS	1.35	/	1.35	/	Development of the REDD+ pilots
CEMDA	0.10	/	0.10	/	Promotion of REDD+ across the civil society sector
TOTAL	490.28	378.1	20.14	31	
	868.38 million		51.14 million		

B. Key characteristics of local case study sites: La Mancolona and Xmaben

Community	La Mancolona	Xmaben
Characteristics		
Year of village foundation	1989	1861
Land tenure type	Since 1992 – community of private landowners of 50 ha each (60 owners, 20 women)	Since 1929 – <i>ejido</i> (216 <i>ejidatarios</i> , 11 female)
Land area	2,700 ha	36,808 ha
Location	State of Campeche, Municipality of Calakmul	State of Campeche, Municipality Hopelchen, region of La Montaña within Los Chenes
Distance from state and municipality capital	40 km from Xpujil; Reached by State road Hopelchen-Xpujil, and local road Nueva Vida-Flores Magon	160 km east of Campeche and 96 km from Hopelchen; Reached by State road Hopelchen-Xpujil
Number of inhabitants	485	1,130
Number of households	90	251
Location in relation to protected area and laws and regulation that apply	Buffer zone of the Calakmul Biosphere Reserve Need special licenses and permits to conduct productive activities including mechanised agriculture	Transition zone of the Calakmul Biosphere Reserve Mechanised agriculture allowed
Main vegetation types and height above sea level	Various evergreen and semi-evergreen rainforests of different ages; savannahs, and aquatic vegetation 195 masl	Various evergreen and semi-evergreen rainforests of different ages; savannahs, and aquatic vegetation 125 masl
Level of marginalisation	High (0.839)	Medium (0.156)
Urban infrastructure	Electricity, a rainwater collection tank, a kindergarten, an elementary school, a <i>telesecundaria</i> , a health centre, a village house, and a roofed basketball field	Water and electricity supply system, a kindergarten, primary and secondary schools, one ambulance vehicle, a health centre, a village house, and a roofed sport field
Origen and languages	Mayas migrants from Chiapas Tzeltal and Spanish (few families Tzotzil)	Yucatec Mayan 96,1% Maya and Spanish, a few elderly only Maya
Main production activity	<i>Milpa</i> for subsistence, allspice for sale, beekeeping, and only few livestock production	<i>Milpa</i> for subsistence, mechanised agriculture, beekeeping, and livestock production

Other activities	Embroidery, school kitchen, scented candles and hammocks (women), and off-farm work (young men)	Embroidery, hammocks, and stamped wax, jam, plant medicines and cosmetics (women), off-farm work and sale of gasoline (young men)
Local organizations and groups	<ul style="list-style-type: none"> • Organic pepper producers group from Calakmul, member of a regional marketing organisation <i>Xannich</i>, Xpujil • Beekeepers group <i>Nich Pimienta</i> members of <i>Lol Kaax</i> from Xmaben • Ethno-eco-touristic centre <i>La raiz de future</i> • Tree nursery group • <i>Sac Ajel Ty Maitel</i> the agricultural production cooperative • CRAX Xpujil livestock association • Consejo Regional Indígena Popular de Xpujil (CRIPX) 	<ul style="list-style-type: none"> • Regional Social and Solidarity Society <i>Lol k´ax</i> (beekeepers) • Women association for production and conservation (marmalade, natural medicines and cosmetics) <i>La Asociación de Mujeres Campesinas para la Producción y la Conservación</i>
Government and civil society support -agriculture and social development programmes-	<ul style="list-style-type: none"> • PROCAMPO starting year 1993-1994 • PROGAN 2008- present (livestock and beekeeping) • PROCEDE 2000- formalization of land ownership • Temporary employment program (PET) (landowners and <i>pobladores</i>) 	<ul style="list-style-type: none"> • PROCAMPO 2009-2012 renewed with the same area • PROGAN 2008-2011 (mainly beekeepers) • The Educampo loan obtained through NGO <i>Fundacion Mexicana para el Desarrollo Rural A.C.</i> • Temporary employment program (PET) (<i>ejidatarios</i>)
Government and civil society support -environmental protection-	2008-(2013) - CONAFOR reforestation programme (cedar and mahogany), 2009- CONAFOR tree nursery 2010-(2015)- PSAH (1,631 ha)	PSAH 2004-2009 (3,451 ha) PSAH 2011-(2016) (7,055 ha) Community-based Forestry Development Project in Southern States DECOFOS 2013-(2016)- agroforestry
Land area division	82.9 % forest (PES), 8.75 % fallows, 4.3 % agriculture, 2.57 % pasture, and 0% area for possible timber extraction	78.6% forest (timber extraction and PES), 8.9% mechanized agriculture by Mennonites , 5.7 % fallows, 3.7 % agriculture, and 2.5% pasture
Land management plan	No	Yes, from 2006, but not consensuated
Internal regulation	No	Yes, from 2004

Deforestation rate and main causes of deforestation	0.51%/yr (1994-2000) Initial opening areas for <i>milpa</i> and PROCAMPO, construction of road to Nueva Vida, construction of houses, hurricanes and droughts 0.81% /yr (2000-2010) Opening new lots to claim property, hurricanes and droughts, livestock production	0.52%/yr (1988-2000) Increase in agricultural activities and unregulated exploitation of forests; 0.88%/yr (2000-2010) Programs promoting productive activities, hurricanes and droughts, sale of 5,000 ha to the Mennonites in 2002, and increase in agricultural areas, due to the construction of access road
Inclusion in REDD+ process	Local community representatives participated in both Yucatan Peninsula REDD+ strategy evaluation organised by ECOSUR and validation process and CTC-Campeche sessions	<i>Ejido</i> was invited but not participated in Yucatan Peninsula REDD+ strategy evaluation and validation process organised by ECOSUR and CTC-Campeche sessions

C. List of research activities

I: Interviews and informal comments; M: Meetings; F: Focus group; E: E-Mail comments

Code	Activity	Organisation / Community	Position	Date	Location
I01	Informal conversation	Felipe Carrillo Puerto (FCP)	<i>Ejidatario</i>	08/06/11	FCP
I02	Informal conversation	Felipe Carrillo Puerto	Members of the eco-touristic group	12/06/11	FCP
I03	Semi-structured interview	Felipe Carrillo Puerto	<i>Ejido</i> president	15/06/11	FCP
M01	Meeting attendance	COPLADE	Participants from different sectors	17/06/11	Chetumal
I04	Informal conversation	U'yool'che A.C.	President	17/06/11	FCP
I05	Semi-structured interview	Felipe Carrillo Puerto	<i>Ejidatario</i>	23/06/11	FCP
I06	Semi-structured interview	U'yool'che A.C.	Technical coordinator	27/06/11	FCP
M02	Meeting attendance	COPLADE	Participants from different sectors	28/06/11	FCP
I07	Semi-structured interview	SEMA	Director	28/06/11	FCP
I08	Semi-structured interview	U'yool'che A.C.	Technical coordinator	29/06/11	FCP
I09	Semi-structured interview	U'yool'che A.C.	President	30/06/11	FCP
I10	Semi-structured interview	INFOQROO	Officer	30/06/11	Chetumal
I11	Semi-structured interview	OEPFZM	Advisor	01/07/11	FCP
I12	Semi-structured interview	OEPFZM	Technical director	08/07/11	FCP
M03	Workshop attendance	U'yool'che workshop with <i>ejidatarios</i> on REDD+	Representatives of communities from the state of Campeche and the <i>ejido</i> FCP	09/07/11 10/07/11	FCP
M04	Workshop attendance	TNC workshop on sources of deforestation	Variety of participants form different sectors	10/07/11 11/07/11	Merida
M05	Workshop attendance	U'yool'che workshop on the <i>ejido</i> 's protected area	Members of the <i>ejido</i> FCP	12/07/11	FCP
I13	Semi-structured interview	TNC	Officer for the Yucatan Peninsula region	13/07/11	Chetumal
I14	Semi-structured interview	INE	Director of Environmental Economics	18/07/11	Mexico DF

			Policy and Research		
M06	Meeting attendance	UNAM roundtable on LEGEEPA	Participants from various organisations	20/07/11	Mexico DF
I15	Semi-structured interview	CONAFOR	Director of trade promotion	20/07/11	Mexico DF
I16	Informal conversation	Public Policies at Community and Biodiversity (COBI)	Director	21/07/11	Mexico DF
I17	Semi-structured interview	CONAFOR	Head of international finance and development unit	21/07/11	Mexico DF
I18	Semi-structured interview	WWF	Director of Climate Change Program	25/07/11	Mexico DF
I19	Semi-structured interview	SAGARPA	Assistant manager	27/07/11	Mexico DF
I20	Semi-structured interview	CCMSS	Biodiversity conservation officer	28/07/11	Mexico DF
I21	Semi-structured interview	UNAM-CIGA	Senior investigator	01/08/11	Morelia
I22	Semi-structured interview	CIECO-UNAM	Senior investigator	02/08/11	Morelia
I23	Semi-structured interview	CIECO-UNAM	Academic technician	02/08/11	Morelia
I24	Semi-structured interview	ECOSUR	Senior investigator	04/08/11	Villahermosa
M07	Workshop attendance	CCMSS workshop on REDD+	SEMA, SESISA, Ya'axsot' yook'olkaab, U'yool'che A.C., CCMSS	09/08/11	Chetumal
M08	Workshop attendance	Workshop on REDD+	Members of Aliance Sian Ka'an-Calakmul	16/08/11	Bacalar
I25	Semi-structured interview	La Mancolona	Landowner (women)	02/10/13	La Mancolona
I26	Key Semi-structured interview	La Mancolona	Representative of nursery and ethno-eco-tourism centre	02/10/13	La Mancolona
I27	Key Semi-structured interview	La Mancolona	Representative for PSAH programme	03/10/13	La Mancolona
I28	Key Semi-structured interview	La Mancolona	Representative of beekeepers group, touristic guide at ethno-eco-tourism centre	03/10/13	La Mancolona
I29	Key Semi-structured interview	La Mancolona	Community president and secretary	03/10/13	La Mancolona

I30	Key Semi-structured interview	La Mancolona	Representative of vegetables and compost producing groups	03/10/13	La Mancolona
I31	Key Semi-structured interview	La Mancolona	Representative of group of pepper producers	05/10/13	La Mancolona
I32	Semi-structured interview	La Mancolona	Landowner	06/10/13	La Mancolona
I33	Semi-structured interview	La Mancolona	Landowner	06/10/13	La Mancolona
I34	Semi-structured interview	La Mancolona	Landowner	06/10/13	La Mancolona
I35	Semi-structured interview	La Mancolona	Landowner (women)	07/10/13	La Mancolona
I36	Semi-structured interview	La Mancolona	<i>Poblador</i> (women)	07/10/13	La Mancolona
I37	Semi-structured interview	La Mancolona	Landowner	07/10/13	La Mancolona
I38	Semi-structured interview	La Mancolona	<i>Poblador</i> (women)	08/10/13	La Mancolona
I39	Semi-structured interview	La Mancolona	Landowner	08/10/13	La Mancolona
I40	Semi-structured interview	La Mancolona	<i>Poblador</i> (women)	08/10/13	La Mancolona
I41	Semi-structured interview	La Mancolona	Landowner	08/10/13	La Mancolona
I42	Semi-structured interview	La Mancolona	Landowner (women)	09/10/13	La Mancolona
I43	Semi-structured interview	La Mancolona	Landowner (women)	09/10/13	La Mancolona
I44	Semi-structured interview	La Mancolona	Landowner	09/10/13	La Mancolona
I45	Semi-structured interview	La Mancolona	<i>Poblador</i>	09/10/13	La Mancolona
I46	Semi-structured interview	La Mancolona	<i>Poblador</i> (women)	10/10/13	La Mancolona
I47	Semi-structured interview	La Mancolona	Landowner	10/10/13	La Mancolona
I48	Semi-structured interview	La Mancolona	Landowner	10/10/13	La Mancolona
I49	Semi-structured interview	La Mancolona	Landowner (women)	10/10/13	La Mancolona
I50	Semi-structured interview	La Mancolona	Landowner	10/10/13	La Mancolona
I51	Semi-structured interview	La Mancolona	<i>Poblador</i> (women)	10/10/13	La Mancolona
I52	Semi-structured interview	U'yool'che A.C.	Sustainable agriculture officer	12/10/13	FCP
I53	Informal conversation	Mexico-Norway programme	Extension officer	13/10/13	FCP
M09	Meeting attendance	CTC-Quintana Roo session	Participants from different sectors	14/10/13	FCP
I54	Informal conversation	<i>Ejido</i> FCP	President of the <i>ejido</i> FCP	15/10/13	FCP

I55	Informal conversation	ECOSUR	Junior researcher	17/10/13	Campeche
I56	Semi-structured interview	ECOSUR	Research associate	18/10/13	Campeche
I57	Semi-structured interview	La Mancolona	Landowner	19/10/13	La Mancolona
I58	Semi-structured interview	La Mancolona	<i>Poblador</i>	19/10/13	La Mancolona
I59	Semi-structured interview	La Mancolona	Landowner	19/10/13	La Mancolona
I60	Semi-structured interview	La Mancolona	<i>Poblador (women)</i>	19/10/13	La Mancolona
I61	Semi-structured interview	La Mancolona	Landowner	19/10/13	La Mancolona
I62	Semi-structured interview	La Mancolona	Landowner	19/10/13	La Mancolona
I63	Semi-structured interview	La Mancolona	Landowner	20/10/13	La Mancolona
I64	Semi-structured interview	La Mancolona	<i>Poblador</i>	20/10/13	La Mancolona
I65	Semi-structured interview	La Mancolona	Landowner (women)	20/10/13	La Mancolona
I66	Semi-structured interview	La Mancolona	Landowner (women)	20/10/13	La Mancolona
I67	Semi-structured interview	La Mancolona	Landowner (women)	20/10/13	La Mancolona
I68	Semi-structured interview	La Mancolona	Landowner	20/10/13	La Mancolona
I69	Semi-structured interview	La Mancolona	Landowner	21/10/13	La Mancolona
I70	Semi-structured interview	La Mancolona	<i>Poblador</i>	21/10/13	La Mancolona
I71	Semi-structured interview	La Mancolona	<i>Poblador (women)</i>	21/10/13	La Mancolona
I72	Semi-structured interview	La Mancolona	Landowner	21/10/13	La Mancolona
I73	Key Semi-structured interview	La Mancolona	President of tree nursery and ecotourism groups	21/10/13	La Mancolona
E01	E-mail comment	CIGA-UNAM	Senior researcher	23/10/13	/
I74	Key Semi-structured interview	La Mancolona	Representative of the groups of solicitors of vacant state land	26/10/13	La Mancolona
I75	Key Semi-structured interview	La Mancolona	Carpenter	26/10/13	La Mancolona
I76	Key Semi-structured interview	Xmaben	<i>Comunero</i>	02/11/13	Xmaben

I77	Key Semi-structured interview	Xmaben	Representative of local beekeepers association <i>Lol Kax</i>	03/11/13	Xmaben
I78	Semi-structured interview	Xmaben	<i>Ejidataria</i>	06/11/13	Xmaben
I79	Semi-structured interview	Xmaben	<i>Comunero</i>	06/11/13	Xmaben
I80	Semi-structured interview	Xmaben	<i>Ejidataria</i>	06/11/13	Xmaben
I81	Semi-structured interview	Xmaben	<i>Ejidatario</i>	07/11/13	Xmaben
I82	Semi-structured interview	Xmaben	<i>Ejidatario</i>	07/11/13	Xmaben
I83	Semi-structured interview	Xmaben	<i>Ejidataria</i>	07/11/13	Xmaben
I84	Semi-structured interview	Xmaben	<i>Ejidatario</i>	07/11/13	Xmaben
I85	Semi-structured interview	Xmaben	<i>Ejidatario</i> (women)	07/11/13	Xmaben
I86	Semi-structured interview	Xmaben	<i>Ejidatario</i>	08/11/13	Xmaben
I87	Semi-structured interview	Xmaben	<i>Comunero</i> (women)	08/11/13	Xmaben
I88	Semi-structured interview	Xmaben	<i>Comunero</i>	08/11/13	Xmaben
I89	Semi-structured interview	Xmaben	<i>Ejidatario</i>	08/11/13	Xmaben
I90	Semi-structured interview	Xmaben	<i>Ejidataria</i>	09/11/13	Xmaben
I91	Semi-structured interview	Xmaben	<i>Ejidatario</i>	09/11/13	Xmaben
I92	Semi-structured interview	Xmaben	<i>Ejidatario</i>	09/11/13	Xmaben
I93	Semi-structured interview	Xmaben	<i>Ejidatario</i>	10/11/13	Xmaben
I94	Semi-structured interview	Xmaben	<i>Comunero</i>	10/11/13	Xmaben
I95	Semi-structured interview	Xmaben	<i>Ejidatario</i>	10/11/13	Xmaben
I96	Semi-structured interview	Xmaben	<i>Ejidatario</i>	21/11/13	Xmaben
I97	Semi-structured interview	Xmaben	<i>Comunero</i>	21/11/13	Xmaben
I98	Semi-structured interview	Xmaben	<i>Comunero</i>	21/11/13	Xmaben
I99	Semi-structured interview	Xmaben	<i>Comunero</i>	22/11/13	Xmaben
I100	Semi-structured interview	Xmaben	<i>Ejidatario</i>	22/11/13	Xmaben
I101	Semi-structured interview	Xmaben	<i>Ejidatario</i> (women)	22/11/13	Xmaben
I102	Semi-structured interview	Xmaben	<i>Comunero</i>	24/11/13	Xmaben
I103	Semi-structured interview	Xmaben	<i>Ejidatario</i> (women)	24/11/13	Xmaben

I104	Semi-structured interview	Xmaben	<i>Ejidatario</i>	24/11/13	Xmaben
I105	Semi-structured interview	Xmaben	<i>Ejidatario</i>	25/11/13	Xmaben
I106	Semi-structured interview	Xmaben	<i>Ejidatario</i>	25/11/13	Xmaben
I107	Semi-structured interview	Xmaben	<i>Ejidatario</i>	25/11/13	Xmaben
I108	Semi-structured interview	Xmaben	<i>Comunero</i>	26/11/13	Xmaben
I109	Semi-structured interview	Xmaben	<i>Comunero</i>	26/11/13	Xmaben
I110	Semi-structured interview	Xmaben	<i>Ejidatario</i> (women)	26/11/13	Xmaben
I111	Semi-structured interview	Xmaben	<i>Comunero</i>	27/11/13	Xmaben
I112	Semi-structured interview	Xmaben	<i>Comunero</i> (women)	27/11/13	Xmaben
I113	Semi-structured interview	Xmaben	<i>Ejidatario</i>	27/11/13	Xmaben
I114	Semi-structured interview	Xmaben	<i>Ejidatario</i>	28/11/13	Xmaben
I115	Semi-structured interview	Xmaben	<i>Ejidatario</i>	28/11/13	Xmaben
I116	Semi-structured interview	Xmaben	<i>Ejidataria</i>	28/11/13	Xmaben
I117	Key Semi-structured interview	Xmaben	Previously the <i>ejido's</i> forest technician, comunero	29/11/2013	Xmaben
I118	Informal conversation	CRIPX	Officer	29/11/13	Xpujil
I119	Informal conversation	CRIPX	President	29/11/13	Xpujil
M10	Meeting attendance	CRIPX meeting	CRIPX delegates	29/11/13	Xpujil
F01	Focus group	Xmaben	Women	05/12/13	La Mancolona
I120	Key Semi-structured interview	Xmaben	Municipal commissioner	18/12/13	Xmaben
F02	Focus group	Xmaben	Authorities	22/12/13	La Mancolona
F03	Focus group	Xmaben	<i>Pobladores</i>	28/12/13	La Mancolona
F04	Focus group	La Mancolona	Landowners	30/12/13	La Mancolona
I121	Key Semi-structured interview	Xmaben	President of the <i>ejido</i>	09/01/13	Xmaben
I122	Semi-structured interview	Ka Kuxtal Much Meyah	Member	10/01/14	Hopelchen
I123	Semi-structured interview	Koolel Kab	President	10/01/14	Ich-Ek

I124	Semi-structured interview	UAICH	Consultant	11/01/14	Hopelchen
F05	Focus group	Xmaben	Women	15/01/14	Xmaben
F06	Focus group	Xmaben	Authorities	17/01/14	Xmaben
F07	Focus group	Xmaben	<i>Comuneros</i>	18/01/14	Xmaben
I125	Semi-structured interview	CEGAM	President	22/01/14	Mexico DF
I126	Semi-structured interview	Red MOCAF	Chairman of the steering committee	24/01/14	Mexico DF
I127	Semi-structured interview	INECC	Director of Sector Models for Low Carbon Development	29/01/14	Mexico DF
I128	Semi-structured interview	RIOD MEX	Project coordinator	29/01/14	Mexico DF
I129	Semi-structured interview	SEMARNAT	General Director of Forest and Soil Management	30/01/14	Mexico DF
I130	Semi-structured interview	SEMARNAT	Director of Forest Exploitation	30/01/14	Mexico DF
I131	Semi-structured interview	CDI	Assistant Director of Design Methodology	30/01/14	Mexico DF
I132	Semi-structured interview	CCMSS	Executive Director	31/01/14	Mexico DF
I133	Semi-structured interview	CEMDA	Program coordinator	03/02/14	Mexico DF
I134	Semi-structured interview	SAGARPA	General Director of Attention to Climate Change in Agricultural Sector	04/02/14	Mexico DF
I135	Semi-structured interview	SEMARNAT	Director of Public Policies, Climate Change Studies and Ecosystem Management	05/02/14	Mexico DF
I136	Semi-structured interview	INECC	Director of Environmental Economics	05/02/14	Mexico DF
I137	Semi-structured interview	RITA	Member	06/02/14	Mexico DF
F08	Focus group	Xmaben	<i>Ejidatarios</i>	09/02/14	Xmaben
I138	Semi-structured interview	TNC	Projects coordinator of M-REDD+ Alliance in the Yucatan Peninsula	11/02/14	Merida
I139	Semi-structured interview	SMAAS	Coordinator of Climate Change sector	14/02/14	Campeche
I140	Semi-structured interview	PRONATURA	Management coordinator	14/02/14	Campeche
I141	Semi-structured interview	ECOSUR	Agro-ecology group	14/02/14	Campeche

M11	Meeting attendance	SMAAS-CONAFOR Working meeting	Representatives of SMAAS and CONAFOR's Campeche office	14/02/14	Campeche
E02	E-mail comment	Servicios ambientales y cambio climático A.C.	Director	26/02/14	/

D. National and regional level semi-structured interviews

Name of interviewee	Organisation	Position	Date	Location
Remarks				
1.1. Participation in REDD+ readiness				
1. Do you/your organisation participate in any activity of REDD+ readiness process?		If NO , continue until question 5. If YES , go to question 5.		
Non-participants				
2. Have you/your organisation been invited to participate in any activity of REDD+ readiness process?		If NO : <ul style="list-style-type: none"> • What do you think why you/your organisation have not been invited to participate in REDD+ readiness? • Would you like to participate in REDD+ readiness? If YES : <ul style="list-style-type: none"> • By whom and when? • What is your/your organisation motivation not to participate in REDD+ readiness? 		
3. Do you/your organisation follow the REDD+ readiness process?		If YES : <ul style="list-style-type: none"> • Where you/your organisation and how easy find the information related with the REDD+ readiness process? If NO : go to section 1.5.		
Participants				
4. In which activity in the process of preparation for REDD+ you /your organisation have participated? (national and sub-national CTCs, and/or other multi-sectorial bodies, e.g. SESA, and local REDD+ pilot or demonstration activity, other fora)		<ul style="list-style-type: none"> • What is your/your organisation's role within particular fora? 		
5. By whom and when have you/your organisation been invited to participate in the REDD+ readiness?		<ul style="list-style-type: none"> • When did you/your organisation join the REDD+ readiness process and why then? 		

6. What is your/your organisation motivation to participate in REDD+ readiness? (e.g., economic self-interest, nature conservation aspiration, ensuring local people rights)	<ul style="list-style-type: none"> In your opinion, what is the main reason that Mexico entered the preparation process for REDD+? (e.g., social benefits, mitigation of climate change or environmental benefits)
7. How successful do you find REDD+ readiness in Mexico so far? Why?	<ul style="list-style-type: none"> Do you know of any conflicts (e.g., over land use, benefit-sharing, or tenure rights) in Mexico rising from or being exacerbated by REDD+ readiness? What is your/your organisation position on such conflicts? How are those conflicts, if any, being managed? Have you heard of the Internal Control Organ (OIC)?
1.2. Recognition and meaningful participation	
8. Are there actors that currently do not participate in the REDD+ readiness process and that should be invited/recognised by the government?	<ul style="list-style-type: none"> What could be the reason for not inviting/recognising this group in the first place? Do you know of any mechanism used to include non-participating actors and by whom are those mechanisms initiated?
9. Is there any actor currently participating in the REDD+ readiness that you think should not have been invited? Why?	
10. Which stakeholders lead the discussions, propose dates and set agenda for the REDD+ readiness fora you/your organisation participate in?	
1.3. Accountability	
11. What are your/your organisation rights and responsibilities in the context of the REDD+ readiness process, if any?	<ul style="list-style-type: none"> Who should fulfil/ensure/guarantee your rights, and who should control (answerability) and sanction (enforceability) you/you organisation in case of non-responsiveness in REDD+ readiness? Are you/your organisation responsible of fulfilling/ensuring/guaranteeing other actors' rights, and/or hold them answerable and/or sanction them in case of non-responsiveness in REDD+ readiness?
1.4. Productive deliberation	
12. Did participation in REDD+ readiness process helped you understand better other actors' views?	Please comment.

13. Did participation in the REDD+ readiness influenced/changed your/your organisation's motivation/practice/knowledge and how?	Please comment.
14. How you/your organisation participate in the REDD+ readiness (e.g., take part in discussions and/or provide written comments on the draft documents)?	<ul style="list-style-type: none"> • What REDD+ design issue you/your organization find particularly important?
15. How much is your/your organisation's view represented in the texts produced after a round of comments? (in the ENAREDD+ draft)	<ul style="list-style-type: none"> • How much is views of other actors represented in the texts produced after a round of comments? • Could you describe me the procedure of making decisions regarding the issue you/your organisation have commented on (either in written or oral form)?
1.5. Transparency	
16. Where and how easy do you/your organisation find the information related to REDD+ readiness?	<ul style="list-style-type: none"> • Does the information reach you in a timely manner so you are able to prepare adequately for the event?
17. Do you/your organisation face difficulties in understanding documents that content the information on REDD+?	<ul style="list-style-type: none"> • And the other actors involved in the REDD+ readiness? • Beyond the information itself, does your organization have experiencing other difficulties to prepare for participation? • Do you think the actors that are not involved in the process can easily find the REDD+ related information?
18. Do you know how have the REDD+ readiness funds been managed so far?	
1.6. Public policy alignment	
19. In your opinion, what were/are major causes of deforestation in Mexico/state of Campeche? (particularly in the municipality of Calakmul/Hopelchen)	<p>If the answer is one particular sector:</p> <ul style="list-style-type: none"> • How that sector causes deforestation? <ul style="list-style-type: none"> a) Programmes are poorly designed b) Programmes are poorly implemented c) Programmes result in poor performance, related to the way the beneficiaries use the resources
20. How are these causes of deforestation being prevented?	If the answer is one particular sector:

	<ul style="list-style-type: none"> • How that sector prevents deforestation? <ul style="list-style-type: none"> a) By introducing changes in the programme’s design (including environmental safeguards) b) By improving the programme’s implementation c) By improving the implementation of the programme’s activities (e.g., improved monitoring at the local level)
21. In your opinion, the institutions from the land use sectors are sufficiently coordinated?	<ul style="list-style-type: none"> • What should be done to improve consistency between public policies with an impact on forests? • How much the REDD+ preparation process has helped to link different public policies promoted under the idea of sustainable rural development?
1.7. Future of REDD+	
22. How do you see the future of REDD + in Mexico?	Please comment on: <ul style="list-style-type: none"> • Key public policies • Local communities participation in design and implementation of the national MRV system • Calculation of national reference emission level • Effect on land tenure and carbon rights • Impact on equity • Nested or centralized approach and the risk of leakage • Permanence period • Most probable/ best source for financing REDD+
1.8. Concluding questions	
<ul style="list-style-type: none"> • Do you think there is anything you would like to share with me and related to the issues explored in this interview? • Could you please suggest other actors I should interview? 	

E. Community level semi-structured interviews

General questions

- What are the main productive and conservation activities in your community?
- What productive and conservation initiatives have been implemented in your community so far?
- Could you list all important events that have occurred in the community since 2010?
- What are the main necessities for the community? Which sources has the community used so far to finance its necessities?
- Does your community/*ejido* count with a document of internal regulation? And with a land use management plan?
- Is there a map/sketch of your community/*ejido*?
- How many people in the community are rightholders/non-rightholders? Does your community have a census list?
- Who holds the highest authority in the community?
- Could you list all, both legally based, and informal groups and organizations involved in conservation or productive activities in your community?
- Could you provide me with the names of representatives of those groups/organizations?

Conservation

- Who has promoted the idea of conservation in your community?
- Do you think conservation activities have provided any benefits to your community? If yes, which ones?
- Do you think that conservation activities had any negative effects in your community? If yes, which ones?

PSAH

- When were the payments for ecosystem services activities implemented in the community?
- Who promoted the PES activities in your community?
- Are there any other actors, external to the community, which are involved in implementation of the PES activities?
- Did any members of the community oppose the idea of PES?
- How much money did your community receive annually from the PSAH programme?
- How were the benefits from PSAH programme distributed within the community?
- How much did the individuals receive annually from the PSAH programme?

- What do you think will happen with the PSAH areas in the future?

REDD+

- Have there been any consultations on REDD+ in the community?
- Have there been any consultations on carbon dioxide and forest carbon in the community?
- Have you heard of some REDD+ pilot project being developed in the region?

Ecotourism (La Mancolona)

- How has the eco-tourism group been established?
- Can all community members join the eco-tourism group?
- How are the benefits from eco-touristic activities being distributed within the member of the group?
- Are there any other actors, external to the community, which are helping in implementation of the eco-tourism centre?
- Did any members of the community oppose the idea of eco-tourism?

Productive groups

- How long have you been a member of the group?
- What were the reasons to form a group in the first place?
- How many members does the group have?
- Who are the members of the group?
- What are the group's internal organisation and rules?
- Are you a member of any other group in the community?
- Is your group in conflict with any other productive activity group in the community?
- What are the main necessities for the group?
- What is the main source of finance for the group?

F. Household level semi-structured interviews

Personal information:

Location		
Date		
1. What is your name?	Name and Surname	
2. How old are you?	Age	Sex
3. Do you live in a household with land rights?	Yes/No	
4. Are you a landowner?	Yes/No	
5. What is your relationship with: a) The head of the family? b) The person with the land rights?	a) Him-/her- self, spouse, son/daughter, grand-son/daughter, other	
	b) Him-/her- self, spouse, son/daughter, grand-son/daughter, other	
6. How many members of this household are landowners?	Number of persons	
7. Did you have any position within the community since 2007?	“None”, or note up to five different positions	
8. Are you a member of some association/organization/group? If yes, which ones?	“None” or note up to five different groups	
Remarks		

Socio-economic data:

9. What was the main source of income for your household last year?

Paid job	
Remittances	
Subsidies	
Own production activities	
Other (specify)	

10. What productive activities did the people living in this household perform last year?

List activities and mark X if they performed it	How much did you produce? in local units of measure	Do you sell your products? (Yes/No)
Agriculture	Hectares under milpa: Name of other crops:_____	

	(e.g., beans, chihua, sweet potato, coconut, mango, orange, chile, watermelon, pumpkin, ibes and potato) Hectares under those crops:	
Big livestock	Number of cows: Hectares under pasture:	
Small livestock	Number of sheep and goats:	
Apiculture	Number of hives:	
Handicrafts products (hipiles, hammock...)	Number of pieces:	
Backyard animals	Number of chickens and turkeys: Number of pigs:	
Agroforestry pepper or fruit tree	Name of the product: _____ Number of hectares planted:	
Forestry activities	Cubic meters:	

11. Which productive activity brings you the most income and food supplies throughout the year?
12. When did you start performing that activity/ies?
13. Which productive activity/ies takes the most of your time throughout the year?
14. When did you start performing that activity/ies?
15. Which of the benefits provided by the following governmental programmes have you/your household received last year?

PROCAMPO	Hectares:	
PROCAMPITO	Hectares:	
PROGAN	Unit (hectares or beehives):	
Oportunidades	Number of people:	
PSA	Number of people:	Hectares:
PET	Number of people:	
70 y más	Number of people:	
Other	Unit:	

16. Over the last year, did you receive any money from the member of this household that has been working outside the community for more than a year?
No/Yes/There is no such person
17. Did you collect wood or other materials from the forest to construct or fix your house over the last year?
No/Yes
18. Did you go to forest/jungle to collect firewood over the last month?
No/Rarely/Once per week/Almost every day

19. Did you go to the forest to collect fruits, honey, leaves, fibres, clay or gum for your consumption over the last month?
No/Rarely/Once per week/Almost every day
20. Do you hunt?
No/Yes

REDD+ benefit-sharing scheme design:

21. Did your community experience deforestation or increase in forest cover over the past 10 years? If yes, which ones?
22. What activities in the community have a negative impact on forests and cause deforestation and/or forest degradation? Who conducts those activities?
23. What activities in the community have a positive effect on preserving forest and/or increasing forest cover? Who develops such activities?
24. What should be done -if anything- to halt the activities identified in 1., and who should be in charge?
25. What should be done to further promote the activities listed in 2., and who should be in charge?
26. Have you heard of REDD+? Could you explain what you heard?
27. Have you heard of carbon dioxide? Could you explain what you heard?
28. Have you heard of climate change? Could you explain what you heard?
29. Have you heard of forest carbon? Could you explain what you heard?
30. Being familiar with the definition of REDD+ now, in your opinion, which of the activities that are currently being implemented in the community, or could be implemented in the future, meet the objectives of REDD+?
31. Who should be compensated for (or benefit from) activities that reduce deforestation or promote forest conservation and reforestation in your community?
32. In your opinion, should the families of non-right holders benefit from REDD+ also? And how could they benefit?
33. What type of compensation should be provided to those who perform activities that preserve or increase the forest area? How would you prefer to be compensated?
34. Who should be in charge of administering compensation - the community or an outsider? So far, what was your experience with collective management of resources from different projects such as PSAH, eco-tourism, nursery, reforestation or similar?
35. If there are benefits that target a collective, how should those benefits be shared among the community members?
36. What should be the length of the beneficiaries' engagement in the activities?
37. At which point during the contract should the compensation be distributed?
38. Do you agree with the principle of conditionality in REDD+ payments? Or you think you should be paid in any case?

39. Do you think there should be sanctions if a person or community does not meet the requirements under the REDD+ contract?
40. Knowing all this, at which point during the contract should the compensation be distributed?
41. In which period of the year should the compensation be distributed?
42. Are you satisfied with the amount of money you receive with the PSAH?
43. Do you/your community experience negative impacts from the PSAH? If so, which effects?
44. Do you think that REDD+ will provoke negative effects? If so, which effect?
45. Who do you think is or would be the most affected by REDD+ and why? Do you have any suggestions on what should be considered when developing a REDD+ strategy in order to avoid any potential negative effects?

G. General information of the focus group participants

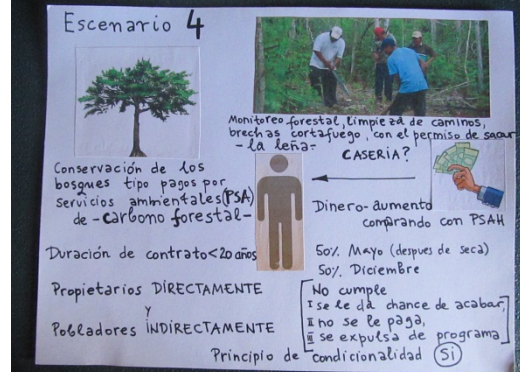
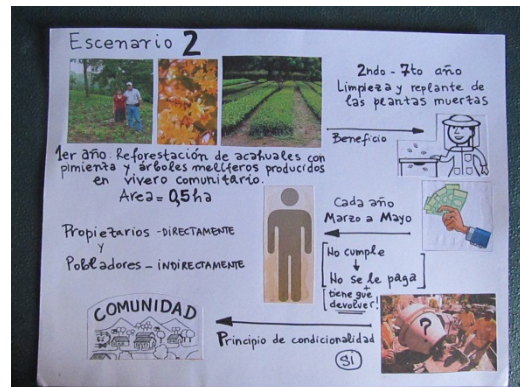
Focus group:		
Date:		
Location:		
Name and surname		
Age		
Gender	<ol style="list-style-type: none"> 1. Male 2. Female 	
Marital status	<ol style="list-style-type: none"> 1. Single 2. Married 3. In union 4. Widowed 	
Education level	<ol style="list-style-type: none"> 1. None 2. Primary school 3. Secondary school 4. High school 5. University 6. Postgraduate 	
Household with land tenure rights	Yes No	
Person with land tenure rights	Yes No	
Land near the urban area (only in La Mancolona)	Yes No	
Receives PSAH	Yes No	
Main source of household income	La Mancolona: <ol style="list-style-type: none"> 1. Milpa 2. Apiculture 3. Livestock breeding 4. Pepper production 5. PSAH 6. Day labourer in PSAH 7. Tree nursery 8. Ecotourism 9. Working outside the community 	Xmaben: <ol style="list-style-type: none"> 1. Milpa 2. Mechanised agriculture 3. Apiculture 4. Livestock breeding 5. PSAH 6. Day labourer in PSAH 7. Working outside the community
Social membership (current and previous)	<ol style="list-style-type: none"> 1. 2. 3. 	<ol style="list-style-type: none"> 4. 5. 6.
Position in the community		
Applicant to the property rights over state-owned vacant land (only in La Mancolona)	Yes No	

H. Explanatory posters and photos of the focus groups

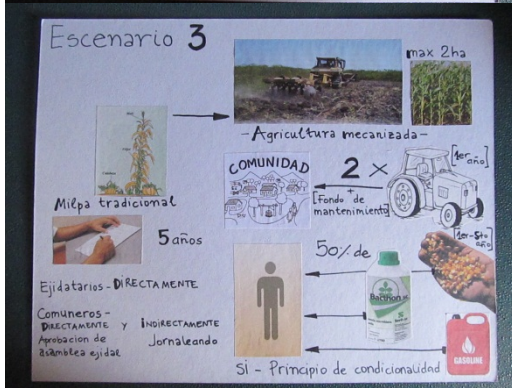
The carbon cycle:



Alternative REDD+ scenarios in La Mancolona:



Alternative REDD+ scenarios in Xmaben:



Focus groups with women in La Mancolona and comuneros in Xmaben:



I. Form used to take down and analyse focus groups information

Focus group:	Date:	Location:
Scenario:		
Characteristics:		
Activity		
Details on the activity		
Potential beneficiaries		
Compensation level		
Contract duration		
Actor who should administer the benefits		
Type of benefits		
Frequency and timing of benefits disbursement		
Type of sanctions		
Principle of conditionality		

J. Photos of the attended meetings and events

Aliance Sian Ka'an-Calakmul workshop on REDD+



Uy'oo'lche A.C. workshop on reforestation



Uy'oo'lche A.C. workshop on REDD+



Sessions of the Commission for State Development Planning (COPLADE)



