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# **Forest tenure reforms and socio-environmental consequences: case studies on Guatemala and Nicaragua**

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## Abstract

During the last thirty years, legal reforms promoting changes in rules and regulations that govern the appropriation and use of natural resources have resulted in a shift of responsibilities and the recognition of rights to organized groups such as indigenous people and local communities. This formal redefinition of rights among different right holders at various levels has been defined as forest tenure reforms

This dissertation has analyzed different types of reform in forestlands of Guatemala and Nicaragua to understand the extent to which these reforms have recognized collective rights of forest dependent communities to understand their socio-environmental consequences. Three main research questions have guided this dissertation work: (1) what factors motivate and shape emergence of tenure reform processes? (2) How institutional change brought about by reforms shifts tenure rights and impact local community livelihoods and forest conditions? (3) What conditions surrounding the devolution of rights led to the continuity of forest tenure reform? Specifically, the objectives of this dissertation were:

1. To analyze and discuss the characteristics of forest tenure reform and the factors behind recent changes in tenure rights over forest areas in the lowlands of Central America.
2. To explore and analyze the impacts of changes in tenure rights at the community level and the extent to which this meant changes in livelihoods and in forest conditions.
3. To examine the role of secondary level organizations in the continuity and success of tenure reform processes.

Results show the need to analyze three aspects to understand the nature of reforms and their outcomes: the statutory change and its origin, how the implementation of this change plays out in practice, and the way in which reforms enable improvements in livelihoods and forest conditions, including maintenance of ecosystem functioning. I have drawn from institutional economics and the commons school perspectives to understand how reforms shift the bundles of rights around resources and land and promote collective action to sustain outcomes. These perspectives proved particularly useful for identifying the multiple sets of right-holders intervening in the forest tenure reforms of Guatemala and Nicaragua. Cases presented in this dissertation show that the definition of right holder - the different set of forest users - depends on the characteristics of the reform process. Three characteristics are common to these cases analyzed here. First, rights have been transferred from the State to multiple users and collective or communal. Second, alienation rights are not granted and the state remains in the picture

holding the rights to other ecosystem services, such as CO<sup>2</sup> sequestration and subsoil extraction. Third, forests were central in the transfer of rights.

Results show that tenure rights and practices are socially embedded. Which sets of claims over resources is formalized through rights, which sets of forest users will be recognized, what set of state institutions will become rights granters depends from the social and political context in each case and it is not exempt from contestation. To further understand the politics of reform I have drawn from political ecology and environmental history. Even once claims are recognized as rights, and right holders are identified, opposition may continue as other demands and claims to access resources emerge. Pressure for competing land uses and existing overlapping rights undermine the authority of right-granters and threaten right-holders as potential conflicts undermine their ability to benefit from formalized rights. This dissertation analyzed the changes in tenure arrangements and the institutional structures used to recognize rights, but also provided insight into who gains and who loses and how changes in tenure differentially affect different set of groups at the local level. This is particularly relevant to understand distributional conflicts around resource control. Institutions and behavior change over time and are continuously shaped by the re-negotiation with and within state actors.

As demonstrated by the cases presented here, however, our understanding demands consideration of the political and historical processes that construct and shape forest tenure rights and practices, taking into account history and change over time, conflict and negotiation with multiple actors at multiple scales and the dynamic production of space and boundaries. Research is required that pays greater attention to the dynamic processes that produce and alter institutions and behavior, including not only the analysis of changing property rights but also broader processes of territory construction. These dynamic landscapes present considerable challenges not only for communities but also for practitioners. This calls for mixed method approaches that use different set of techniques to uncover patterns within countries and across types of reforms, to generate in-depth understandings of implementation processes, interactions and outcomes.

## **Keywords**

Forest tenure; Guatemala; Nicaragua; Nepal; institutional analysis; tenure reforms; Petén; North Caribbean Coast Autonomous Region; territorialization

## Resumen

En los últimos 30 años reformas legales han modificado normas y regulaciones sobre la apropiación y uso de las tierras forestales. Estas reformas han cambiado las responsabilidades y han permitido el reconocimiento de derechos sobre bosques a grupos indígenas y comunidades locales organizados. Esta redefinición formal de derechos a varios niveles se conoce como reformas de tenencia forestal.

El presente trabajo analiza diferentes tipos de reformas en tierras forestales en Guatemala y Nicaragua, con el fin de entender el grado en que estas reformas han reconocido los derechos colectivos de las comunidades que dependen de los bosques, y de esta manera comprender sus consecuencias socio-ambientales. Esta tesis se ha guiado por tres preguntas de investigación: (1) ¿Qué factores motivan y dan forma al surgimiento de reformas de tenencia?, (2) ¿De qué forma el cambio institucional promovido por las reformas modifica los derechos de tenencia e impacta los medios de vida de las comunidades locales y las condiciones del bosque?, (3) ¿Qué condiciones relacionadas con la devolución de derechos, conducen a la continuidad de las reformas de tenencia forestal?. De manera específica los objetivos del trabajo son:

1. Analizar y discutir las características de las reformas de tenencia forestal, y los factores que influyen los cambios recientes en los derechos de tenencia de las áreas forestales ubicadas en las tierras bajas de Centroamérica.
2. Conocer y analizar los impactos de los cambios en los derechos de tenencia de la tierra a nivel comunitario, así como el nivel y el grado en que estos influyen en cambios en los medios de vida y las condiciones de los bosques.
3. Examinar el rol de las organizaciones de segundo nivel en la continuidad y el éxito del proceso de reforma en la tenencia.

Los resultados evidencian la necesidad de analizar tres aspectos para entender la naturaleza de las reformas y sus resultados: 1) el cambio estatutario y el contexto en el que emerge la reforma, 2) como la implementación de estos cambios se da en la práctica, y 3) la forma en que las reformas permiten mejorar los medios de vida y las condiciones forestales, incluyendo el mantenimiento de las funciones ecosistémicas. Partiendo de conceptos de economía institucional y estudio sobre los bienes comunes he podido entender los cambios institucionales relacionados con los nuevos derechos, así como el papel de la acción colectiva en estos procesos. Estos enfoques han demostrado ser particularmente útiles para identificar los múltiples titulares de derechos que

intervienen en las reformas de tenencia forestal en Guatemala y Nicaragua. Los casos presentados en este documento demuestran que la definición de los titulares de los derechos -los diferentes grupos de usuarios del bosque- depende de las características y el contexto en el que se dan los procesos de reforma. Tres características comunes se encontraron en los casos de estudios analizados. Primero, los derechos han sido transferidos desde el Estado hacia múltiples usuarios, colectivos o grupos de comunidades. Segundo, los derechos de alineación no están garantizados y el Estado continúa siendo el titular en casos como el secuestro de carbono y los recursos del subsuelo. Tercero, el bosque juega un papel central en la transferencia de derechos y los resultados del proceso.

Esta investigación muestra que los derechos de tenencia están inmersos en prácticas socialmente construidas. El contexto social y político de cada caso determina (1) qué grupo de reclamos se formalizará a través de qué tipo de derechos, (2) qué grupo de usuarios del bosque será reconocido, y (3) qué grupo de instituciones estatales otorgará dichos derechos. Elementos de la ecología política y la historia ambiental fueron utilizados para analizar la política de las reformas de tenencia. Una vez que las demandas se reconocen como derechos, y los titulares de los derechos han sido identificados, el proceso de reconocimiento del derecho no está exento de conflictos. Competencia por otros usos del suelo y la existencia de derechos superpuestos debilitan la autoridad de los que otorgan el derecho y amenazan a los titulares del mismo, amenazando su capacidad de beneficiarse de los derechos formalizados. El presente trabajo analiza los cambios en los regímenes de tenencia y en los arreglos institucionales usados para reconocer los derechos, también proporciona una perspectiva sobre quien gana y quien pierde y como estas reformas afectan a distintos grupos de actores a nivel local. Esto es particularmente relevante para entender los conflictos distributivos relacionados con el control de los recursos.

Como demuestran los casos analizados en el presente trabajo, el análisis de las reformas forestales requiere una comprensión de los procesos históricos y políticos que moldean las prácticas y los derechos sobre el bosque, tomando en cuenta los cambios a lo largo del tiempo, así como conflictos y negociaciones entre los actores a múltiples escalas. Se requiere que el análisis de las reformas forestales ponga más atención en los procesos dinámicos que producen y modifican las instituciones y el comportamiento, incluyendo no sólo el análisis de los cambios en los derechos de propiedad sino también procesos más amplios de construcción del territorio. Estos escenarios dinámicos presentan desafíos no solo para las comunidades sino también para los tomadores de decisión y los implementadores de reformas. Para ello se requieren aproximaciones metodológicas que combinen diversas técnicas para analizar patrones dentro de

los países y a nivel de los diversos tipos de reformas, y de esta manera generar un entendimiento profundo de los procesos de implementación y los resultados.

**Palabras clave**

Tenencia Forestal; Guatemala; Nicaragua; Nepal; análisis institucional; reformas de tenencia; Petén; Región Autónoma de la Costa Caribe Norte; territorialización

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## Acronyms

|          |  |
|----------|--|
| ACICAFOC | Asociación Centroamericana Indígena y Campesina de Forestería Comunitaria            |
| ACOFOP   | Asociación de Comunidades Forestales de Petén  |
| AHT      | Agrar-Und Hydrotechnik   |
| AIDSESP  | Asociación Interétnica de Desarrollo de la Selva Peruana                             |
| ALARM    | Assessing Large Scale Risks with Tested Methods Project                              |
| AMAN     | Aliansi Masyarakat Adat Nusantara  |
| AMPB     | Alianza Mesoamericana de Pueblos y Bosques   |
| APESA    | Asesoría y Promoción Económica S.A.  |
| CEMEC    | Centro de Monitoreo y Evaluación de CONAP - Guatemala                                |
| CEPAL    | Economic Commission for Latin America and the Caribbean                              |
| CFUG     | Community Forest User Group  |
| CIDT     | Comisiones Intersectoriales de Demarcación y Titulación - Nicaragua                  |
| CIFOR    | Center for International Forestry Research   |
| CLACSO   | Consejo Latinoamericano de Ciencias Sociales   |
| COICA    | Coordinadora de Organizaciones Indígenas de la Cuenca Amazónica                      |
| CONACHI  | Consejo Nacional de Chicle - Guatemala   |
| CONAP    | Consejo Nacional de Areas Protegidas - Guatemala                                     |
| CONADETI | Consejo Nacional de Demarcación y Titulación - Nicaragua                             |
| CARE     | Cooperative for Assistance and Relief Everywhere - Nepal                             |
| CIDH     | Corte Interamericana de Derechos Humanos   |
| DFO      | District Forest Officers - Nepal   |
| ECA      | Empresas Campesinas Asociadas - Guatemala  |
| FAO      | Food and Agriculture Organization of the United Nations                              |
| FAR      | Fuerzas Armadas Revolucionarias  |
| FARES    | Fundación para la Investigación Antropológica y los Estudios Ambientales - Guatemala |
| FLACSO   | Facultad Latinoamericana de Ciencias Sociales - Guatemala                            |
| FSCC     | Forest System Coordination Committee - Nepal   |
| FECOFUN  | Federation of Community Forestry Users Nepal   |
| FSC      | Forest Stewardship Council   |
| FSLN     | Frente Sandinista de Liberación Nacional - Nicaragua                                 |
| FYDEP    | Empresa de Fomento y Desarrollo Económico de Petén                                   |
| GACF     | Global Alliance of Community Forestry  |
| GHF      | Global Heritage Fund   |
| IAD      | Institutional Analysis and Development framework                                     |
| IAN      | Instituto Agrario Nicaraguense   |
| IARNA    | Instituto de Agricultura, Recursos Naturales y Ambiente - Guatemala                  |
| ICIMOD   | International Centre for Integrated Mountain Development - Nepal                     |
| ICTA     | Institut de Ciència i Tecnologia Ambientals  |
| IFRI     | International Forestry Resources and Institutions                                    |
| INAB     | Instituto Nacional de Bosques - Guatemala  |
| INE      | Instituto Nacional de Estadística - Guatemala  |
| INTA     | Instituto de Transformación Agraria - Guatemala                                      |
| ITTO     | International Tropical Timber Organization   |
| KFW      | Kreditanstalt für Wiederaufbau   |
| MBR      | Mayan Biosphere Reserve  |
| MUZ      | Multiple Use Zone  |
| NGO      | Non-governmental Organization  |
| NTFP     | Non Timber Forest Products   |

|           |  |
|-----------|--|
| PAC       | Patrimonios Agrarios Colectivos - Guatemala  |
| PAR       | Participatory Action Research Approach   |
| RAAN      | North Atlantic Autonomous Region   |
| RACCN     | North Caribbean Coast Autonomous Region  |
| RAISG     | Red Amazónica de Información Socioambiental Georefenciada                            |
| REPALEF   | Réseau des Peuples Autochtones et Locales pour la Gestion des Ecosystemes Forestiers |
| RIC       | Registro de Información Catastral - Guatemala  |
| RRI       | Rights and Resources Initiative  |
| SI-CONFOR | Sistema de Información de Concesiones Forestales (Database)                          |
| SMEE      | Sociedad Mesoamericana de Economía Ecológica   |
| SUCHILMA  | Sindicato Unico de los Chicleros y Laborantes de la Madera                           |
| TCN       | Timber Corporation Nepal   |
| UFCO      | United Fruit Company   |
| UFID      | United Kingdom's Department for International Development                            |
| UNEPET    | Unidad Ejecutora del Proyecto Petén  |
| UNDP      | United Nations Development Programme   |
| USAID     | United States via its Agency for International Development                           |
| WWF       | World Wildlife Fund  |
| YATAMA    | Tasba Masrka Asla Takanka Nani   |

## Glossary

|   |   |
|---|---|
| <i>agarrada</i>                         | Informal system of claiming possession over land by means of improvements such as forest clearing, increasing cropping areas, building fences, increasing pasturelands and/or building a house were central to legitimize these claims over land.   |
| <i>baldío</i>                           | Idle land.  |
| <i>bloque</i>                           | Approach to the titling of communal lands in Nicaragua as multi-community blocs.  |
| <i>campesino</i>                        | Peasant.  |
| <i>chiclero</i>                         | Gum-tapper.   |
| <i>comarca</i>                          | Legal term used to defined collective indigenous lands in Panama.   |
| <i>colono</i>                           | Settler. Term used to define new settlers arriving in the Atlantic Coast in Nicaragua. It is also used in the same context in other regions of Central America as Honduras and Panama.  |
| <i>ejido</i>                            | In Guatemala the term is used to define municipal land tenure regimes established since 1870. In Guatemala <i>ejido</i> lands are under the authority of the municipal governments.   |
| <i>Finca</i>                            | Farm. Term used to refer to the cadastral plot that is registered in the National Public Registry.  |
| <i>Franja Transversal del Norte FTN</i> | Refers to the northern lowlands of Guatemala and includes the regions of Huehuetenango, Alta Verapaz, Quiché, Izabal and southern Petén. These regions shared similar biophysical characteristics; most of them had remained barely populated until the end of the 1800s and were subject to colonization projects since the 1960s. Defined as the “Lowlands of the North” in Melville and Melville (1971). |
| <i>habilitación</i>                     | A system where money was lent or goods were given on credit in exchange for work. In this way many laborers ended up virtually enslaved.  |
| <i>ladino</i>                           | Or <i>mestizo</i> is the term used to refer to the people of mixed indigenous and Spaniard descent.   |
| <i>Mosquitia</i>                        | Refers to the northern regions of Honduras and Nicaragua inhabited by Miskitu indigenous populations. Historically governed by the British.   |
| <i>oro blanco</i>                       | White Gold. Refers to the name that was given to gum as this product was considered a highly valued product in Petén, Guatemala.  |
| <i>parcialidad</i>                      | Refers to the type of land tenure based on kinship that still predominates in some areas in the highlands of Guatemala.   |
| <i>pinabete</i>                         | Refers to a highland pine species endemic to the highlands of Guatemala popular for Christmas trees, other ornamental uses and carpentry.   |
| <i>petenero</i>                         | Term used for the residents of Petén.   |
| <i>sandinista</i>                       | Term used to described members (or supporter) of the FSLN party.  |
| <i>saneamiento</i>                      | Title clearance process.  |
| <i>sindico</i>                          | Local customary authority in charge of land and resource allocation.  |
| <i>ramón</i>                            | Breadnut seed, <i>Brosimum Sp.</i>  |
| <i>tercero</i>                          | Third party.  |
| <i>vagancia</i>                         | Vagrancy - refers to a Guatemalan Law during in force during the dictatorial period of Ubico (1931 - 1944) that allowed the movement of people (usually indigenous and rural peasant populations) found in cities with no ID documents.   |
| <i>xcate - shate</i>                    | <i>Chamaedorea</i> sp. Palm leave used for ornamental purposes.   |

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To my colleagues in the Mesoamerican Alliance of People and Forest and Fundación Prisma, that allowed me learn from other experiences throughout Central America, always pushing me to make my academic interests be in line with the issues at stake in the region. In particular to Deborah, with whom I was able to share different moments of this dissertation, her guidance was and continues to be very important in the journey.

To the list of great friends that have been there, asking for the thesis and were willing to listen and support me.

To Joan, thanks for the support in making this finally happen.

A mi familia, por su apoyo incondicional en particular a Mar e Inés por iluminar mis días y enseñarme que es lo importante.

Miguel, comparto este logro contigo, gracias por tu amor y apoyo incondicional.

Lima, 2015

## Prologue

I was trained as a biologist at John Brown University (United States) from 1996 to 2000. Soon after I returned to Guatemala, I joined the Latin American Faculty of Social Sciences (FLACSO) where I worked as researcher for the Environmental, Rural Development and Population Program from 2001 to 2014. I was first hired to implement a rural extension-training program on community forestry (2001 - 2002) to support second-level grassroots organizations<sup>1</sup> working with community forest management in both the lowlands and highlands of Guatemala.<sup>2</sup> The focus of the training program was on social aspects of community forestry, mainly discussing organizational challenges and ways to promote collective actions around local natural resource management. It was during this program that I realized the diversity of community forest organizations and collective forest tenure regimes in Guatemala.

In that same two-year period, I engaged in research for the first time thanks to a scholarship from the political-ecology working group of the Latin American Council of Social Sciences (CLACSO). The research focused on the Petén region, specifically analyzing Guatemala's conservation policies and the conflict that emerged from a lack of mechanisms recognizing resident communities' access and rights. Considering the Petén experience successful in gaining recognition of forest communities in protected areas, I documented their organizational process, including the emergence of the Community Association of Forest Communities of Petén (ACOFOP),<sup>3</sup> which became the representative of the community-based organizations within the Mayan Biosphere Reserve. I started documenting its struggle to gain access and recognition, the process of defining norms to manage resources as well as the implications these had for other forest users. This overlapped a training program in the Workshop on Political Theory and Policy Analysis in Indiana University Bloomington (2001), where I was introduced to the work of Elinor Ostrom and in particular the Institutional Analysis and Development framework employed by the International Forestry Resources and Institutions (IFRI) research program (Gibson et al., 2000). This was the basis for my early research work; different versions of this analysis were later published by CLACSO's thematic working group (Monterroso, 2008; 2006).

Parallel to this, I led an exchange of experiences initiative in 2002, together with ACOFOP and the Central American Association of Community Agroforestry Organizations (ACICAFOC) – a

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<sup>1</sup> Further analysis on this concept and work will be developed in Chapter 5.

<sup>2</sup> This program was developed to support organizations that had been involved in research activities with FLACSO. Organizations participating in this process worked in the regions of Petén, Totonicapán, Quetzaltenango, San Marcos, Huehuetenango, Quiché and Sololá, all of them in Guatemala.

<sup>3</sup> Detailed results of research around these two issues will be developed in the following chapters.

third-level organization with members in Central America – bringing together community leaders from second-level organizations in Honduras, Panama, Belize, Nicaragua, Mexico and Guatemala. During a ten-day journey through Guatemalan, Belizean and Mexican forests together with 32 community-based leaders, both men and women, I reflected on challenges and opportunities of community forest initiatives in the region. This marked the beginnings of my research using a participatory action research approach (PAR)<sup>4</sup>. These and other reflections on the role of research to promote social change in postwar contexts leveraged a two-year distance learning process combining research and training led by the University of Manchester in which I participated from 2005 to 2006<sup>5</sup> (Monterroso, 2007b; Bazan et al., 2007).

In 2003, I started a master program in Environmental Studies with the UAB. Between Guatemala and Barcelona I was able to continue the research on Petén in 2004 and 2005. That research focused on how the establishment of protected areas had influenced management practices of non-timber forest products in two ACOFOP member organizations; the research questions addressed gender equity implications in extractive economy contexts (Monterroso, 2007c). While doing this work, visits to Petén allowed me to follow up on ACOFOP's broader political and organizational work, while understanding how member organizations worked and viewed this organization's role in their process of gaining rights recognition, but even more importantly on sustaining their rights against external pressures.

From 2004 to 2006, while still in Barcelona, I started working as a researcher in the Research Project "Assessing Large Scale Risks to biodiversity and climate change with Tested Methods" ALARM (European Commission FP 6 GOCE-CT-2003-506675). This project aimed at providing a socioeconomic analysis of anthropogenic pressures related to the risks to biodiversity in Europe, including biological invasion processes, chemicals and climate change. As part of this project, I conducted a case study from 2004 to 2005 that involved a socioeconomic evaluation of the invasion of *Hydrilla verticillata* in Lake Izabal, Guatemala (Monterroso, 2005). The results formed the basis of my master thesis, from which a series of works were later published

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<sup>4</sup> Following Smith et al (2010), I understand PAR as a set of methods that emphasize the active participation of social groups in generating knowledge. Derived from the work on neo-Marxist community development approaches, PAR methods aim at bridging research with action through the active collaboration of researchers and community stakeholders, going beyond the researcher/researched subject/object dichotomy. Important characteristics of the research process then become the ability to get past the idea of the researcher as a neutral observer and the emphasis on studying social practices.

<sup>5</sup> This program was implemented by the School of Environment and Development, in which the objective of the representatives from eight different institutions of El Salvador, Guatemala, Nicaragua, Honduras and Mexico was to analyze the role of knowledge-generating centers in promoting social change (Bebbington, 2007; Bazan et al 2007). It consisted of two face-to-face meetings, one in Manchester (2005) and another in El Salvador (2006), plus action research between those workshops.



(Monterroso et al., 2011; Monterroso et al., 2010; Monterroso et al., 2009a; 2009b; Binimelis et al., 2007; 2009c.). I also collaborated in the conducting of case studies that analyzed biological invasion processes from a socioeconomic perspective in the Ebro River, Catalunya (Rodriguez Labajos et al., 2010; Rodriguez Labajos et al., 2009; Binimelis et al, 2009a; 2007)<sup>6</sup> and Argentina (Monterroso et al., 2010b; Binimelis et al 2009b; Pengue et al, 2009; Monterroso et al, 2009b)<sup>7</sup>. During these years the research group from ICTA and five other research organizations developed a series of methodologies to analyze invasion processes from the socioeconomic perspective (Spangenberg et al., 2009; Rodriguez-Labajos et al., 2009; Binimelis et al., 2006). This was an enriching experience, allowing me to become thoroughly immersed in the theoretical and methodological frameworks of risks to biodiversity from an ecological economic perspective.

At the end of 2006 I returned to Guatemala and continued collaborating with the ALARM Project through FLACSO. In 2008, as part of this involvement, I led a 250-lecture hour regional training course on ecological economics with 28 students from seven Latin American countries. That same year, I participated together with several professionals and activists from the region in the establishment of the Mesoamerican Society of Ecological Economics, SMEE.<sup>8</sup>

In 2007, ACOFOP invited me to document the internal and external processes pressuring the community tenure model and develop strategies to face these challenges. The main focus was on documenting the conflict against the Mirador archaeological tourist initiative (Mirador Basin Project <http://www.miradorbasin.com/about.php>), which threatened to extend into areas to which communities had recently acquired management rights (Monterroso, 2010; Monterroso, 2007a).

As the previous paragraphs described, my research work presented for this dissertation has followed a participatory action research approach based on my involvement in both research and advocacy. While the experience in Guatemala will be central in my reflections, I will draw from work in other countries to establish comparisons and analyses on the issues presented here. Further discussion on the theoretical and methodological approaches will be developed in the introduction.

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<sup>6</sup> Two cases were implemented in Catalunya; one analyzed the invasion of zebra mussel *Dreissena polymorpha* and the other related genetically modified organisms (mainly corn) to invasion processes.

<sup>7</sup> This case analyzed the impacts of glyphosate-resistant sorghum (*Sorghum halepense*).

<sup>8</sup> In this process, I became the first president of this regional Society (from 2008 to 2010) [http://www.redibec.org/pdf/boletin1\\_SMEE.pdf](http://www.redibec.org/pdf/boletin1_SMEE.pdf).

Most of the empirical work this dissertation draws on was gathered from 2007 to 2013<sup>9</sup> in two phases that combined research and action work. In the first phase, 2007 to 2009, most information was collected while I was part of the international team led by the Centre of International Forestry Research engaged in a global comparative study that analyzed 30 cases in 11 countries where local communities won new statutory rights to forestland and resources over the last 20 years<sup>10</sup> (see Larson et al., 2010a and b). That research aimed to understand the nature of forest tenure reforms and the extent to which local rights had increased or were more secure in practice. As part of this study, three research sites were selected in Central America: the North Atlantic Autonomous Region (RAAN)<sup>11</sup> of Nicaragua, the Mayan Biosphere Reserve of Northern Petén, Guatemala, and Guatemala's western highlands (Larson et al., 2008). I led the analysis of the community forest concession in the Mayan Biosphere Reserve's Multiple Use Zone and participated actively in the discussion and analysis of results in the other sites. Together, these three regions represent a wide variety of common property regimes and three very different reform types and contexts<sup>12</sup>.

From 2009 to 2014 I joined the Rights and Resources Initiative (RRI)<sup>13</sup>, an international coalition formed by research-, advocacy- and development- oriented organizations interested in advancing reform in forest rights, governance and markets (2012). RRI focuses on catalyzing institutional reforms, sharing learning initiatives and promoting strategic networks based on the analysis of threats and opportunities (RRI, 2012:9). My role as regional facilitators focused on providing technical assistance and strengthening synergies among partners and regional networks. Insights from my role in supporting the regional analysis and documentation on issues related to forest tenure, rights and community forestry in Central America were central to documenting important cases of regional forest tenure models, especially for Guatemala and Nicaragua<sup>14</sup>.

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<sup>9</sup> Fieldwork notes taken from 2001 to 2005 were key to establishing patterns and trends.

<sup>10</sup> Research activities were conducted in 30 sites across Latin America, Africa and Asia, specifically in Brazil, Bolivia, Nicaragua, Cameroon, Ghana, Guatemala, Burkina Faso, Nepal, Philippines, India and Laos. The selected study sites represent places where local people had won statutory rights to forests in recent years and opportunities to support those statutory reforms (Larson et al., 2010a). Further discussion into what is understood as forest tenure reform will be discussed in Chapter 1.

<sup>11</sup> Legally changed to North Caribbean Coast Autonomous Region (RACCN) in 2014. For consistency purposes I refer to the region with this new name throughout the document.

<sup>12</sup> These regions represent three of the five most important regions of common property forests in Central America. The others include the *comarcas* of Panama and the lowland tropical forests of Honduras.

<sup>13</sup> RRI is a global coalition of 13 partners and over 140 international, regional and community organizations (RRI, 2014). In Latin America there are 48 collaborator organizations, 15 of which work in Central America. <http://www.rightsandresources.org/>.

<sup>14</sup> RRI works in Central America, focused mainly in Guatemala, in both Petén lowlands – more specifically the Mayan Biosphere Reserve – and regions with a presence of communal lands. Between 2010 and 2012 RRI implemented research and training activities in Nicaragua, more specifically in the RACCN, supporting and documenting the process of titling indigenous territories. Other works were done in Panamá (2008 and 2013),

This dissertation is composed of seven chapters, including the introduction and conclusions. Three chapters are reviewed versions of published articles (two in the Journal of Conservation and Society and one in the Journal of Latin America Geography). I have been the primary and corresponding author as well as the main contributor for two of these papers. I was responsible for drafting the texts, although the feedback and comments from co-authors helped me improve the work. I have made some modifications in the content in this dissertation to avoid repetitions and update information. I have been the main contributor to all chapters (except for one where I share equal contributions with Dr. Naya Paudel). These materials have not been submitted by anybody else for a doctoral dissertation.

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following up recent reforms around the Law of Titling Collective Territories outside indigenous *comarcas*, and in Honduras, following on the titling of indigenous territories (2013) and the management of forest usufructs drawing from the Forest Law (2007).

## Chapter 1. Introduction

## **1.1. Background and motivation**

Latin America is one of the most unequal regions of the world, contrasting with its rich natural endowment. Six of the world's most biodiverse countries are in the region, including Brazil, Colombia, Ecuador, Mexico, Venezuela and Peru. The region also contains one of the most biologically diverse single areas in the world, the Amazon. South America alone has more than 40% of the Earth's biodiversity and more than a quarter of its forests (Bovarnick et al., 2010). One third of the world's arable land is located in Latin America. Nonetheless the appropriation of natural resources is highly contested and the access to land and resources is highly skewed. One third of the population lives in conditions of poverty, and the situation is the worst for the more than half of this portion that lives in rural areas (FAO, 2013). With an average Gini index of 0.52 (CEPAL, 2013), Latin America has some of the highest inequality rates of developing countries, fueled by the continued concentration of land, capital and other assets in the hands of political and economic elites. The most vulnerable segments of society are highly dependent for their well-being and livelihoods on products and services from forests and other natural ecosystems. Competition over resources is increasing as the basis of economic growth policies relies more and more on intensive use of natural resources for the production of commodities, export and, more recently, for tourism (Barcenas, 2013; Bovarick et al., 2010). Latin America produces 48% of the world's soy production, 28% of its cattle production and 47% of its copper production (Barcenas, 2013). According to CEPAL, more than 40% of Latin America's material exports in 2012 were made up of primary or manufactured products with low domestic added value (2013).

While economic growth rates in the region have been maintained above 2% annually (with the exception of 2008 during which it went down to 1%), the skewed distribution is worsening as government policies seem unable to tackle structural problems such as poverty, exclusion and land tenure, which keep large segments of society highly marginalized. Indigenous populations and women are among the worst off and most vulnerable groups. In terms of poverty, about 80% of the indigenous populations (some 40 million people) continue living below the poverty line (CEPAL, 2013). Additionally, women's access to land and other resources and their contributions to management are not yet widely recognized. Therefore unequal and uncertain land tenure and access to resources have been pointed out as among the major challenges these populations face, together with the lack of social services and infrastructure (FAO, 2013).

Surprisingly, in spite of this historic situation of inequality, Latin America has witnessed important policy reforms over the last twenty years, changing forest and natural resource regulations that have redefined tenure rights in forested lands, thus increasing access to resources

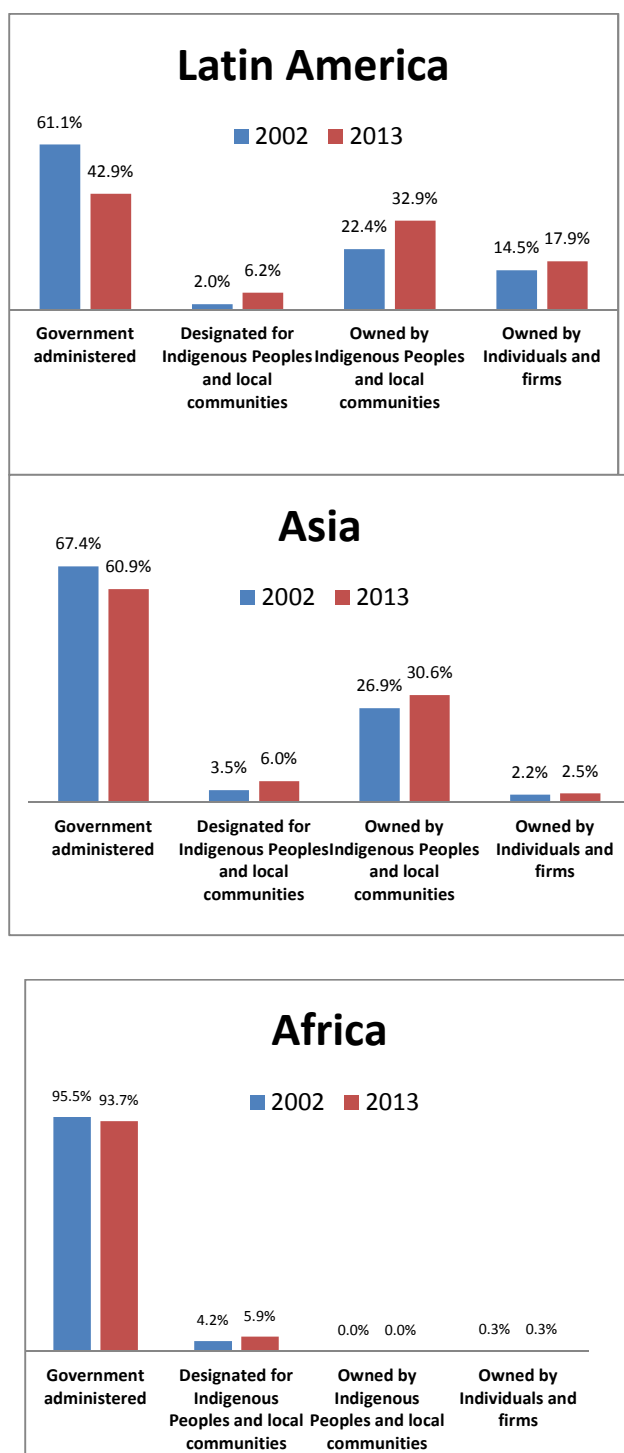
previously in the hands of governments. Changes in rights have occurred on lands historically inhabited by forest dependent communities, mainly indigenous, Afro-descendant and forest communities, transforming the nature of land tenure in the region. While the modes of transfer and the types of rights granted vary among countries and among groups within countries, this devolution process has taken place mostly in large forested regions, drawing from a variety of institutional instruments ranging from collective land and territorial titling to co-management schemes and concession contracts that recognize some extent of rights (RRI, 2014 and 2012; Larson et al., 2010a; RRI and ITTO 2009; Sunderlin et al., 2008). This process of redefining tenure rights affecting forestlands has been defined as forest tenure reforms. Tenure reforms stem from changes in institutions, often statutory regulations, that (re)define the bundle of rights and responsibilities over who uses, manages and controls forest resources and how (Larson et al., 2010a).

Recent data analyzing changes in statutory regimes around the world show that Latin American is actually the developing region where most significant changes have resulted in the transference or recognition of rights designed for the use and management of communities, at least on paper (See Figure No. 1). This is a significant change in comparison to Africa, where above 93% of the land remains in the hands of the State, or Asia, where 60% of forest lands continues to be administrated by the government (RRI, 2014<sup>15</sup>). In total, as of 2013, nearly 33% of Latin American forests were under some type of collective tenure regime owned by communities, most of which are of indigenous peoples, and another 6% was designated for their use (RRI, 2014). Across Latin America this amounts to a total of 232 million ha of forests in the hands of these groups – more than 85 million ha of which have come since 2002 – representing a major shift in tenure rights in the hands of local communities (RRI, 2014; White and Martin, 2002; RRI and ITTO, 2009). This portion of land represents above 60% of the global increase of forest under community ownership or control in the period of 2002-2013.

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<sup>15</sup> This recent study (RRI, 2014) is based on the analysis of statutory regimes. Data collected for 52 countries under statutory regimes from 2002 to 2013, representing nearly 90% of the global forest area.

Figure 1. Changes in statutory forest tenure developing regions (2002-2013)



Based on: RRI, 2014

Note: This study (RRI, 2014) is based on data collection and the update of existing data (RRI, 2008 and White and Martin 2008) for 52 countries under statutory regimes from 2002 to 2013, representing nearly 90% of the global forest area.

These changes in formal regulations, particularly laws and policies that regulate forests and natural resources, do not necessarily guarantee that local communities automatically benefit from exercising these newly acquired rights. However, they provide the basis for accessing resources that are essential to their livelihoods. Secure access to land and resources has been highlighted as a precondition to improve the situation of highly diverse forests but poorly developed regions as recognition of forest rights to local populations allows the conversion of forest resources into

community assets or livelihoods (Seymour et al., 2014, Andersson, 2012). Oftentimes these changes in institutional arrangements are the result of constant negotiation between the State and forest users, promoted by mobilization efforts not only to gain access to resources but also to increase local decision-making around forests (Larson, 2010b; Lemos and Agrawal 2006). This chapter is organized in three sections. In the next section I present the main motivations guiding this work, including the overall aims and research questions. Following that, I discuss the theoretical underpinnings on which the work draws. The final section presents a note on the authorship and a summary of the chapters.

## **1.2. Aims**

Drawing information from case study work, this dissertation analyzes tenure reform processes and approaches to study forest tenure reforms in different geographical contexts. Using empirical data gathered for Guatemala as the basis, it analyzes how forest tenure reform processes have resulted in changes in the (re)distribution of rights with outcomes on livelihoods and forest conditions. Drawing from the analysis of two second-level organizations in Guatemala and Nepal, it analyzes the role of social mobilization in shaping forest resource governance. And finally, drawing on research results from Guatemala and Nicaragua, it reviews and reflects on existing approaches to study forest commons in Central America.

A broad set of research questions guided this work. At the national level, I was interested in taking a historical approach to understand resource appropriation and identify recent tenure reform processes, understanding how they are defined at the regional and local level and what factors motivate and shape devolution processes; particularly in the context of ongoing contestation over natural resources, understanding why governments at the national level would willingly devolve authority, power and resources to political actors at the regional and local levels? At the regional and community level, information was gathered to analyze and compare how the transference of legal rights to local communities played out. This meant among other things understanding: What modes of transfer of rights the State used in research sites and what rights were transferred and who benefited from this devolution process. This meant also unraveling the way in which tenure rights impacted local community livelihoods and analyzing whether this change in rights has meant an improvement in forests conditions. Finally, research explored what conditions surrounding devolution led to the continuity and success of tenure reform processes. Thinking on the normative implications of research, this later question aimed at providing relevant policy information.



## Research objectives

As previously mentioned, this work draws from my involvement in a global comparative study that analyzed 30 cases in 10 countries where local communities won new statutory rights to forestland and resources over the last 20 years<sup>16</sup> (see Larson et al., 2010a and 2010b). This comparative research aimed at analyzing the forest tenure reforms in selected countries to understand their nature. As part of this study, three research sites were selected in Central America and information was gathered on seven different case studies: the North Caribbean Coast Autonomous Region (RAAN)<sup>17</sup> of Nicaragua (two sites)<sup>18</sup>, the Mayan Biosphere Reserve of the Northern Petén (two sites)<sup>19</sup>, Guatemala and the Guatemalan western highlands (three sites) (Larson et al., 2008; Pacheco et al., 2008). Together, these three regions represent a wide variety of common property regimes and three very different types and contexts of reform. While the global comparative study was based on a broader set of questions<sup>20</sup>, this dissertation narrowed down the research objectives to the following:

4. To analyze and discuss the characteristics of forest tenure reform and the factors behind recent changes in tenure rights over forest areas in the lowlands of Central America.
5. To explore and analyze the impacts of changes in tenure rights at the community level and the extent to which this meant changes in livelihoods and in forest conditions.
6. To examine the role of secondary level organizations in the continuity and success of tenure reform processes.

### 1.3. Summary of the content

This work is made up of six chapters, in some cases incorporating additional conceptual elements when the response to research questions required it. Chapters 4, 5 and 6 are reviewed works of published peer review journal articles; a reference to the journal as well as the co-authors is included in each chapter. These chapters have been reviewed and modified to meet

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<sup>16</sup> Besides Guatemala, other countries included in this study are Brazil, Bolivia, Nicaragua, Cameroon, Ghana, Burkina Faso, Nepal, Philippines and India.

<sup>17</sup> The region's original name in the autonomy statute was North Atlantic Autonomous Region (RAAN) and numerous sources I cite use that reference. In 2014 the name was legally changed to North Caribbean Coast Autonomous Region (RACCN). For consistency purposes I refer to the region with this new name throughout the document.

<sup>18</sup> Further information on this case is found in Monterroso and Larson (2013); Larson and Soto (2012); Larson and Mendoza-Lewis (2012 and 2009) and Larson (2010).

<sup>19</sup> Further information on work in Petén is found in Monterroso and Barry (2012); Monterroso and Barry (2010); Monterroso and Barry (2009); Monterroso and Barry (2007).

<sup>20</sup> Research questions in this global study included: What is the effect of tenure change on community rights to access and decision-making regarding forests? How do the regulatory framework, markets and local organization affect these rights in practice? What are the interactions among these variables or spheres? And what is the effect of each on outcomes? (For further information see Larson et al., 2010a:12)

the objectives and ensure coherence with the research questions. I conducted all fieldwork activities in Guatemala. In the case of Nicaragua I collected information at the regional level (RAAN, see Chapter 6) while information on community case studies came from local partners and organizations that participated in the same collaborative research project. Case study information for Nepal (Chapter 5) was collected by my co-author Dr. Naya Paudel, and I provided additional information collected from interviews during different moments with FECOFUN representatives.<sup>21</sup> I led the writing process of Chapter 4 and Chapter 5, while I shared equal writing responsibilities of Chapter 6.

During this research I was able to work closely with local as well as community networks between 2007 and 2012. In the case of Guatemala, I was fortunate to work together with the Petén Association of Forest Communities (ACOFOP)<sup>22</sup> at both the regional and local community levels. At the regional level I was also able to engage with the Mesoamerican Alliance of Peoples and Forests (AMPB), a coalition of nine different territorial organizations including two Guatemalan community organizations (National Alliance of Community Forestry Organizations and ACOFOP), and two Nicaraguan indigenous government organizations (the Mayangna Nation Government and Tasba Masrka Asla Takanka Nani, YATAMA). Since 2014, together with the authorities and territorial leaders from the Amazonia (COICA and AIDSESP), the Congo basin (People's Network for the management of the Congo basin, REPALEF) and Indonesia (Aliansi Masyarakat Adat Nusantara, AMAN), the AMPB has mobilized around the recognition of tenure rights and advocacy of the role that indigenous and local communities play in mitigating climate change. One of their most successful mobilization efforts is the work with Handicraft Films *If not us then who* (<http://ifnotusthenwho.me/me/>). Interactions with these movements, including numerous conversations with their grassroots leaders as well as participatory observation during workshops and advocacy activities organized by and with them, were particularly enlightening and provided important insights for my work.

Together with other colleagues involved in the major CIFOR project, I have published related works both in English and Spanish, some of which have not been included in this dissertation. These include:

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<sup>21</sup> Between 2009 and 2013 I was able to meet FECOFUN representatives as part of the RRI coalition. In different moments during this time I was able to interview members of this organization to further understand the characteristics of the organization's work and nature.

<sup>22</sup> In fact, FECOFUN and ACOFOP – both of them studied in Chapter 5 – belong to the Global Alliance of Community Forestry Organizations, a network of community organizations formed in 2004 with the objective of bringing together community-based forestry organizations and advocating community forest management in international and regional forums on common issues (<http://www.rightsandresources.org/publication/global-alliance-of-community-forestry-gacf-lombok-declaration/> last viewed august, 2015).

- Barry, D. and **Monterroso, I.** 2008. Institutional change and community forestry in the Mayan Biosphere Reserve Guatemala. Proceedings of the International Association for the Study of the Commons IASC. July 2008. IASC: Cheltenham, England.
- **Monterroso, I.** and Larson, A. 2013. The dynamic forest commons of Central America: New directions for research. *Journal of Latin American Geography*. 12 (1): 87-110.
- **Monterroso, I.** and Barry, D. 2013. La legitimidad de los derechos forestales: Los fundamentos de la reforma de tenencia forestal en las áreas protegidas de Petén, Guatemala. In: Larson, A. y Dahal, G. Reformas en la Tenencia Forestal. CIFOR: Bogor, Indonesia. Pp. 139-168.
- **Monterroso, I.,** and Barry, D. 2012. Legitimation of forest rights: The underpinnings of the forest tenure reform in the Protected areas of Petén, Guatemala. *Journal of Conservation and Society*. Vol 10 (2):136-150.
- **Monterroso I.** and Barry D. 2009. Sistema de Concesiones Forestales Comunitarias: Tenencia de la tierra, bosques y medios de vida en la Reserva de la Biosfera Maya en Guatemala. Center for International Forestry Research, CIFOR; Rights and Resources Initiative, RRI; Facultad de Ciencias Sociales, FLACSO. Editorial de Ciencias Sociales: Guatemala.
- **Monterroso I.** and Barry D. 2008. Institutional change and community forestry in the Mayan Biosphere Reserve. Conference proceedings. 12th Biennial Conference of the International Conference for the Study of The Commons: Governing shared resources: connecting local experiences to global challenges. University of Gloucestershire. Cheltenham.
- **Monterroso I.** and Barry D. 2007 Community based forestry and the changes in tenure and access rights in the Mayan Biosphere Reserve, Guatemala. Conference proceedings. International Conference on Poverty Reduction and Forests. Recoftc: Bangkok.
- Paudel, N., **Monterroso, I.** and Cronkleton, P. 2013. Organizaciones de segundo nivel y la democratización de la gobernanza forestal: Estudios de caso de Nepal y Guatemala. In: Larson, A. y Dahal, G. Reformas en la Tenencia Forestal. CIFOR: Bogor, Indonesia. Pp. 111-137.
- Paudel, N., **Monterroso, I.** and Cronkleton, P. . 2012. Secondary organizations and the democratization of forest governance: Case studies from Nepal and Guatemala. *Journal for Conservation and Society*. Vol 10 (2):124-135.
- Paudel, N., **Monterroso, I.** and Cronkleton, P. 2010 Redes comunitarias, acción colectiva y beneficios derivados del manejo forestal. In: Larson, A., Barry, D., Dahal, Ganga Ram y Pierce Colfer, J. Bosques y Derechos Comunitarios: Las reformas en la tenencia forestal. CIFOR: Bogor, Indonesia. Pp. 121-141.
- Paudel, N., **I. Monterroso,** and P. Cronkleton. 2010 Community networks, collective action and forest management benefits. In Larson, A., Barry, D., Dahal, Ganga Ram and Carol Pierce Colfer. Community Rights and Forest Tenure Reform. CIFOR. Bogor, Indonesia. Pp. 116- 138.

In the case of Guatemala and Nicaragua, different research reports are available in both English and Spanish at each level studied (see <http://www.cifor.org/tenure-reform/data/menus/aboutcd.html#>). For the case of Guatemala I produced all reports for the Petén site.

#### 1.4. Summary of the chapters

Chapter 1, 2, 3 and 7 were the last written therefore they are structured to provide significant complementary and basic information to provide a more consistent line of discussion for the rest of the document.

**Chapter one** introduces the overall research aims and objectives as well as the theoretical basis on which this work draws.

**Chapter two** discusses the methodological approach, presents data collection instruments and provides a description of the research sites. It introduces contextual elements to understand the nature of the reform processes in Guatemala and Nicaragua and presents two case studies: Petén (Guatemala) and RAAN (Nicaragua).

**Chapter three** uses a socio-environmental historical perspective to analyze major land and forest policies that have influenced resource tenure changes in Guatemala focusing on their environmental implications. Focusing on the Petén case (Research Question No. 1), the chapter discusses the factors motivating changes in tenure rights to land and forests that shaped tenure reforms. The chapter draws from an extensive literature review and empirical data to explain the politics of reform in Guatemala. It analyzes development initiatives that have influenced and shaped access to and control of land and forest resources in this region starting with the frontier colonization initiatives in the 1950s and continuing to the emergence of protected area policies in the 1990s.

**Chapter Four** analyses the most recent reform process in Petén – the recognition of community rights in protected areas. Exploring the legitimacy elements, it explains the changes in tenure rights and outcomes of the reform process at the community and regional level (Research Question No. 2). Based on empirical work in two sites, the chapter discusses the impacts of reform at the local level focusing on changes in livelihoods and forest conditions.

**Chapter Five** discusses the conditions leading to the emergence and continuity of forest tenure reforms focusing on the role of collective action for promoting changes in institutions governing access to forest resources (Research Question No. 3). It does so by analyzing the role of second-level organizations in forest governance in Guatemala and Nepal. It explores the conditions surrounding the emergence and growth of these secondary organizations and examines the nature of their organizational approaches, strategic actions, and resulting outcomes in terms of advancing and ensuring continuity of forest tenure reforms.

**Chapter Six** compares tenure reform processes in Guatemala and Nicaragua. It also discusses the institutional approach and the common property theory in regards to the advantages and limits of this framework for the study of tenure reform processes in forest areas in Central America. It argues that greater attention must be given to the dynamic historical processes that produce boundaries and institutions.

Finally, **Chapter Seven** provides the major conclusions of this work.

### **1.5. Theoretical underpinnings: Understanding tenure reforms**

This section discusses the theoretical framework behind this dissertation and how key concepts relate to research questions. Tenure is a term that is usually associated with the concepts of holding and possessing, often used interchangeably as a synonym of ownership (Wily, 2011). As property, tenure is a social institution and refers to the variety of social arrangements, either formally or informally defined, that allocates rights to things – enforceable claims to some use or benefit of something (McPherson, 1978:32). While ownership is often used to refer to a particular type of tenure rights allocated to a right holder, tenure relationships refer to different combinations of property rights to the bundle including rights to access, use, withdrawal, management, market, transfer, inheritance, and lease, among others (FAO, 2011). In this dissertation I use tenure to refer to these different configurations of the bundle of property rights to avoid confusion with other economic perspectives that treat property as identical to the exclusive and individual right (as defined by David Ricardo, Hernando de Soto and others). In the context of forestlands, I use the concept of tenure relationships to define social arrangements that shape institutional arrangements around rights and obligations as they relate to claims to forest resources, including land as well as goods and services provided by forest ecosystems (Bruce, 1998 Robinson et al., 2014; Safitri, 2010). Tenure rights include the set of institutions that govern the appropriation and use of natural resources. That means the rules, norms and social conventions that determine who can benefit from forests lands in what way, for how long, under what conditions and how (Agrawal and Ostrom, 2001). These claims over forestlands are ones that will be enforced by society (by custom or convention) or the State (by law).

Different authors have argued that land and forest tenure rights are critical issues when discussing forest governance because they influence decision-making around resource use, as they regulate access, consumption and management practices (Andersson, 2012, Bromley and Cernea, 1989). This dissertation aims at contributing to this debate by focusing on the analysis of

reforms that have meant a change in tenure rights, understanding how this change evolves and analyzing reform outcomes in forestlands.

In the cases analyzed in this dissertation, forest tenure reforms are the result of State-led formal processes by which new statutory regulations are drafted or existing ones are modified (Larson et al., 2010a; RRI, 2012 and 2014; RRI and ITTO, 2009; Sunderlin et al., 2008). In this process, the formal redefinition of rights to forests lands may affect several rights holders at various governance levels. Rights here are then defined as institutional arrangements that determine who is the rights holder, the scope of rights and the types of responsibilities and benefits one may obtain from them (Agrawal and Ostrom, 2001). While the set of institutional arrangements governing the use of forest resources may be either formal or based on custom (customary systems<sup>23</sup>), the formalization of rights occurs when the statutory recognition of claims is recognized as rights (Larson et al., 2010b; Meizen-Dick et al., 2001).

Oftentimes, these changes in tenure systems occurred thanks to the shift of responsibilities and authorities from a central government to an organized group that can be a local government (usually understood as decentralization processes), a nongovernmental organization or community-based organization. In Latin America, at least four trends explain the contextual conditions that favor forest tenure reform emergence (See Chapter 2). First, agrarian land reforms during the 60s and 70s modified existing land tenure structures; second, the emergence of social movements around international human rights, in particular those that advocated for the recognition of indigenous territorial rights; third, environmental movements that aimed at expanding conservation areas through the establishment of protected areas; and finally, democratization and decentralization processes that argued the failure of centralized forest management and advocated changes in forest governance that imply more participation in decision-making around forests (Ribot and Larson, 2005, Barry et al., 2010). In this dissertation I was particularly interested in understanding those processes in which central governments have transferred rights to groups of either peasant or indigenous local communities, even though this transfer often involved other actors in the governmental and nongovernmental sphere. I focused my analysis on changes that derive from formal recognition, either changing existing regulations or issuing new ones. In practice, these reforms affect both individual and collective tenure

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<sup>23</sup> Customary systems are defined as the norms, customs, traditions and practices of a given community inherited from ancestors or developed locally and accepted, reinterpreted and enforced by the community to govern local land access and use (Wily, 2011; Fitzpatrick, 2005). These may or may not be recognized by the state.

systems. However, in this work I focused the analysis on collective tenure systems, as this was the predominant model used to recognize rights in the areas selected for study.

### **1.5.1. Tenure reform as property rights redistribution processes**

It is institutions that define the existence of or changes in rights<sup>24</sup>. For every right held by an individual or a group of individuals, there is a rule, norm or social convention that authorizes the exercising of that right (Schlager and Ostrom, 1992). Institutions defining rights around natural resources exist at different levels: the national State can establish legal regulations while local organizations or territorial governments can develop by-laws concerning who gets to use which resources and how. Therefore, another underlying issue in the understanding of tenure reforms is to analyze tenure rights as the institutions that govern resource access, use and control. Property rights are at the center of this redistribution as they define who has access to which resources or benefit under which conditions. As applied to natural resources, Ciriacy-Wantrup and Bishop define property as “a bundle of rights in the use and transfer (through selling, leasing, inheritance, etc) of natural resources” (1975:714). According to these authors, different rights may be distributed among individuals and groups including the government. In this study property rights refer to “an enforceable authority to undertake particular actions in a specific domain” (Commons, 1968). Common property often has its basis in the distribution of resource rights usually based on custom, kinship and other types of social ties (Ciriacy-Wantrup and Bishop 1975). In fact, the concept of commons according to Pollock (1896 in Juergensmeyer and Wadley, 1974) predates that of private individual property rights, referring to rights enjoyed as a member of a community.<sup>25</sup> These authors also discuss the difference between the right to commons vs. that of common lands, which they defined from the legal viewpoint as “those lands in which rights of common exist” (Ibid, 1974:367).

As institutions, property rights are socially defined relations that determine the way individuals will interact with respect to benefits (Vatn, 2005). This research focused on tenure systems that fall under common property regimes. Literature often identifies at least four different property right regimes according to which entity holds the domain over those rights i.e. public, private and common property regimes; or, in the absence of any, open access situations. While ownership is in the hands of the government in public property regimes, private property is in

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<sup>24</sup> The terms “rights” and “rules” has often being used interchangeably in referring to uses of resources, however “rights are the product of rules and thus not equivalent to rules” (Schlager and Ostrom, 1992:250)

<sup>25</sup> In their work Juergensmeyer and Wadley analyze the discussion of Pollock as regards the existence of “common lands in England and Wales and the effects of enclosures to common land” (1974).

the hands of an individual or a collective (e.g. this can be a firm or a community of resource users). Last, common property regimes define situations where the ownership is in the hands of co-owners, which is why it could also be classified as a form of private property, according to Bromley (1991). Some authors argue that common property tends to be the regime with less formalized rules, which is why it is easy to confound it with open access situations (Vatn, 2005). In this work I analyze institutional change processes where there has either been a change in existing arrangements or new institutions (either formal or informal) emerge at the local level as a result of or in response to a reform in regulations over forest resources.

### **1.5.2. Using the bundle of rights to analyze distribution of rights**

Tenure reforms may also refer to a variety of situations; at least three different types of institutional instruments are cited in the literature (RRI, 2012; Larson, 2010a and 2010b). A first possible situation is one where statutory rights are fully transferred from public ownership to individuals or collectives (e.g. land titles of indigenous territories). A second situation is where a partial bundle of rights has been recognized among groups of resource users (e.g. Co-management agreements or management conventions), and a third situations is where the State recognizes rights that overlap other rights that have been granted to third parties (concessions or licenses). In the latter case, regulations recognize different set of rights to different right holders in the same land area, for instance a case in which an extractive concession is granted within the boundaries of an established protected area and/or indigenous territory.

Two cases draw our attention, first that of protected areas. In Latin America about 12% of the region has been set aside for conservation purposes (according to IUCN, 2010), however about 30% of these lands often overlap with areas that have been titled as indigenous people's territories or collective lands of Afro-descendants and other communities (RAISG, 2012; IBC, 2014). A similar situation exists when private companies are allocated concession rights to extract mining or fossil fuel in areas titled as communal lands (RAISG, 2012), or when extraction and/or management rights are recognized for different set of actors to extract or manage different resources in the same lands, for instance the case of forest and mining concessions. These overlapping situations may bring out differing views around resource management, highlighting how tenure regimes also influence resource conflict situations. Therefore, to analyze different types of reforms, i.e. existing institutional instruments granting forest tenure rights (RRI, 2012), it becomes useful to distinguish among resource users and owners and the bundle of tenure rights held by each. To operationalize this, the work of Shlager and Ostrom is



particularly useful (1992)<sup>26</sup>. Table 1 draws on this work and provides an overview of the bundle of rights according to different types of right holders.

These bundles of rights determine ‘who is allowed to use which resources, in what way, for how long and under what conditions, as well as who is entitled to transfer rights to others and how’ in forests (Larson 2010:80 based on Schlager and Ostrom, 1992 and Ostrom and Agrawal, 2001). These bundles are made up of user rights<sup>27</sup> (access, use) and decision-making rights<sup>28</sup> (management, exclusion and alienation). Access implies the possibility of entering the forest area and enjoying the non-subtractive benefits such as air and scenery. Use, harvest, extraction and withdrawal rights represent the possibility of quantities of resource units, including fuel wood, palm or any other timber or non-timber forest product. Following Andersson, 2012, use rights may also include the right to earn an income from a resource, as might be the case where partial recognition of rights such as in concession or management agreements may occur. Management rights refer to decision-making over the resource (resource maintenance, harvest, regulating who gets to use which resources and how). Agrawal and Ostrom (2001) break down management into the power to define rules around how resources may be used, rule compliance and monitoring and the power to settle conflict situations. Exclusion rights refer to the ability to prevent individuals or groups from accessing the forests and removing resources from it. Alienation refers to the possibility of transferring rights, including selling, mortgaging, inheriting or leasing.

Different rights holders, including community forest users, state entities or individuals, may hold different rights in forest areas (Barry and Meinzen-Dick, 2009; Schlager and Ostrom, 1992; Agrawal and Ostrom, 2001). Following RRI, 2012:15-22, in the analysis I added two dimensions: the time span in which the rights are recognized; i.e., whether they are time-limited or continuous in duration; and whether the law allows for revoking or extinguishing them, i.e. extinguishability. When analyzing extinguishability, it is also important to analyze whether compensation for loss rights exists. Barry and Meinzen-Dick (2009) argue that breaking down rights into these categories allows changes in tenure rights to be examined in greater detail.

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<sup>26</sup> Applications of this methodology can also be found in the works of Barry and Meinzen-Dick (2009), Agrawal and Ostrom (2002) and RRI (2012; 2014) that apply specifically to the analysis of tenure reforms or devolution of rights processes.

<sup>27</sup> In the typology developed by Ostrom (1990) and Schlager and Ostrom (1992), these are called operational rules, and they delimit activities regardless of the source of the rules.

<sup>28</sup> In the typology developed by Ostrom (1990) and Schlager and Ostrom (1992), these are called collective choice rules, and they concern who can participate in defining and changing operational rules

**Table 1. Bundle of rights and types of right holders**

|   | Bundle of rights  | Types of right holders |            |          |                 |
|---|-------------------|------------------------|------------|----------|-----------------|
|   |                   | Owner                  | Proprietor | Claimant | Authorized User |
| Operational rules (Use)                   | Access            |                        |            |          |                 |
|   | Withdrawal        |                        |            |          |                 |
| Collective Choice Rules (Decision-making) | Management        |                        |            |          |                 |
|   | Exclusion         |                        |            |          |                 |
|   | Alienation        |                        |            |          |                 |
| Constitutional Situations                 | Duration          |                        |            |          |                 |
|   | Extinguishability |                        |            |          |                 |

Source: Adapted from Ostrom and Schlager, 1992; Barry and Meizen Dick, 2009; and RRI, 2012.

Examining who is the rights granter can provide further insight into the nature of the legal basis behind the rules that sustain these rights, i.e. whether they are governed by formally established *de jure* rights enforced by formal regulations or are governed by customary tenure systems<sup>29</sup> of *de facto* rights substantiated by customary systems that may or may not be recognized by statutory law. As the initial basis of this research has focused on statutory changes, it is assumed that the analysis is delimited to those reforms that started from changes in formal regulations. However, legal pluralism is a situation that often characterizes tenure regimes of common pool resources. In other words, there often exists a situation at the local level in which multiple, often overlapping and sometimes even conflicting bases for claims (and therefore rights) to resources coexist (Benda-Beckham and von Benda-Beckman, 1999). My analysis is interested in contrasting what formally recognized written regulations existed and the difference between what was prescribed and how the rights transference process actually played out in implementation processes. That is, it analyzes rules-in-use, which according to Andersson (2012) should account for both *de facto* and *de jure* rights.

Finally, this analysis takes into account the different spatial scales and multiple governance levels at which rights allocation may occur. Take for instance a formal regulation that defines a devolution process where the central government transfers rights to local groups or organizations; this may involve more than one government institution (e.g. the environmental ministry, a local municipality or the forest service). Additional levels of right granters may also

<sup>29</sup> see Footnote 23.

exist at the local level, a legally recognized community organization that has been conferred the power to allocate rights both to groups and individuals at the community level. Therefore, the rights granter may be one or more institutions. Delving into who is the rights granter would become particularly important to understand the power and interests relationships governing the devolution process.

As in the case of rights granters, each category of tenure right holder may be broken down into more than one group or individual, for instance there can be more than one group of claimants or tenant for each resource system under study. Take for instance a forest where different groups are claiming recognition of access, use and control, e.g. a timber committee, a women's group committee or a cooperative. Therefore, according to Vatn, there can be two kind of rules in common tenure regimes: (a) those defining resource access and control, i.e. the bundle of rights, and (b) those defining who are members of the commons and those who are not (2005:256).

### **1.5.3. Tenure reforms as processes of institutional change**

I took an institutional change approach to understand why and how a change in rights on forest resources – either by recognition or devolution – takes place. Institutions in this context are defined as those governing rules, norms, conventions and agreements that facilitate coordination and explain the social behavior of individuals or groups of individuals and regularize life, support values and produce and protect interests (Ostrom, 1990; Bromley, 1991; Vatn 2005). Understanding how institutions that govern the use of natural resources affect the way they are accessed and managed and understanding the actors behind these arrangements as well as the interests and power relationships behind the way resources are distributed leads to a better understanding of the emergence of conflicts around resource control.

The theoretical discussion on institutional change can take place from different theoretical perspectives. For the analysis of changes in forest tenure institutions, the emergence of reforms and how these processes unfold, I have drawn on the work of classical institutional economists (Bromley, 1989, 1991 and Vatn 2005) and new institutional economists (Ostrom, 1990; Ostrom et al., 2002; North, 1990). However, it is important to pinpoint how these perspectives differ in the way they analyze institutional change (See Table 2). First, the classical school understands institutions as the result of a multi-rational process rather than individual rationality (the new institutional perspective). I was particularly interested in understanding how tenure reforms have promoted collective action to understand the extent to which mobilization efforts actually

resulted in institutional changes. I agree with the classical perspective of institutions that highlights the importance of analyzing the institutional context and historical conditions that shape institutions such as values, as well as power and interests relationships (Bromley, 1989). More importantly, the classical institutional economic school views institutions as the product of a social construction process (not the result of equilibrium), where preferences and behavior are dynamic and both transaction and information costs exist. Finally, institutions influence policy formulation processes, therefore all social actors play an important role in the public policy-making process (Vatn, 2005). While classical institutionalism has provided interesting elements for this work, references to the new institutionalism, in particular literature on commons property regimes, were also included in this work.

**Table 2. Comparing different schools of institutionalism**

|                                | <b>Neoclassical economics</b>   | <b>New institutionalism</b>  | <b>Classical institutionalism</b>  |
|--------------------------------|---|--|--|
| <b>Concept of Institutions</b> | Institutions defined as individual equilibria strategies, spontaneous       | Rules of the game, common constraints defining social behavior                   | Both external, common constraints and formative of the individual  |
| <b>Transaction costs</b>       | Non-existing  | Both transaction and information costs exist                                     | Both transaction and information costs exist   |
| <b>Rationality</b>             | Institution as products of individual rationality                           | Institutions as products of individual rationality                               | Institutions as a result of a multi-rational process   |
| <b>Institutional Change</b>    | Spontaneous – unintended. Rational choice as maximizing individual utility. | Intended - Institutional change to reduce transaction costs. Bounded rationality | Institutional change as intended and designed to protect interests, rationality dependent on the institutional context |

Source: Adapted from Vatn (2005, see Chapter 4 and 7), Ostrom, (1990); Bromley (1991), Paavola (2007)

### **Institutionalism in Ecological Economics**

In our review of the study of institutions in ecological economics, two main approaches have been identified. The first perspective proposes the use of institutional analysis as a methodological framework to assess legal, political and administrative structures and processes behind decision-making in the public policy sphere (see for instance the works of Di Marchi, 2000; Guimaraes-Pereira and Corral-Quintana, 2002; and Salgado et al., 2009). This perspective understands institutions as the set of regulations – usually statutory law – that affect the distribution of costs and benefits. According to these authors, looking into the institutional context is key to understanding the groundrules for conflict analysis and resolution. In the work of these authors, institutional analysis also provides a map of relevant actors as well as evidence of the existing values, interests, perceptions and roles of those stakeholders that intervene in

policy. In this perspective, institutional analysis is often employed as a social science method for analyzing social actors in the evaluation of environmental policy and management problems such as the analysis done as part of a social multi-criteria evaluation process (Monterroso et al., 2011; Salgado et al., 2009; Munda, 2008; Di Marchi, 2000).

A different perspective discusses how institutional analysis provides insight for developing governance solutions to environmental conflicts. Following the work of Paavola and Adger (2005), the concepts of interdependence and transaction costs are key to the understanding and resolution of conflicts over natural resources. Interdependence describes the situation where the choice of one agent influences that of another and becomes particularly important in the analysis of distributional issues and environmental conflicts around resources under scarce conditions (Paavola, 2007). Different sources and types of interdependence favor environmental conflicts. For instance, conflicts emerge when agents have incompatible interests and values, lack agreement over who gets to use which resources, or situations where unclear and insecure entitlements exist. Under this situation, Paavola argues that conflicts can be solved by "defining or assigning rights," i.e. changing institutions that define entitlements to resources (2007:95; Bromley, 1991). Institutional change becomes essential for environmental governance as institutions contribute to the resolution of environmental conflict by "either establishing, reaffirming or redefining entitlements in environmental resources" (Paavola 2007:95).

This concept, according to Paavola (2007), explains the existence of institutions independently of transaction costs, as institutions are adopted to resolve conflict whether or not transaction costs exist or are acknowledged (Paavola, 2005). In this sense this concept is valuable to analyze conflicts around distributional issues as they relate to tenure reform processes. On the other hand, the analysis of transaction costs can provide insight into the effectiveness of governance solutions including the choice of institutional response and under what circumstances certain institutional solutions fail. The analysis of transaction costs can shed light on the elements favoring successful reform implementation.

As argued by this author, "the current trend towards devolution and decentralization in the governance of environmental resources may be counter-productive when interdependence transcends the local context" highlighting the need to further understand tenure reform processes and outcomes (Paavola, 2005:356). First, it calls for the need to craft and analyze institutions behind resource entitlements to resolve conflicts; second, it calls for careful analysis of resource and resource users' attributes as the main sources of interdependence.

#### **1.5.4. Factors motivating changes in tenure rights**

One main motivation to promote changes in tenure is related to the need to gain or increase tenure security. The role of secure land tenure and clear tenure resource rights has been widely recognized as an important element of good forest governance and ensuring ecosystem goods and services provision. Secure tenure will influence how communities use and control land and other natural resources (Anderson, 2012; Robinson et al., 2014; Mwangi and Markelova, 2008). See for instance the recent guidelines endorsed by different governments on responsible governance of land fishery and forest tenure, proposed as a crucial element for eradicating hunger and poverty as well as ensuring sustainable land use (FAO, 2012:iv). Securing access to and control over forests and natural resources is broadly recognized as a necessary condition for reducing poverty, increasing food security and ensuring sustainable forest management (WRI and RRI, 2014; Seymour et al., 2014). These positive outcomes of tenure reforms are therefore major incentives for pursuing changes in regulations and other institutions governing the use and appropriation of natural resources.

For this research I understand tenure security as it relates to three aspects: the content, the perception and the actual practice of rights. The content refers to the extent to which the bundle of rights has been recognized. The perception and the practice of rights relate to the confidence of resource claimant(s) that they can benefit from exercising those rights and that the rights that have been granted will not be overridden; i.e., certainty that the rights allocated are recognized and protected formally in case they are challenged for a long time (FAO, 2002). Usually, security is also related to the certainty of right holders that they can recover their investment costs, in case their rights become overruled; that is why the duration of the rights as well as recognized due compensation are considered important, as short-term rights do not represent an incentive for investment (Almeida, 2015; RRI, 2012; Andersson, 2012).

Looking into how other researchers have analyzed motivations behind changes in tenure, two major works became particularly useful for my work. First, the work of Agrawal and Ostrom (2001), which analyzed decentralization as the devolution of rights in Nepal and India. These authors argue that there are two approaches in which factors that motivate reform may be analyzed. The first focuses on the consequences of the devolution process. It entails analyzing the outcomes of reform processes including impacts around efficiency, equity and resource sustainability conditions. The second suggests taking the analysis further and examining the politics of the reform itself (Vatn, 2005). According to this approach, combining both perspectives is important although they argue that it is the second perspective, the analysis of the politics of reforms, that provides further information into the motivations behind devolutions.

In his discussion around institutional change, Vatn (2005) examines motivations in changing regulations. While the list he provides is longer<sup>30</sup>, two elements agree with what Agrawal and Ostrom discuss and are particularly useful for this work: the first refers to motivations driven by efficiency considerations and the second to motivations driven by the intent to protect specific interests and values. These approaches are both considered intentional<sup>31</sup> institutional building processes (Vatn 2005:170-191). Vatn argues that collective action plays a central role in motivating institutional change in this analysis. He further argues that understanding motivations behind institutional change is fundamental to understanding how new institutions emerge and change (2005:170).

This section provides a quick overview of these perspectives to highlight the theoretical elements that have guided the methodological approaches employed for the analysis of forest tenure reform in this research work. Following Vatn's recommendations, empirical work around tenure reform provides insight into how the above elements explain tenure reform in forest areas. Additionally, I argue that guiding the analysis in the elements underlying the political process of the reform provides further insights into understanding the nature of conflicts around resource access, use and management.

#### **1.5.5. Two approaches to understand institutional change in forest tenure reforms**

##### **Institutional change driven by efficiency motivations**

In this perspective, motivations behind changes in regulations associated with forest tenure reforms and the emergence of new institutions is driven by the goal of improving the efficiency of the institutional and resource system, i.e. lowering transaction costs and ensuring resource sustainability. Following after the concept developed by Commons (1931), transaction costs refer to those costs incurred in the exchange of commodities, to which Williamson would further include those costs associated with regulation enforcement (1996). This second view of transaction costs becomes particularly important for my work around tenure reform processes. Therefore, acknowledging the existence of transaction costs follows the work of new institutionalism perspectives that challenge the neo-classical economics view where property rights are conceived as clearly defined.

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<sup>30</sup> His list includes: "(a) spontaneous creation of institutions; (b) designed institutional change aimed at increased efficiency, (c) designed institutional change to protect certain interests, and (d) institutional change as a reaction to crises." (Vatn 2005:187)

<sup>31</sup> Vatn uses the term "intentional institutional change" to differentiate from the neoclassical perspective that views institutional change as a product of spontaneous evolution (2005).

In the case of forest tenure reforms, this perspective would support the idea that in order to sustain changes in regulations, redistribution of tenure rights should keep investments from rights-holders and rights-granters, at a minimum including those that derive from rule compliance and monitoring conditions of resource systems. According to this perspective, lowering costs will be enough incentive to engage in these reforms by favoring a positive balance of benefits among all, including rights-holders, rights-granters and the resource system<sup>32</sup>. Therefore this perspective acknowledges the existence of trade-offs between the costs of establishing the right and the gains thereof. As will be further discussed in the following chapters, the analysis of transaction costs becomes quite relevant when analyzing the implementation processes.

In accordance with the new institutional perspectives, I was not interested in arguing in this work that a particular property regime, be it common, public or private, is more efficient. Rather my interest was analyzing existing transaction costs and benefits as perceived by groups of rights-holders and rights-granters and how these relate to the implementation of reform processes. Based on this, the existence or lack of transaction costs is conducive to sustained forest tenure reform processes.

### **The politics of the policy reform**

While transaction costs provide an indication of the effort required for ensuring rule compliance, it falls short of understanding equity implications associated with the reform. For this I analyzed how reforms redistributed costs and benefits and the implications this had for each social actor involved in the process. Such analysis is important as it sheds light on who gets the rights and who gains and who loses from the changes in the redistribution of such rights. This means understanding interdependence conditions as described by Paavola. It becomes particularly useful for understanding how changes in forest tenure have differentially affected individuals who are in vulnerable conditions within the community, for instance women and indigenous members of the group. It also allows for understanding how conflicts emerge around resource use and control. According to Larson (2010a) it is easy to ignore overlapping rights situations with regard to underprivileged groups, which is why it is important to understand existing roles, identities and interests of both women and men in regards to resources. I argue that in the analysis of forest tenure reforms, while lowering transaction costs is important both to

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<sup>32</sup> Benefits from tenure reform are then understood in the broad sense and may include increases in income generation, increases in the food security conditions of rights holders or in sustained forest conditions, improved resource use regulations, conservation of forest ecosystems and governance of resource systems, among others.



understand successful implementation and continuity of reforms, the legitimacy underpinnings of these reforms must also be analyzed<sup>33</sup>. Central to this is the analysis of how tenure reforms shift power and authority among rights holders and granters, which interests' issues are being protected and who benefits from this. This perspective argues that changes in statutory rights are driven by the need for efficiency as well as by a demand to redistribute rights.

I see then that the driving forces behind forest tenure reform include not only efficiency concerns but are the interests of reallocating forest tenure rights to generate benefits that are highly valued by groups of social actors involved. This contradicts an argument often mentioned as an incentive for making local communities a partner in forest conservation, i.e. the assumption that the costs of forest safeguarding, and thus also of related monitoring costs, will be reduced when local actors assume responsibilities for the conservation actions. Empirical work by Agrawal and Ostrom (2001) provides evidence that some devolution situations have indeed resulted in lower costs, at least for government agencies, but it is only because these costs are transferred to the local actors when the rights, and even more importantly the responsibilities, of forest safeguarding are transferred to them. In fact, however, the costs in absolute terms for ensuring monitoring compliance are sometimes higher for local communities than what the government invested (See Chapter 4).

In this view, the analysis of institutional change should also provide insight into the politics that shaped how the devolutionary initiative unfolded; this means examining not only the implementation of the reform but also understanding why changes in regulation occurred in the first place. Underlying this view is the approach that sees forest tenure reforms as processes where power and authority are constantly negotiated and contested to define institutions and social arrangements through which tenure rights are allocated. Here, identifying and grouping rights holders and rights granters according to their power and vested interests in tenure reform processes is as important as breaking down the bundle of rights to understand what type of right has been allocated. Vatn provides interesting insights into the State's role in his analysis of institutional change. He argues that state structures are not necessarily entities aimed solely at reducing transaction costs or even defending property but rather as power structures to protect the interests of certain groups, particularly elite structures that tend to concentrate the means of production. In this sense, he suggests analyzing how state structures are established to understand how they legitimate the authority that sustains tenure reform processes in practice.

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<sup>33</sup> Further discussion of the theoretical elements behind the view of legitimacy in relation to the analysis of tenure reform processes is provided in Chapter 4.

But as the State is only one social actor participating in the dynamics of institutional change, the analysis should also take into account the other social actors involved to understand which groups have the power to press for and make changes in institutional settings and understand what interests are behind their motivations (Bromley, 2001). Indeed, different interests exist in regards to resource access and control. These can be overriding (e.g. the public interest of sovereign States), competing, complementary or overlapping. Changes in rights to forests in the context of reforms are then a function of increased ability by different groups to define their interests and press for changes.

In the analysis of tenure reform I was then very interested in understanding which interests and values are protected and why. This meant examining the power, values and interests underlying the devolution process to respond to questions such as why powerful political actors at the central authority level would willingly devolve authority, power and resources to less powerful political actors at the regional and local levels. What interests and values are being protected or legitimized in this process?

#### **1.5.6. Forest tenure and collective tenure systems**

Referred to in literature also as communal tenure systems, land and forest collective tenure systems are those in which resource tenure is formally recognized or informally claimed by groups of people (collectives may include forest-dependent people, indigenous, peasant or Afro-descendant groups). While these types of regimes may also include recognition of rights to individuals, these rights are usually embedded within institutional collective agreements. The term communal tenure is often used interchangeably with the term collective property, common property and informal collective institutional arrangements related to land, forests or resources (Bruce, 1998; Bromley and Cernea, 1989; Baland and Plateau, 1996; Ostrom et al., 2002) when defining a resource characterized by specific features rather than a kind of management created by a group of people or an existing property regime form (Ostrom, 1990).

Most recent work on commons takes after the work of Ostrom (1990: 30)<sup>34</sup>, who defines common pool resource systems as a “natural or man-made resource system that is sufficiently

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<sup>34</sup> Further readings on commons scholarship and practice can be found in the International Journal for the Study of the Commons, focused on understanding institutions for use and management of resources that are (or could be) enjoyed collectively: <https://www.thecommonsjournal.org/index.php/ijc/about/editorialPolicies#focusAndScope> (last accessed 06/17/2014). Particularly interesting to approach the research questions in this dissertation are the works of Larson and Lewis-Mendoza, 2012; Armitage, 2008; Agrawal, 2007.

large as to make it costly (but not impossible) to exclude potential beneficiaries from obtaining benefits from its use”. Examples of common pool resource systems include watersheds, grazing areas, forests and irrigation channels. This type of resource system can be accessed both by individuals and groups, however this dissertation is interested in analyzing areas where the collective (either in the form of a legally organized indigenous group or a forest community) has been granted rights over the appropriation and regulation of common pool resources.

Much of the work from commons scholars emerged as a critique to Hardin’s (1968) article on the “tragedy of the commons,” arguing that when using resources collectively, many individuals have access to resources open to commons, leading to degradation and depletion. By confusing common property regimes with open access, Hardin’s work ignored the fact that under certain circumstances, groups of individuals may actually develop rules, norms and agreements, i.e. *institutions*, to govern resource systems with varied degrees of success in the long term (Ostrom, 1990; Ostrom et al., 2002). Hardin’s work was used as the scientific basis to support re-centralization policies that have led to reinforced state control of resources or proposals around the privatization of resources as the way to ensure maintenance of ecosystem goods and services as well as solve allocation and depletion problems (Ostrom, 1990).

It is important to notice here that the work on commons goes beyond the analysis of institutions and the role they play in the way people organize resource access, use and management. For instance, the work of these scholars has been particularly useful in the development of interdisciplinary frameworks for the analysis of sustainability of complex socio-ecological systems (Ostrom, 2009) as well as other theoretical perspectives for the analysis of adaptive socio-ecological systems (Berkes and Folke, 1998). Important works have also analyzed attributes of common pool resources as well as user systems and external conditions evidencing key principles that shape human resource (over)use and characterize successful governance institutions as well as resilient management options (Ostrom et al., 2002; Agrawal, 2001; Ostrom, 1990; Baland and Plateau; 1996). Other works have analyzed critically existing forms of exclusion within governance systems of common pool resources that marginalize vulnerable groups, including women (Agrawal, 2001; 2003). Recently, important works have drawn on the theoretical perspective of the commons for the analysis of resource governance systems to understand how resource users invest and design complex systems to govern the way resources are accessed and controlled (Agrawal, 2007; Agrawal and Gupta, 2005; Young, 2002).

### 1.5.7. Tenure reform as practices of territoriality

Analytical work on institutions sheds light on how entitlements to natural resources are distributed via property rights and the institutions governing these situations. I was interested in further understanding the politics of reform processes and to this end other theoretical approaches from environmental historians, political geographers and political ecologists were useful to provide a more critical approach, particularly their discussions on space production and socio-environmental conflicts. I wanted to understand how institutions shape the processes of appropriating nature, and how changes in the redistribution of rights in time provide further insights for analyzing socio-environmental conflicts.

Therefore, while Chapter 4 analyzes the characteristics and outcomes of recent reform processes, Chapter 3 expands the analytical exercise both in space and time to understand reform emergence so as to analyze the politics of reform as processes of ongoing contestation of power, authority and interests. I argue that in the context of Guatemala and Nicaragua, these tenure reform processes can also be understood as practices of territoriality (Sack, 1986) or, as defined by Brenner and Elder (2009), as practices of state territorial strategies. Following the work of Lefebvre (2009) on the politics of space, these authors refer to the capacity of the State (and capital) to use different means to consolidate and organize space. According to these authors, such means "represent powerful instruments of intervention for all social and political forces concerned to mobilize state power as a means to reorganize socio-spatial relations" (2009: 368). I argue that tenure reforms are state territoriality practices and can be analyzed as territorial strategies to further understand the motivations, actors and struggles of power and interests behind the appropriation, access and control of natural resources<sup>35</sup>. To support this argument I analyzed public policies from a historical perspective, analyzing key moments that have shaped institutional change, including state projects, programs and policies that have (re)defined property rights – particularly those related to natural resources.

In both research sites the allocation of property rights around land, and even more importantly around forests, is a recent process, therefore changes and redistribution could be traced to different tenure reforms in time. In fact, both the Petén region in Guatemala and the North Atlantic Coast of Nicaragua could be characterized using the "frontier concept" as defined by Hennessey to discuss Latin American history (1978:19)<sup>36</sup> and describe the occupation of frontier lands and their relationship to dominant political and economic centers. More importantly these

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<sup>35</sup> Here the concept of access follows the work of Ribot and Peluso (2003) on the theory of access defined as "the ability to derive benefits from things."

<sup>36</sup> For a recent literature review on the concept of frontiers in Latin America, review the work of Rausch (2010).

regions provide further insight into how the allocation of rights has favored capitalism's penetration by means of accumulation and appropriation of natural resources in these frontier regions (Grandia, 2007). As discussed in the work of Foweraker (1981) in three pioneer frontier regions in Brazil, capitalist penetration can be further analyzed in the context of accumulation and appropriation cycles facilitated by introducing or changing entitlements to the means of production.

### **Theories of space production and territoriality**

The concept of space provides a more critical view on how property rights are at the core of processes of contestation of power and authority not only over territories, but also over natural resources and even people. The struggle for control over access to resources – as well as labor, markets and other means of production – is, according to Harvey, a struggle over territory and space (2001:134). This author argues that the organization of space, for instance by means of allocating rights for the appropriation of nature and labor, can be analyzed in the light of current accumulation processes that require spatial changes to ensure fluid relationship between things and space. This argument takes after Lefebvre, who argued that capitalism survives through the production of space to explain that the accumulation and appropriation process requires the rationalization of space, such as entitlements to resources and land, to ensure efficient production processes. In fact Harvey argues that any struggle to change power relations is a struggle to reorganize the spatial basis of this power, which I argue provides insight into understanding the politics of tenure reform processes (2001). This is particularly relevant as those who define the territorial distribution of political and economic powers, including the distribution of rights, usually are those who can obtain the larger benefits from this allocation.

Scott for instance, uses the example of the emergence and use of cadastral maps – to override social practices that defined land tenure customs in the emergence of modern States in Western Europe – to discuss that these new maps not only defined new land tenure systems that facilitated tax collection but also represented a means to control legitimate state power and make the exercise of modern state authority easier (Scott, 1998). As discussed by this author, the organization of space was an act marked by the play of power relationships. To understand better the motivations behind tenure reform in forest lands, the concept of territoriality is particularly insightful to identify the interests at play in the redistribution of rights.

Among scholars who have used the territoriality concept, Sack's work has been particularly thought-provoking, as he argues that the definition of property rights and institutions has been key in establishing territoriality. For this author, territoriality is one form of organizing space. In his work on human territoriality, Sack (1986:19) argues that territoriality is "a spatial strategy to affect, influence or control resources and people" that could involve "any attempt by an individual or group to influence, affect or control objects, people and relationships by delimiting and asserting control over a geographic area" (Sack, 2010:56). Territoriality strategies aim at affecting, influencing and controlling people and their relationships to space as a way to control access to things and relationships among people. Embedded in the concept of territoriality are the ways in which people use the land, organize themselves in space and give meaning to a place. Territoriality refers not only to the outcome of power, but also strategies by which power is exercised and legitimized.

According to this author, territoriality can be defined in a number of ways, including the way property rights to land and resources are allocated. In fact, he argues that introducing rights to land can be a source of inequalities as they institutionalize a differential form of access to resources (Sack, 2010). In particular, as territoriality strategies can be used to displace attention from existing power relationships between who controls and is being controlled in the territory, "it is not competition for space that occurs but rather a competition for things and relationships in space (2010:59)." What becomes quite interesting from this work is the existence of territorial rules as those forces that explain how social relations relate to nature and give meaning to places. Chapter 3 will draw on these concepts to analyze Guatemalan state territorial strategies around resource control and governance.

## **Chapter 2. Tenure reform processes in Central America: methodological approach, case study work and data collection tools**

This chapter discusses the methodological approach and provides descriptive and contextual elements. First, it discusses key processes that have shaped reforms in Latin American forestlands. Second, it provides crucial information on tenure reforms at the national level for the cases of Guatemala and Nicaragua, presenting the case study work. Last, it discusses data collection tools.

## **2.1. Methodological approach**

The previous chapter discussed how forest tenure reforms emerge from a combination of factors including socio-political, economic and biophysical elements that are embedded within broader historical processes. These elements include the characteristics of the resource systems, nature of national political regimes, relationship of local people with land and forest resources, global environmental and rights discourses at the time, international agencies and flow of funding, strength of civil society and social movements, attitude of and incentives to individuals within the bureaucracy to promote reforms, and the capacity of local communities, government agencies, non-state actors and market forces (Larson et al., 2010a.).

I have used the framework presented in Figure 2 to characterize reform processes and analyze outcomes on forests and livelihoods. This framework characterizes reform as ongoing and dynamic in which the emergence and implementation processes are central to the analysis<sup>37</sup>. This includes understanding the type and goal(s) of the reform as well as identifying key actors, interests and interactions at different governance levels. Implementation is non-linear, constantly changing and modifying reform goals as interests and power relationships vary, in which resistance, change and adjustments are the norm. What happens on the ground depends substantially on how the reform is implemented, including the role of government officials and social mobilization. Conflict may occur at different moments in the reform as social actors oppose or appropriate reform processes.

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<sup>37</sup> The development of this methodological framework to analyze forest tenure reforms is an ongoing effort, and has benefitted from numerous discussions and joint work with Anne Larson, who is coordinating a global comparative study on forest tenure reforms. I am participating in this study in charge of the work in Peru.



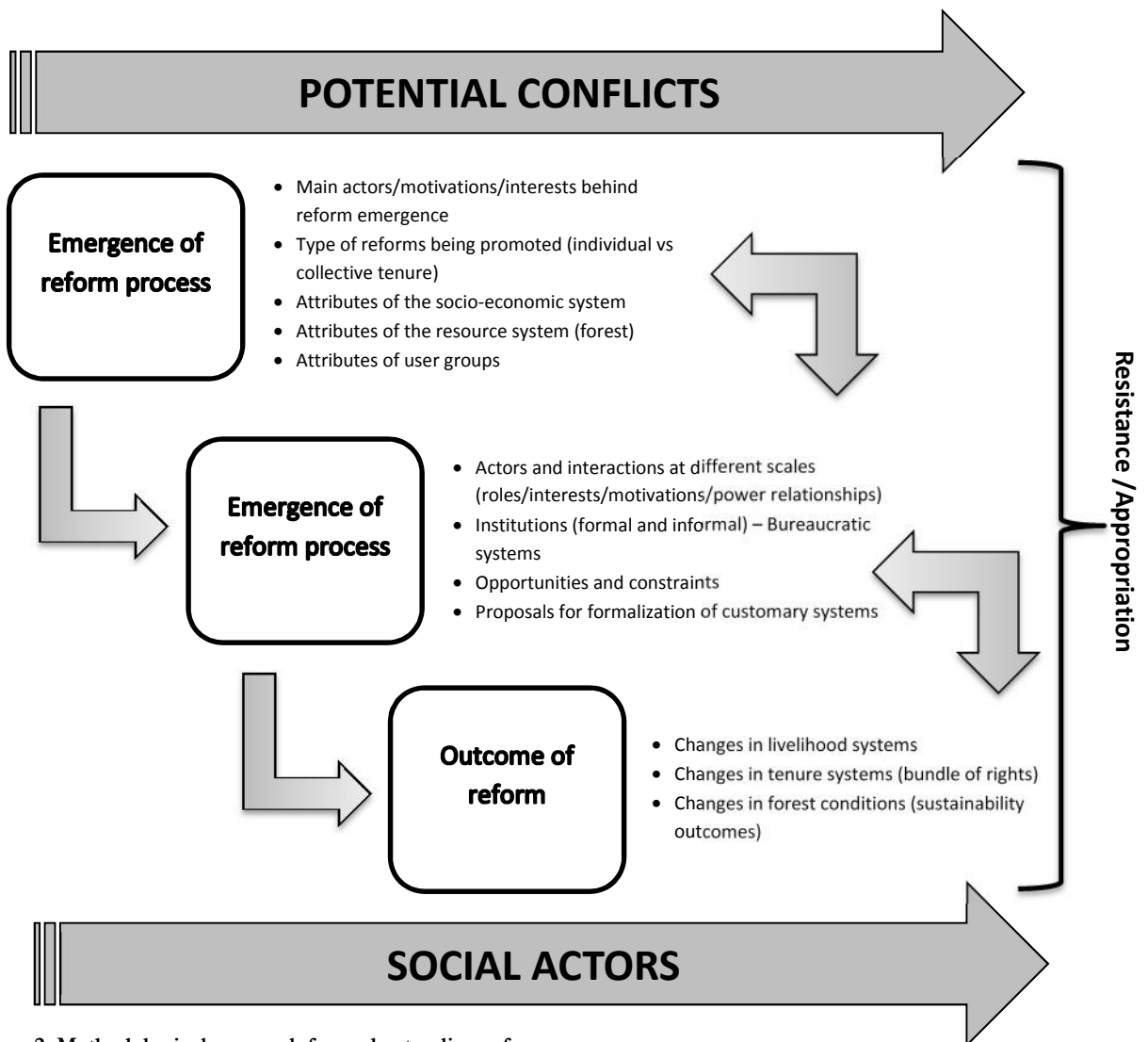


Figure 2. Methodological approach for understanding reform processes

**Table 3. Summary of research objectives, questions and data collection instruments**

|                       | <b>Research Objective</b>   | <b>Research questions</b>  | <b>Spatial Scale of Analysis</b>  | <b>Data collection instrument</b>  |
|-----------------------|---|--|---|--|
| <b>Emergence</b>      | To analyze and discuss what the characteristics of forest tenure reform have been as well as the main factors motivating recent changes in tenure rights over forest areas in Central America | <ul style="list-style-type: none"> <li>▪ What factors motivate and shape emergence of tenure reform processes at the regional and local level?               <ul style="list-style-type: none"> <li>○ What are the contextual elements that catalyze emergence of forest tenure reforms in case study countries?</li> <li>○ How do different social actors participate in the emergence of forest tenure reforms? What roles do these actors play favoring or opposing tenure reform processes?</li> <li>○ To what extent does existing legislation include provisions that formally recognize collective forest tenure rights to indigenous and other forest communities?</li> <li>○ To what extent does tenure reforms recognize individual as well as collective tenure?</li> </ul> </li> </ul> | <p><i>Guatemala:</i> National and Regional (Petén - Mayan Biosphere Reserve) -</p> <p><i>Nicaragua:</i> National and Regional (North Caribbean Coast Autonomous Region - RACCN) -</p>                             | <ul style="list-style-type: none"> <li>▪ Historical analysis including review of key literature, periodicals and archival material.</li> <li>▪ Legal analysis</li> <li>▪ Stakeholder analysis</li> </ul> |
| <b>Implementation</b> | To examine what the role of secondary level organizations has been in the continuity and success of tenure reforms  | <ul style="list-style-type: none"> <li>▪ What conditions surrounding the devolution led to the continuity of forest tenure reform?               <ul style="list-style-type: none"> <li>○ Who are the key actors in tenure implementation? What are their key roles and responsibilities, incentives, motivations? Which actors are critical at what points of the implementation chain and in what way?</li> <li>○ What factors are affecting the ability and effectiveness of civil society to influence implementation?</li> </ul> </li> </ul>  | <p><i>Guatemala:</i> National and Regional (Petén - Mayan Biosphere Reserve) -</p> <p><i>Nicaragua:</i> National and Regional (North Caribbean Coast Autonomous Region - RACCN)</p> <p><i>Nepal:</i> National</p> | <ul style="list-style-type: none"> <li>▪ Stakeholder analysis</li> <li>▪ Key informant interviews</li> <li>▪ Participatory Forums: Workshops</li> <li>▪ Participant observation</li> </ul>               |

|   |  |   |  |  |
|---|--|---|--|--|
| <p style="text-align: center;"><b>Outcome</b></p> | <p>To explore and analyze the impacts of tenure rights changes at the community level with respect to livelihoods and the conditions of the ecosystem where this reform took place</p> | <ul style="list-style-type: none"> <li>▪ How institutional change brought about by reforms changes tenure rights and impact local community livelihoods and forest conditions? <ul style="list-style-type: none"> <li>○ How has the transference of rights to local actors played out? What are the modes of transfer of rights? What rights were transferred and who benefited from this devolution?</li> <li>○ Who allocates the rights? Where does the authority and legitimacy to allocate rights come from? Who enforces/guarantees rights?</li> <li>○ What are the main outcomes on livelihoods and forest conditions associated with forest tenure reform implementation?</li> <li>○ What are the changes in rights held by women and men to forest and tree resources prior to reform and currently? What have been the implications on benefits, livelihoods and forest management regimes?</li> </ul> </li> </ul> | <p><b>Guatemala:</b> National and Regional (Petén - Mayan Biosphere Reserve)</p> <p>Communal and Grassroots Organization (Association of community concession organizations ACOFOP and community concession organizations Arbol Verde and Carmelita)</p> | <ul style="list-style-type: none"> <li>▪ Stakeholder Analysis</li> <li>▪ Key informant interviews</li> <li>▪ Focus group discussions</li> <li>▪ Household survey</li> <li>▪ Participant observation</li> </ul> |
|---|--|---|--|--|

Table 3 summarizes how the elements of the framework relate to research questions and presents the data collection instruments used to respond to the research objectives. Contextualizing how reform processes emerge enables the identification of the key events and interactions of social actors that shape reforms. An analysis of the social actors involved in the implementation chain is relevant to show how key stakeholders coordinate among sectors both within and outside state institutions to understand their implementation roles, interests and capacities. These will be important elements to understand the reforms' legitimate underpinnings. The literature shows that the last 15 years of reforms have provided uneven and somewhat unclear outcomes across countries (RRI, 2014; Larson et al., 2010a). This dissertation analyzes reform outcomes as they favor changes in tenure rights and both livelihood and sustainability conditions as perceived by social actors.

## **2.2. Data collection tools**

The collection of data for this dissertation took place between 2007 and 2013 and was carried out at different levels (See Table 3). While this section provides a quick overview of the data collection methods, subsequent chapters provide additional conceptual and methodological elements as needed to respond to specific objectives and questions.

This research combined different quantitative and qualitative tools including semi-structured interviews, household surveys, focus groups and workshops to collect information and promote the participation of local stakeholders in the discussion of the origins, nature and outcomes of the forest tenure reform. Ethnographic methods including participant observation and key informant interviewing were central in the data collection. Continuous involvement in the activities of the networks, coalitions, organizations and communities studied (especially those analyzed in Guatemala) allowed me to participate in advocacy events, training activities and extensive informal conversations that provided invaluable insights.

At the regional level, extensive literature reviews of a variety of sources including academic journals, historical archives and data from periodicals data were key in identifying contexts that allowed the characterization of reform processes and the spectrum of land and forest tenure regimes in study areas. Information on relevant political and economic trends was collected for the areas of influence of the tenure reforms analyzed. Additionally, participatory workshops were conducted to present preliminary results and promote

collective discussions about forest management scenarios, existing rules about forest management, conflicts around resource control and appropriation. In Petén, Guatemala, information was collected between 2007 and 2013, and works in the RACCN, Nicaragua, was undertaken between 2007 and 2013, as was the case study analyzed on Nepal.

Also at the national and regional level, interviews were done with different stakeholders affected by or affecting reform processes, including government representatives from different sectors (forest, agriculture, land and indigenous affairs), indigenous organizations, environmental and development NGOs, research organizations and other community organizations, to gather information about the regional context in both countries. About 75 semi-structured interviews were done during the research period in Guatemala. Informants were selected among the main actors involved in the emergence and/or implementation of these reforms. The interview guide elicited aspects on existing rules and other institutional arrangements around forest management and also collected information associated with implementation (the complete interview guide used during this research is found in Annex 2). Interviews were also conducted to collect expert judgment, database material and other specific technical aspects of forest management including information on deforestation, forest fires and other indicators of changing forest conditions. During the interviews, participants were asked to list relevant stakeholders that they believed should participate in the debate. In doing so, internal consistency in the selection of stakeholders was verified to ensure representation of existing perspectives. Additional interviews (23) were done to collect information on the nature of the reform process in Nicaragua, while others collected additional information on the Nepal case by interviewing FECOFUN representatives. Interview guides in these cases focused on specific aspects of the reform process in the former and the mobilization process in the latter.

Work at the local community level was conducted only for the Guatemalan case, using both qualitative and quantitative techniques that included ethnographic and participatory techniques to study reform processes across existing types of reforms and generate in-depth understandings of implementation processes, interactions and outcomes. These include household questionnaires, semi-structured and group interviews and focus group discussions. In communities, questionnaires were used to gather information at the household level. The household survey questionnaires were divided into three sections, the first gathering information on family composition and socioeconomic conditions, the second focusing on livelihood strategies and the third gathering information on

organizational and institutional aspects (a sample of the survey used during this research is found in Annex 3). Additionally, at the community level I also used a guide that gathered information on population composition, public services, current community organizations, existing developing projects and major community problems and perceptions.

Other qualitative techniques included semi-structured and group interviews with local organizations, while focus group techniques were used to gather information on the way the reforms affected vulnerable groups, in particular women. Guidelines for focus groups were structured following the research project's general content and included tools to gather the community-level perception of current conditions and issues related to the tenure reform. Specific information on forest management, major products obtained from the forests, identification of groups extracting resources from managed forests, rules and norms associated with access and extraction of major forest resources (timber and non-timber), perception of dependency on forest resources, perception of the major problems and conflicts within the community related to the forest, perception of the role of external organizations as regards the community and concessionaire organizations.

This dissertation follows a case-study approach often used by the social and environmental sciences, which focuses on selecting a particular case with the aim at capturing the complexity. Communities or groups of communities representing different tenure arrangements or models were selected for in-depth research. (For a list of the case studies analyzed see Table 4) Depending on the nature of the organization managing forests, the research included work at the territorial or sub-regional level, collecting information from a group of communities, an association or enterprise, or the community. I collected all of the field data for the case of Guatemala. In the case of Nicaragua, I collected data at the regional level, while information at the community level draws from results obtained in a previous study (Larson and Mendoza-Lewis, 2009).

Table 4. Research sites and tenure models analyzed

| Country   | Region  | Community   | Tenure model studied  |
|-----------|---|-------------|---|
| Guatemala | Petén   | Carmelita   | 25-year community concession contract (community living inside forest area)   |
|           |   | Arbol Verde | 25-year community concession contract (concessionaire members living in nine different communities outside the forest area) |
| Nicaragua | North Caribbean Coast Autonomous Region - RACCN | Tasba Raya  | Indigenous communities being demarcated and titled as indigenous territories  |
|           |   | Layasiksa   | Indigenous communities being demarcated and titled as indigenous territories  |

The next section provides an overview of these case studies. The extent to which each one is further developed in subsequent chapters varies to respond to research objectives. The case of Petén, Guatemala, is central to our analysis of reform processes and is analyzed throughout all remaining chapters. Factors motivating reforms in this region of Guatemala are analyzed from a historical perspective in Chapter 3, in which I analyzed state territorialization strategies shaping resource appropriation and modifying tenure arrangements in these forestlands. The community concession system represents the most recent reform in Petén; outcomes of it on livelihoods and forests conditions are discussed in Chapter 4. Chapter 5 further discusses the role of grassroots organizations by comparing the role that second-level organizations played in the democratization of forest governance in Guatemala and comparing this to a case in Nepal. Finally Chapter 6 takes a different approach, comparing similarities and differences in the nature and outcomes of reforms in Guatemala and Nicaragua and discussing theoretical approaches to study forest commons.

### 2.3. Forest tenure reforms in Latin America

In comparison to issues of land and agrarian reforms, the analysis of forest tenure reforms is recent to both practitioners and academics (Pacheco et al., 2008, Pacheco and Barry, 2009, Larson et al., 2010a, Larson, 2010, FAO, 2011)<sup>38</sup>. Efforts to respond to the need of improving rural populations' access to land as a means to attain development goals have for many years been the basis for promoting agrarian reforms (FAO, 2011). However, as much effort was placed in implementing different types of land reforms with varying

<sup>38</sup> Land reform refers specifically to the redistribution of ownership to land (Cousins et al., 2005) and forests (Larson et al 2010a) while agrarian reform is further concerned with the politics and economic conditions from which production and distribution relations are defined.

results, this work takes a different approach to the issue of property right allocation. While most efforts to implement land reform argued that the only way to secure tenure, enable income generation and avoid poverty was by ensuring property rights via individual land and resources titling,<sup>39</sup> significant work has challenged the panacea of viewing private property as the most efficient way to solve resource allocation problems (Ostrom et al., 2002; Bromley, 2001; Baland and Platteau, 1996; Bromley and Cernea, 1989).

Indeed, tenure reforms in the forest sector harbor some fundamental differences from land reforms, while other elements stemming from those differences become more important for determining forest tenure security (Robinson, 2014; Barry et al., 2010; Pacheco et al., 2008). Most important is the political context in which these reforms have emerged. As discussed by Larson (2010a), while land and agrarian reforms have been shaped by the demand of peasant movements to increase their land access as a way to alleviate rural poverty and unequal access to production assets and improve livelihood conditions, forest tenure reform on the other hand have been shaped by indigenous movements and their claims to recognition of ancestral territorial rights and by the environmentalist movements' concerns over deforestation and forest degradation. Most recent studies analyzing forest tenure reform have also focused on decentralization of the forest sector and how the negotiation of climate change mitigation and adaptation policies has promoted changes in regulations that affect tenure regimes in forest areas (WRI and RRI, 2014).

At least four characteristics differentiate forest reforms from agrarian reforms (Barry et al., 2010:20-23). First, in most of the current forest tenure reforms, the State retains alienation rights and thus continues to have an influence (real or theoretical) in regulating access rights writ large. It also prevents the forestland from being legally sold. Second, these reforms focus on tenure rights to resources more than to land. Despite the fact that in some countries legislation makes reference to land, it is the access to forest resources that is at the center of the current forestlands reforms. Different to what tends to occur in land reform situations, where the assertion of one's right involved removing forest cover for agriculture or cattle ranching purposes, in forest tenure reform processes forests are expected to be conserved as a condition of the new rights (Larson, 2010a). Third, collective property regimes are the most frequent property regime type found in forested landscapes,

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<sup>39</sup> As a good example of this perspective, see the work of Hardin (1968), who proposed privatization to solve the "tragedy of the commons," and de Soto (2000) on the role of formalizing private property in development. This author argues that formalizing property via individualization of rights promotes the division of labor and productivity increases make capital accumulation possible.



many with common property as an integral part of the tenure arrangements. It also means that rights over forests can allow for multiple users of various forest resources. Fourth, the collective and common property regimes imply the existence of social relations and institutions that in one form or another govern access to and use of the land and natural resources. It is this body, group or set of groupings that will need to be organized and recognized to receive these rights. Thus, the forest reform tends to be more complex in nature, given the multiple functions of forest resources for goods and services provision, and the wider range of actors who share rights to common resources (Pacheco, et. al 2008).

According to Larson (2010a), these characteristics of forest tenure reforms have important implications concerning three aspects. First, the reforms are usually based on pre-existent customary rights to the same lands and or resources since rights have been recognized to groups already living in the forests. Second, the reforms usually imply recognition of an existing governance structure and therefore issues of governance, authority and representation are highly relevant. Finally, the fact that rights recognition takes place in forest areas makes concerns for conservation important drivers, implying that tenure rights are often combined with responsibilities including regulations to ensure maintenance of forest cover and ecosystem preservation.

#### **2.4. Processes shaping forest tenure reform in Latin America**

Historically, Latin American governments have promoted policies around land tenure that have often ignored existing informal institutions governing forestlands, including customary systems. Moreover, policies promoting economic development have encouraged the colonization of lowland regions, favoring policies that aim at incorporating extensive portions of forest lands to be dedicated to commercial agricultural production, also overlapping areas occupied by indigenous, Afro-descendant and forest communities (see for instance Jones, 1990; Hecht, 1985; Foweraker, 1981; Dozier, 1969). Despite this, significant reforms in the last 50 years have resulted in changes in the institutions governing tenure rights in forest areas.

In their work around tenure reform in Latin America and other large forested developing regions, Larson (2010a) and Barry et al., (2010) argue that at least four processes have shaped forest tenure reform. These include land reforms, social mobilization from indigenous, emergence of conservation movements and decentralization.

#### 2.4.1. Land reforms

Important land reforms in Latin America took place after the 1960s in the midst of constant political changes and social unrest, with several countries in the region under dictatorial regimes. In the case of Central America, three countries went through civil war: Guatemala (1960-1996), El Salvador (1980-1992) and Nicaragua (1981-1990)<sup>40</sup>. Armed conflicts in El Salvador and Guatemala included claims for agrarian reforms aiming at the (re) distribution of land to landless peasants and changing existing land tenure structures (Melville and Melville, 1971). In Nicaragua, internal confrontations between the revolutionary government and the contras included claims over land. However, limited change is still evidenced today for the two countries that actually promoted land reforms (El Salvador and Nicaragua, and certainly not for the one where a reform did not occur (Guatemala). In Nicaragua, however, while the revolutionary government promoted collective titling of land through the establishment of cooperatives and other forms of peasant associations, studies indicate that in 2000 big land concentrations were again very similar to those found before the 1979 revolution (Baumeister and Fernández, 2001). Recent studies indicate that even for countries like Guatemala, which followed a market approach to reform the land structure, the situation has worsened in some regions, where about half the land titled to peasant communities as individual titles has since been lost to big landowners for agro-industrial production (Grunberg et al., 2013). However, although land reforms in the region were not as successful in changing the land tenure structure or even furthering the recognition of collective rights as expected, they allowed mobilization by peasant organizations and the emergence of indigenous organizations that provided some successful examples of collective land claims recognition. In Peru, for instance, the military government-driven constitutional land reform in the 1970s recognized rights to indigenous populations that allowed new regulations protecting collective land rights<sup>41</sup>. The Mexican agrarian reform in the early 1900s established some of the first and best-known collective tenure regimes in Latin America. The revolutionary government established *ejidos* and agrarian communities and handed large portions of land to indigenous and peasant communities.

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<sup>40</sup> It is important to note that in the case of Nicaragua, after the insurrection to overthrow Somoza, the emergence of the contra movement against the revolutionary government also resulted in violent internal confrontations particularly affecting the Caribbean Coast after the 1990s.

<sup>41</sup> In Peru, the first land reform occurred in 1974, a contra-reform took place in 1979, current law guiding the titling of collective indigenous territories, referred in the law as native lands (for further discussion on this topic see Chiriff, 2012; Plant and Hvalkof, 2001).

#### **2.4.2. Indigenous movements and the recognition of indigenous territorial rights**

Indigenous mobilizations in Latin America date back to colonial times, however it was not until the 1980s that movements advocating the recognition of indigenous claims were able to promote the abandonment of assimilation policies and the adoption of multicultural and identity policies (Barry et al., 2010; Stavenhagen, 1992; Yashar, 1999; 2005; Hale, 1997). This mobilization centered on the recognition of ethnic identity and political autonomy and pushed for the recognition of land and resource rights claims, enabling the institutionalization of local customary regimes and indigenous community practices. In her discussion of the impact of land reforms on the Latin American indigenous movements, Yashar argues "the legal registration of communities and granting of community-based property created a legally defined, state-sanction geographic area that allowed for the growth and/or maintenance of politically autonomous local enclaves, indigenous culture, and political practices" (1999:83).

According to Roldan (2004), countries enacting progressive reforms around collective rights with some relation to land and resources include Brazil (1989), Colombia (1991), Paraguay (1992), Argentina (1994), Bolivia (1995), Ecuador (1998), Venezuela (1999), and Mexico (2001)<sup>42</sup>. Concurring with international regulations such as ILO Convention 169, approved in 1989<sup>43</sup> and adopted by most countries in the region (except Belize, El Salvador, Guyana and Suriname<sup>44</sup>), indigenous movements have taken the lead in advocating for collective territorial rights.

Two significant elements are important when understanding tenure reforms that deal with indigenous populations. First, the collective right to land forms an essential part of indigenous peoples' identity and is essential to ensure their cultural reproduction and political autonomy (Convention 169, Part II, articles 13-19). The concept of territory rather than land is often used in claims as well as in some regulations, requiring a closer discussion of the concept of territory as a figure of space and how cultural and social elements are embedded in collective practices around land and forests (Davis and Wali, 1994; Hvalkof, 2002; Larson and Soto, 2012). The use of territory as the legal form to recognize collective rights to land is more common in Amazonian countries (Roldan 2004). In Central America, however, while Panama and Costa Rica engaged in reforms that

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<sup>42</sup> While constitutional reforms have recently occurred in Ecuador (2008) and Bolivia (2009), these still maintain regulations protecting collective rights of indigenous populations.

<sup>43</sup> Full text of the Convention can be reviewed at [http://www.ilo.org/wcmsp5/groups/public/---ed\\_norm/--normes/documents/publication/wcms\\_100910.pdf](http://www.ilo.org/wcmsp5/groups/public/---ed_norm/--normes/documents/publication/wcms_100910.pdf).

<sup>44</sup> Data obtained from <http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:1:0::NO::> (accessed May 12, 2014).

recognized collective lands to indigenous populations since the 1970s<sup>45</sup>, discussion around territorial rights has been stronger since the 2000s, in particular after Nicaragua and Honduras advanced reforms recognizing indigenous territories. The process has been much slower for countries like Guatemala and El Salvador<sup>46</sup>; despite the larger indigenous population existing in Guatemala, the Constitution only recognizes the figure of communal lands<sup>47</sup>.

The second important element is the coexistence of large forest lands and the areas that indigenous claim as their territories (Chapin et al., 2005) evidencing existing social arrangements at the local level around the use and management of natural resources before the reforms took place. Therefore, when understanding tenure reforms that coincide with indigenous peoples' lands, further understanding of existing customary systems governing forest resources is important whether or not they are being recognized by statutory reforms.

During the last twenty years, land titling systems were set in place formalizing indigenous ownership of land in different countries. The advance in the devolution and recognition of rights to indigenous populations is considerably larger in South America than in other developing regions because regulations have had a longer history of endorsement and larger extensions of land have been recognized. Brazil accounts for a significant amount of this change in forest tenure distribution through lands designated for and owned by communities and indigenous peoples (RRI and ISA, 2015; RRI, 2012). Other reform processes in countries including Colombia, Ecuador and Peru account for about 10 million ha under collective tenure. Some of these reforms started more than 20 years ago. Take for instance the case of Colombia: since 1991 this country, after endorsing ILO Convention 169, enacted a new Constitution that recognized rights benefiting both indigenous and Afro-descendant communities, allowing for a series of reforms that further advance and consolidate the recognition of their rights (van de Sandt, 2003). However, less information is available for the Central American region, where reforms are more recent.

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<sup>45</sup> Reforms around collective land rights for indigenous populations in Panama was based on the concept of *comarca* while in the case of Costa Rica the concept adopted was of *reserve*. Both represent legal figures of collective landholdings.

<sup>46</sup> Actually, not until 2014 did the Salvadoran parliament ratify a constitutional reform that recognizes the existence of Indigenous Groups in this country (<http://www.telesurtv.net/articulos/2014/06/13/parlamento-salvadoreno-ratifica-enmienda-que-reconoce-a-los-pueblos-indigenas-2798.html>; <http://www.un.org/spanish/News/story.asp?NewsID=29738#.U6nSRLEuKSo>).

<sup>47</sup> Further discussion of the Guatemalan case will be developed in the following chapter.

A significant part of Central America's forests are located on land under common property regimes that have been formally or customarily defined, benefitting more than 3 million people. In fact, several recent changes in statutory rights have been made in favor of local communities in the region. In Nicaragua, about 3.5 million hectares have been titled to indigenous territories, with most titling taking place after 2000 (CONADETI, 2013; Larson and Soto, 2012; Larson 2010), for a total of some 30% of the country's land area. About 70% of the country's remaining natural forests are found in this region. About 750,000 ha of forests are located on indigenous *comarcas* in Panama, about one third of the national forested area (ANAM, 2009; PROARCA and IUCN, 2005). Further extensions of land are in the process of being titled as a recent law issued in 2008 protects collective lands outside of *comarcas*. In Guatemala, some 400,000 ha are under community forest concessions in the Petén, and another 1.2 million ha are under other forms of communal tenure, representing about half of the total forest area in the country (Grupo Promotor, 2009; PROARCA and IUCN, 2005). In Honduras, 37 community forest management contracts had been signed with organized community groups since the last reform to the Forest Code in 2007, accounting for more than 350,000 ha by 2012 (ICF, 2012). Additionally, more than 1 million ha were titled in the Honduran Mosquitia<sup>48</sup> as twelve indigenous territories were legally recognized by the government since 2013.

#### **2.4.3. Conservation movement**

Worldwide since the 1980s, conservation initiatives aiming at reducing biodiversity loss set goals to increase as much as 10% of the earth's surface to establish protected areas as the main conservation policy responses to secure lands from environmental degradation (Brockington et al., 2008; Sodhi and Ehrlich, 2010; Myers et al., 2000). The expansion of the conservation movement in Latin America's forests occurred almost at the same time as the international recognition of indigenous movements, oftentimes claiming preservation (and control) over the same lands<sup>49</sup>. According to the world database on protected areas managed by the world conservation monitoring center of the United Nations Program for the Environment, UNEP, the number of protected areas has increased twofold during the

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<sup>48</sup> *Mosquitia* refers to the northern regions of Honduras and Nicaragua inhabited by Miskitu indigenous populations. Historically governed by the British enclave, the Mosquitia regions remained isolated from the political and economic centers in the Pacific (See Section 2.5).

<sup>49</sup> In 2010 UICN analyzed the overlapping situation between indigenous lands and protected areas in South America, concluding that at least five different forms of overlapping affect about 27% of protected areas. Another interesting effort documenting this overlapping situation is that of Red Amazónica de Información Socioambiental Georeferenciada (RAISG), <http://raisg.socioambiental.org/>

last thirty years, surpassing its 10% goal since 2000 (West et al., 2006; Brockington et al., 2008). Latin American conservation initiatives have been at the forefront of this movement. There are 65 UNESCO biosphere reserves in this region (about 15% of the world's total). Central America has set aside about 30% of its land as protected area while in the Caribbean about 20% of the territory is under some sort of protection regime (<http://www.unep-wcmc.org/>).

The growth of conservation areas restructured the zoning of forestland across many countries, establishing new rights and practices regimes that reshaped the distribution of rights (West et al., 2006). These new regimes defined what resources and land areas should be set aside, what could be extracted by whom and what could be used or not by local people, altering land use rights and redrawing the boundaries of the permissible (Barry et al., 2010:29). Although this often resulted in conflict situations, considering that about 1 billion people living in protected areas have seen their access and use to resources restricted (West et al., 2006; Colchester 2004; Molnar et al., 2004), it also allowed for the emergence of different management schemes to reconcile both development and conservation concerns (Monterroso, 2008). More inclusive approaches that allowed for more active participation of local populations included community-based conservation, co-management of protected areas and community forestry initiatives.

#### **2.4.4. Decentralization**

The fourth process shaping forest tenure reform is democratic decentralization. Political or democratic decentralization refers to the devolution of powers from central authorities to lower government levels (Ribot and Larson, 2005). According to Cousins and Kepe, this is not something new; the main difference is that this recent process expanded the public domain by arguing for the need to open spaces for participation by civil society in governance processes (2005). Democratic decentralization is a political and economic process in which "a set of institutional arrangements among public institutions and social actors" transfers responsibilities and powers induced by social movements and local governments gradually broadening participation in decision-making process with the aim of fundamentally redistributing power and resources (Larson and Soto, 2008:216). While decentralization practices have rarely been implemented that meet this ideal, decentralization policies have been promoted around the world to improve resource allocation, efficiency, accountability and equity (Colfer and Capistrano, 2005).

Not all decentralization processes have changed natural resource management tenure regimes (Agrawal and Ostrom, 2001). While in Asia and Africa decentralization has meant the devolution of tenure rights from previously state-owned lands to local governments and local forest users, in Latin America, it has primarily involved a shift of responsibilities and powers within the forest sector from central to local government offices but not necessarily the recognition of local users' rights (Larson and Soto, 2008). Moreover, decentralization has spurred conflicts by contributing to overlapping authority over who should define the distribution of rights at the local level and by ignoring preexisting informal institutional arrangements or customary regimes at the local level (Colfer and Capistrano, 2005).

The extent to which these four processes have influenced forested landscapes varies from country to country and will be further analyzed in the case study work in the following chapters. For instance, the case analyzed in Guatemala (Chapter 3, 4 and 5) shows that land reform demands shaped early reform processes in the lowlands while conservation policies and decentralization shaped more recent ones. In the case of Nicaragua (Chapter 6), the indigenous struggle around land has been central in the debate influencing the redistribution of rights and responsibilities regarding land and resources in the Caribbean coast region. Table 5 provides a brief summary of the most important elements discussed in this section.

**Table 5. Overview of processes and factors influencing changes in tenure rights**

| Process   | Summary of factors influencing changes in tenure rights  |
|---|--|
| Land reform   | <ul style="list-style-type: none"> <li>• changed land tenure structures, abolished large land concentrations and promoted the (re)distribution of land</li> <li>• allowed for collective (cooperatives and peasant associations) and individual titling</li> <li>• strengthened grassroots organizations and promoted mobilization of peasant and indigenous groups</li> </ul> |
| Indigenous movements and the recognition of indigenous territorial rights | <ul style="list-style-type: none"> <li>• advocated the recognition of collective claims around land and territorial rights</li> <li>• enabled the institutionalization of customary regimes and indigenous practices around land and resources</li> <li>• encouraged initiatives for collective titling of indigenous lands and indigenous territories</li> </ul>              |
| Conservation movement   | <ul style="list-style-type: none"> <li>• restructured the zoning of forestlands, establishing new management categories</li> <li>• established new regimes of rights and management practices of conservation areas</li> <li>• allowed the emergence of co-management schemes</li> </ul>   |
| Decentralization  | <ul style="list-style-type: none"> <li>• promoted the devolution of powers from central authorities to lower government levels</li> <li>• expanded the public domain to increase participation in decision making</li> </ul>   |

## 2.5. Overview of research study areas

### 2.5.1. Communal lands in Guatemala

Guatemala has one of the largest populations (over 15 million in 2014) and the highest GDP of the Central American countries. Though it has a substantially higher GDP per capita (over US\$3,440) than Honduras (US\$2,190) and Nicaragua (US\$1,830), a larger portion of its population lives below the national poverty line (UNEP, 2007), problems rooted in old structures of extreme inequality. In particular, Guatemala's majority indigenous population (60%) is overwhelmingly poor in terms of income measures, quality of life indicators and access to assets such as land (IWGIA, 2015).

These rural inequities in Guatemala can be measured against the highly skewed land ownership between large landowners and the smallholders (a majority of whom are indigenous people, most likely living in and around forests.). According to the 1979 agricultural census, 2.6% of the farms (over 45 hectares) controlled 65% of the agricultural



land. Micro-farms (those with less than 0.7 ha) controlled only 16% of the agricultural land, although they make up 88% of farms. Hough et al (1982) calculated that 88% of the farms in 1979 were too small to provide for the needs of a family. The trend has been increasing landlessness, with Baumeister and Fernandez (2002) calculating that the proportion of landless families in the rural sector had increased from 23% in 1979 to 29% in 2001, and that micro-farms had increased from 31% to 54.5% of total farms. As a result, the vast majority of the rural population is either landless or does not have enough land to cover basic food needs. Other recent data on land concentration illustrates that with 0.84, Guatemala holds one of the highest Gini indices on land access (INE, 2002). Agriculture continues to be the main economic productive activity, employing over 40% of the population, the search of land has moved people into forests areas increasing degradation and deforestation.

Structural inequalities between different land user groups, secure access to land and natural resources are all thus closely linked in Guatemala. Its civil code recognizes only two forms of property: public and private. Most recent data on property comes from the work of Grupo Promotor in 2009. Results from this work indicate that 30% of the national territory is considered public lands, including municipal lands often called *ejidos*<sup>50</sup> and communal lands. Main land use is forests covering about 67% of lands classified under the public tenure regime. The remaining 60% of the national territory is classified as private property. Only 23% of these lands are covered by forests. These data do not differentiate communal forms of tenure, which are often classified as state lands, and as of 2005 no regulations existed to legally recognize them.

Since the late 1990s, regulations have changed in the country as new legislation, including the establishment of a system of protected areas and a national cadaster, attempts to regularize land rights and secure areas for conservation purposes. While some took place before, most occurred in 1996 as the Peace Accords focused substantially on the need to adequately address the land question, with major provisions included in the Agreement on Resettlement of the Population Groups Uprooted by the Armed Conflict; the Agreement on Identity and Rights of Indigenous Peoples; and the Agreement on Social and Economic Aspects and Agrarian Situation. These efforts also included the need to recognize communal lands and guarantee access and rights to resources in protected areas.

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<sup>50</sup> Most of which were lands previously managed by communities and registered to the municipality during the 1870s (Thillet et al., 2003).

In contrast to the process in Nicaragua, the Guatemalan legal framework does not recognize the figure of territories; instead, a new law in 2005 provided the framework to recognize and protect communal lands. These new regulations defined communal lands as "lands in the property, possession or tenure of indigenous or peasant communities, whether legally established or not. These include those lands registered as state or municipal lands but traditionally managed collectively under communal regimes" (Law 41-2005, article 23). Lack of official data concerning the total extension of communal lands is evidence of the lack of agreement over what should be considered as such. The opinion of public sector institutions is different from those of civil society based organizations. Central to the debate is the nature of community lands, the lack of legal provisions to recognize indigenous communities as legal entities and the growing interests over the areas they occupy. Further justification for securing communal lands is the increased pressure, in particular the expansion of land concentration, to respond to the commercial call for the production of bio-energy (oil palm and sugarcane), but also possible future benefits that could be derived from carbon markets (such as REDD). Social organizations claim that at least 15% of the national territory (over 1.5 million ha) should be categorized as communal lands (see Table 6; Grupo Promotor de Tierras Comunales, 2009). The social organizations argue that the slow efforts to implement these new regulations so far prove the little interest of the central government and other actors in recognizing collective rights. Recent data indicate that fewer than 5% of the total number of cases (See Table 6) have been able to follow the formalization process, while the claims of some organizations to categorize their management systems as communal lands are still being contested (Edouard, personal communication).

Table 6. Number of cases and extension of communal lands per region in Guatemala

| <b>Region</b>  | <b># of cases</b> | <b>Area (Hectares)</b> |
|----------------|-------------------|------------------------|
| Alta Verapaz   | 136               | 159,521                |
| Baja Verapaz   | 57                | 99,603                 |
| Chimaltenango  | 46                | 7,373                  |
| Chiquimula     | 102               | 27,237                 |
| El Progreso    | 20                | 3,781                  |
| Escuintla      | 12                | 5,619                  |
| Guatemala      | 42                | 1,642                  |
| Huehuetenango  | 127               | 65,630                 |
| Izabal         | 48                | 264,230                |
| Jalapa         | 18                | 43,940                 |
| Jutiapa        | 28                | 65,351                 |
| Petén          | 38                | 512,276                |
| Quetzaltenango | 86                | 26,329                 |
| Quiché         | 82                | 205,819                |
| Retalhuleu     | 14                | 8,110                  |
| Sacatepéquez   | 57                | 3,048                  |
| San Marcos     | 134               | 11,026                 |
| Santa Rosa     | 18                | 7,575                  |
| Sololá         | 38                | 4,552                  |
| Suchitepéquez  | 4                 | 1,025                  |
| Totonicapán    | 77                | 47,084                 |
| Zacapa         | 29                | 6,358                  |
| <b>Total</b>   | <b>1213</b>       | <b>1,577,129</b>       |

Source: Grupo Promotor de Tierras Comunales, 2009:31

According to Elias et al., (2009), the identification of these lands should be done on the basis of their origin and the time reference of their emergence, including territories that predate the colonial period; those lands the colonial regime recognized as the commons (*comun de pueblo de indios*); communal lands converted to municipal lands during the Liberal period (1870); lineage territories such as *parcialidades*<sup>51</sup>; lands allocated to military combatants<sup>52</sup>; recent communal lands resulting from post-1950s colonization; and redistributive government policies<sup>53</sup>, including lands and natural resources such as forests over which a group of people has established some sort of legal tenure – the community forest concessions.

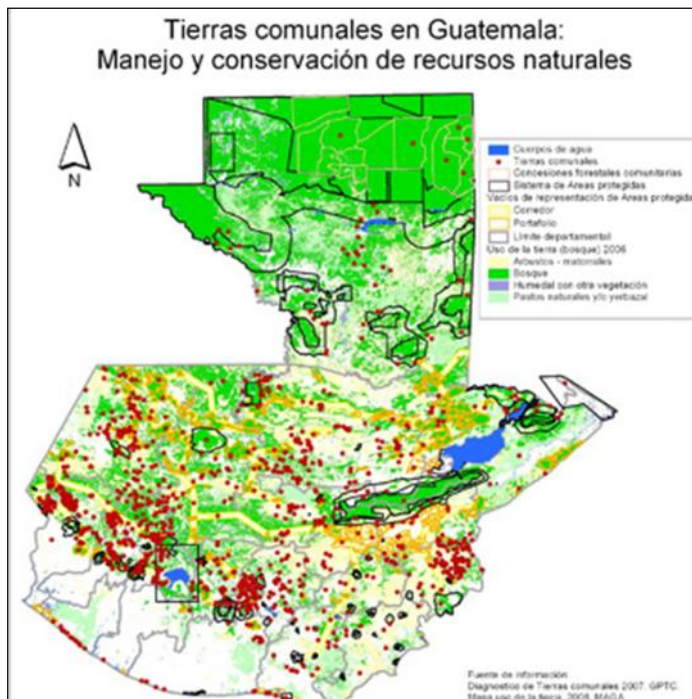
<sup>51</sup> Type of land tenure based of kinship.

<sup>52</sup> Parcelamientos Agrarios (CPAs).

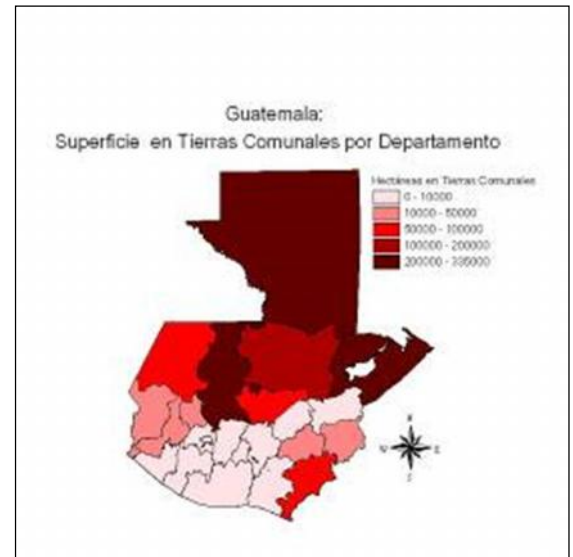
<sup>53</sup> Lands allocated to families by the Instituto Nacional de Transformacion Agraria – INTA from the mid-50s onwards; these were mainly smaller parcels of 20 has, which may have been subdivided later, including *Empresas campesinas asociadas (ECAs)* and *Patrimonios Agrarios Colectivos (PACs)*.

Most communal (indigenous) lands in Guatemala are spread throughout the country; Elias et al. (2007) reported that while a significant number of them is found in the highlands (mainly Huehuetenango and San Marcos; see Figure 3, Map 1), the largest areas are found in the northern strip of the country known as *Franja Transversal del Norte FTN* (See Figure 3, Map 2).

Figure 3. Communal lands in Guatemala



Map 1. Source: Grupo Promotor de Tierras Comunales, 2008. Red dots indicate areas defined as communal lands



Map 2. Source: Grupo Promotor de Tierras Comunales, 2008. Darker areas show regions with larger portions of communal lands (between 200,000 Ha and 350,000 Ha)

Grandia argues that the northern region provides an interesting scenario to understand recent common land enclosure processes (2007)<sup>54</sup>. She does so analyzing the land dispossession of q'qchi indigenous communities and the conflicts that emerge from introducing development and conservation projects that in time have challenged the continuity of indigenous groups (2009). In her work she argues that changes in property regimes following colonization efforts were key to seizing land and controlling labor. While my work shares this historical perspective to trace territorialization practices shaping changes in tenure regimes from 1960 onwards in Petén, my main focus is on how recent reform processes have shaped forest landscapes, changing the institutional arrangements and the way communities relate to their natural endowment.

<sup>54</sup> Extinguishment of common property rights and the development of private property (2007).

The focus in forest landscapes is highly pertinent as this region holds the vast majority of remaining forestlands in Guatemala: 80% (2.8 million hectares) of the remaining 3.5 million hectares of forests are located in the northern strip (FTN) regions (Petén, Alta Verapaz, Quiché, Izabal and Huehuetenango). However, forests are subject to increasing pressures from those interested in expanding subsistence and commercial agriculture, cattle, petroleum extraction and intensive tourism. Following forest inventory and deforestation data from FAO (1970; 1977) and CONAP et al. (2005), more than 48% of the forest area was lost between 1970 and 2006. Most of remaining forests are found in areas under conservation regimes in Petén, as about 75% of the national protected area system is found in this region (over 2.5 million hectares, 73% of this region). The most important, the Mayan Biosphere Reserve (MBR), has set aside more than 2 million ha under three management zones. Over 40% has been designated as the Multiple Use Zone (MUZ), which permits sustainable use, including logging, and a number of concessions were granted to industries and communities living in and around the area. Chapters 3, 4 and 5 develop this case, providing a historical account of the changes in tenure regime, identifying key reform processes and analyzing their impacts in land use and forests.

### **2.5.2. North Caribbean Coast Autonomous Region (RACCN), Nicaragua**

Nicaragua is Central America's largest country, with more than 130,000 km<sup>2</sup>. It is not as densely populated but is among the poorest in the Latin American region, according to world development indicators (World Bank, 2014). The Nicaraguan economy depends largely on the primary sector, with about 60% of the national exports made up of agricultural products that engage 40% of the economically active population. More than 70,000 ha of forests are lost annually, most of them in agricultural frontier areas (INAFOR, 2009). Remaining forests cover about 3 million hectares, some 26% of the national territory, while protected areas surpassed 30% in 2010. About 70% of the natural forests are concentrated in the Caribbean region (FAO, 2011; INAFOR, 2009).

Nicaragua's socioeconomic and political history requires a differentiation between the Spanish influence in the Pacific coast and the role that the British played in its Caribbean Coast. Also known as the Mosquitia, the Caribbean Coast is the home of the vast majority of the country's indigenous populations (about 8,6% in 2005 including Miskitu, Sumu-Mayangna and Rama groups) as well as Afro-descendant groups (Creole and Garífuna)<sup>55</sup>. Britain initiated its presence in Nicaragua's Caribbean Coast as well as Honduras and what

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<sup>55</sup> Other indigenous groups including Chorotega, Cacaopera or Matagalpa, Ocansiu o Sutiaba and Nahoa or Nahuatl inhabit the Pacific Coast and other regions of Nicaragua.

is today Belize in the early 1700s, established an enclave economy, designated Miskitu chiefs, eventually introduced the Moravian and Anglican religions and created the Mosquito kingdom with a nearly 200-year line of Miskitu kings (Hale, 1996). In 1860 the British recognized Nicaraguan sovereignty over the coast in the Treaty of Managua, also known as the Zeledón Wyke decree. This decree allowed the transformation of the protectorate, originally nearly half of the Nicaraguan land mass, into a more geographically reduced reserve, to a large degree recognizing the autonomy of the Mosquito monarchy to govern this region following their customary systems (Merlet et al, 2000). Booms of rubber, mahogany and mineral extraction in the ensuing years renewed the economic and geopolitical interests of the Spanish, the British and increasingly the United States over this region. The incorporation of the region into the Nicaraguan republic started in 1894 with its military annexation by troops from the Pacific and was further formalized in the Harrison-Altamirano Treaty between Managua and Britain, signed in 1905 (Hale, 1996).

The territorial integration of the Atlantic Coast shifted the administration of rights to land and resources from customary systems based on collective arrangements ruled mainly by local indigenous and Afro-descendant groups to a public tenure regime that introduced new forms of private property. These lands were declared state lands belonging to the Nicaraguan territory, and to consolidate the state authority, colonization programs were launched to open vast forest areas to agricultural development (Merlet et al, 2000). The Sandinista revolution in 1979 continued land tenure restructuring of the coast, introducing new forms of collective property, this time in the hands of peasant cooperatives oftentimes militants of the *Sandinista* party (Hale, 2014). By the end of 1980s, the land tenure structure in the Coast was a mosaic of claims between individual and collective owners, including indigenous and non-indigenous populations while claims for autonomous governance questioned the existence of state lands or the legitimacy of central government authorities including municipalities. Indigenous leaders argue that their territorial claims predate the existence of the Nicaraguan State and thus dispute the legitimacy and authority of the central government to define new roles and responsibilities around control of their lands and resources (CCARC, 1998). This exacerbated conflicts as indigenous and Afro-descendants did not see these new forms of tenure as respecting their customary systems and most importantly respecting their territorial claims (Guardian et al., 2014). Until the late 1980s, indigenous groups led military counterrevolutionary groups against the *Sandinista* government, with rights to land and resources, autonomy and self-governance at the center of their claims. Demands for autonomy, governance and territorial rights were central to

the political agenda of Yatama<sup>56</sup> (*Yapti Tasba Masraka Nanib Aslataka*), which became a central actor in negotiations with the central government.

Peace negotiations with indigenous leaders after several years of war led to the recognition of indigenous communal land rights in the Nicaraguan national Constitution of 1987 and the establishment of two autonomous regions<sup>57</sup> in what was then called the North and South Atlantic Coast (Hale 1996, Ortiz 1987). Key to this process was the case of Awas Tigny, a Mayangna community that sued the Nicaraguan government before the Inter American Human Rights Court in 1998 for granting a Korean company timber extraction rights within its communal lands. This has become a landmark case as it set legal standards for the defense of indigenous territorial rights. After years of judicial struggle, the court ruled in favor of the community in 2001, and further urged the Nicaraguan government to draft the necessary regulations to demarcate and title other indigenous lands as well. In 2003, the Communal Lands Law<sup>58</sup> established the institutional framework for demarcation and titling, and in 2007 indigenous leaders actively promoted the formation of large indigenous territories under a supportive central government administration. Most of those territories are now titled.

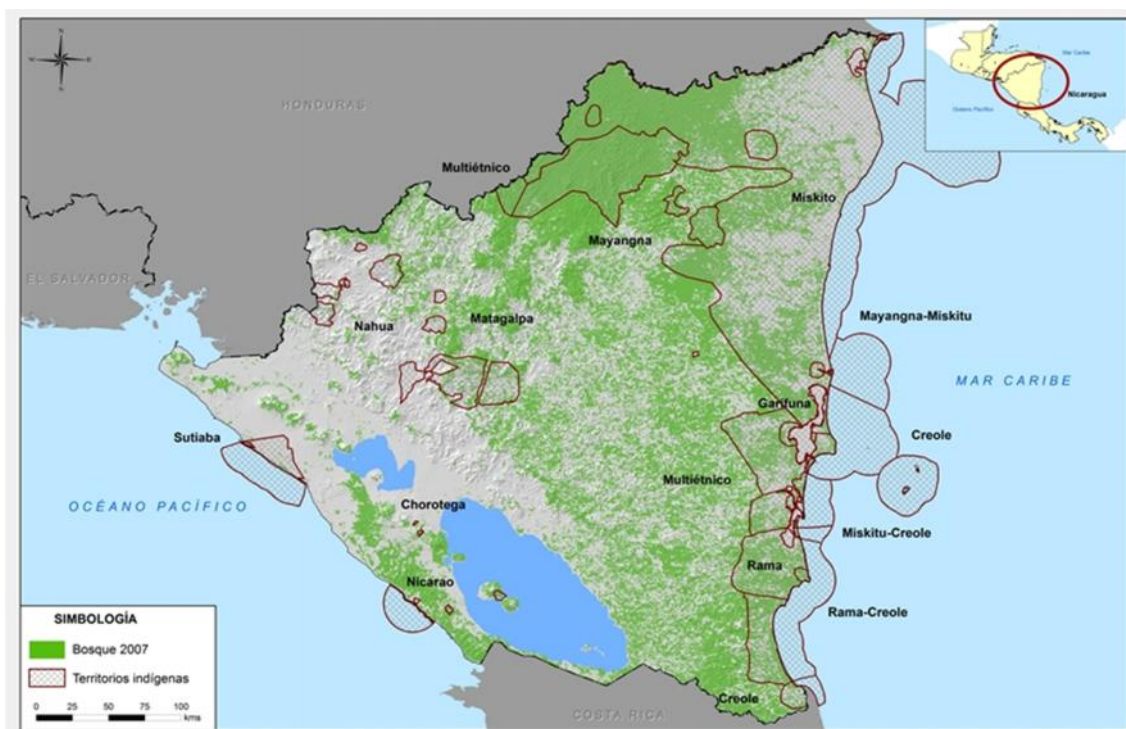
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<sup>56</sup> Yatama was a unification of three other armed indigenous groups in the Coast and after negotiations with the Sandinista government in 1989 returned to run candidates in the 1990 elections. Several years later, in line with changes in the electoral law, it became a regional indigenous political party

<sup>57</sup> The Autonomy Statute created the institutional framework for the election of regional authorities and granted greater control to indigenous communities and traditional peoples over the autonomous regions and their natural resources (Autonomy Statute, Law no. 28).

<sup>58</sup> Law No. 445 of the Communal Property Regime of the Indigenous Peoples and Ethnic Communities of the Autonomous Regions of the Atlantic Coast of Nicaragua and of the Bocay, Coco, Indio and Maiz Rivers, referred to here as the Communal Lands Law.

Figure 4. Map showing indigenous and ethnic territories in Nicaragua



Source: PRISMA, 2014

Between 2007 and 2013, a total of 22 territories were demarcated, over 3.6 million ha (36400 km<sup>2</sup>) totaling about 30% of the Nicaraguan territory (See Figure 4; CONADETI, 2013; CADPI, 2014). The level of implementation of the demarcation and titling process varies; as of this writing only 15 titles had been completely registered and none of the demarcated and titled territories have completed the *saneamiento* (title clearance) process. Table 7 provides the list of indigenous territories and level of implementation of each as reported by the regional governments in 2014 (data compiled until 2013), the latest official information available.



Table 7. List of indigenous territories in Nicaragua

| #  | Territory                        | No. of Communities | Level of implementation of the reform process  |                         |  |
|----|----------------------------------|--------------------|--|-------------------------|--|
|    |                                  |                    | Title process incomplete                       | Titled process complete | Title clearance ( <i>saneamiento</i> ) |
| 1  | Kipla Tani Tasbaika Kum.         | 14                 |  | 113,597 ha              | pending                                |
| 2  | Li Lamni Tasbaika Kum.           | 26                 |  | 138,227 ja              | pending                                |
| 3  | Wangki Li Aubra Tasbaya          | 18                 |  | 88,434.78 ha            | pending                                |
| 4  | Awasi Tigny Maygna Sauni Umani   | 3                  |  | 73,394 ha               | advanced                               |
| 5  | Wangki Maya Tasbaya              | 23*                |  | 138,881.86 ha           | initiated                              |
| 6  | Wangki Twi-Tasba Raya            | 23*                |  | 162,181.60 ha           | pending                                |
| 7  | Diez Comunidades Twi Yahbra      | 15*                |  | 154,476.72 ha           | pending                                |
| 8  | Karata                           | 5                  |  | 30,667.67 ha            | pending                                |
| 9  | Tawira                           | 17                 |  | 304,425.03 ha           | pending                                |
| 10 | Twi Waupasa                      | 14                 |  | 144,860.70 ha           | advanced                               |
| 11 | Tasba Pri                        | 23*                | 147,425.00 ha                                  |                         | pending                                |
| 12 | Mayangna Sauni As                | 16                 |  | 163,810.00 ha           | advanced                               |
| 13 | Mayangna Sauni Arungka-Matungbak | 8                  |  | 48,723.14 ha            | advanced                               |
| 14 | Tuahka                           | 14                 |  | 54,556.36 ha            | pending                                |
| 15 | Mayangna Sauni Bas -Sikilta      | 1                  |  | 43,241.4 ha             | advanced                               |
| 16 | Prinsu Awala                     | 19                 |  | 414,955.40 ha           | pending                                |
| 17 | Prinsu Auhya                     | 13                 | 379,334.27 ha                                  |                         | pending                                |
| 18 | Awaltara Luhpia Nani Tasbaya     | 16                 |  | 241,307 ha              | pending                                |
| 19 | 12 Comunidades de la Cuenca      | 12                 | 382,007.12 ha                                  |                         | pending                                |
| 20 | Rama Kriol                       | 9                  |  | 406,849.30 ha           | pending                                |
| 21 | Miskitu Indian Tasbaika Kum      | 20                 | 4-community complementary area pending titling | 65,230 ha               | pending                                |
| 22 | Mayangna Sauni Bu                | 9                  | 6-community complementary area pending titling | 94,838 ha               | pending                                |

\* CADPI reports that Wangki Maya Tasbaya has 22 communities while Wangki Twi-Tasba Raya has 21 and Diez Comunidades Twi Yahbra has 16; Tasba Pri is reported to be a mixed territory composed of indigenous communities and former FSLN militants - CADPI reports it as a 29-community territory (2014).

The implementation of the reform varies across the two autonomous regions. Following the process described in Law 445, most of the territories have completed four out of the five titling and demarcation steps. The last step of this process is title clearance, which

includes remediation procedures to “*terceros*”, mainly non-indigenous *colonos*<sup>59</sup> living within communal territories. Most of the titling occurred between 2007 and 2013 (Hale, 2014; CADPI, 2014).

The recognition of claims for land and resources in Nicaragua followed a different approach to the titling of communal lands; rather it involved the recognition of indigenous territories formed of blocs of communities. As stated by Gordon et al., "multicommunity blocs (*bloques*) ... are the product of prior agreements among two or more communities to pool their community land to create an aggregate claim" (2003: 373). These territories cover the entire length of Nicaragua's Caribbean coastline (See Figure 2). Gordon et al., (2003) and Hale (2014) further explain the factors that influenced the formation of these multi-communal territories, highlighting elements of cultural identity and political strategies to respond to common threats as the main factors that strengthen the autonomy of these regions and support their claim of the non-existence of state lands in the coast.

The case study of Nicaragua is presented in Chapter 6. The community-level research focused on two groups of Miskitu communities, one with individual land titles and some untitled common forest (Tasba Raya), and the other with only untitled common land (Layasiksa); neither had territory titles at the time of the study. These cases analyzed in Chapter 6 represent two examples of many kinds of problems faced in the implementation of reforms in Nicaragua (see Larson and Soto 2012 for additional cases).

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<sup>59</sup> Identity in the Atlantic coast usually defines *colonos* as non-indigenous people who have migrated to the region relatively recently and have different use practices on land and resources.

### **Chapter 3. Historical analysis of tenure reforms in Petén, Guatemala (1940-1990)**

This chapter presents the first case of tenure reform analyzed in this dissertation; it focuses on the lowland region of Petén, Guatemala. While the reform analyzed is the most recent in the time period covered (1994), this chapter provides a review of the series of programs, policies, regulations and key development initiatives that precede this process (1940 and 1990) to understand reform emergence. This chapter discusses major regulatory reforms that influenced changes in tenure regimes and represented key moments of institutional change. I analyze the role of social actors behind these institutional changes and how changing social relations around natural resources, particularly regarding access to and control of land and forests, modified tenure structures at the territorial level.

This chapter reviews the factors that have motivated and shaped the emergence of tenure reform processes using an environmental history perspective<sup>60</sup> to understand these state interventions with respect to forests and their implications for land use changes in Petén. In particular I focused on those that relate to land use and frontier colonization programs as the most successful state-promoted territorial strategies that have influenced and shaped access to and control of land and forest in Petén<sup>61</sup>. Here the definition of state territorial strategies follows the work of Brenner and Elden (2009). These are referred to as intervention strategies, usually promoted by the state, oriented towards the reorganization of space by transforming practices and institutional arrangements.

Central to this analysis is the role of the definition of resource property rights in the (re) organization of land to facilitate the exploitation of natural resources and ensure the physical and economic integration<sup>62</sup> of this region into Guatemala's national economy. This analysis sheds light on an understanding of the motivations behind the devolution process, defining how reforms emerge, and provides further insight into the different interests, positions and constant power struggles around the control and appropriation of resources at the regional level.

### **3.1. The institutionalizing of private property in the lowlands (1944-1956)**

According to Melville and Melville (1971) in their study of land tenure structure in Guatemala, the concept of private ownership of land per se was alien to indigenous

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<sup>60</sup> Here I am following the work of Gallini who suggests analyzing the context in which environmental policies emerge and evolve (2009; 2004).

<sup>61</sup> Other important policies affecting land use in Petén include those related to the opening of roads. To further understand the impact of roads and other communication infrastructure in Petén see the work of Shriar, 2006; for other works analyzing the impact of roads in tropical forest areas see Laurence et al., 2009. For an extensive literature review of environmental impacts of roads see Spinelli and Marchi, 1996.

<sup>62</sup> Here I understand integration as a form of socio-spatial organization in which a new territory is being reproduced by the actions of the State.

thought<sup>63</sup> and was mostly introduced by the Spaniards during the colonial period. However, for Spaniards and later for mestizos (*ladinos*), the wealth produced by ownership was and continues to be a very important consideration. The land tenure system promoted by the Spaniards and enforced during the early years after independence was built around a system that privileged individual property rights as the basis of development and progress, becoming the most important land tenure system at the expense of other forms of tenure (Carmack, 1993). Most forests and idle lands either remained in the hands of the State or were claimed as public lands while agricultural lands were either allocated or acquired by individuals<sup>64</sup>. By the 1900s most lands suitable for agriculture had already been allocated to individual owners. However, Guatemala's forested regions remained highly unpopulated and unexplored, thus becoming the last region to be introduced into the private land ownership and registration regime. The military governments promoted large land colonization and regularization projects between the 1940s and 1970s. Lands registration began years later as the first national cadaster only started in Petén in 2005 (Milian, 2008). Due to long processes of dispossession and enclosure (see Grandia, 2009 and Grunberg et al., 2013), neither large communal lands nor large indigenous populations remain in northern Petén nowadays. Therefore, in the analysis of the tenure reform case study in Petén (Chapters 4) I did not deal with indigenous forms of tenure<sup>65</sup>, although in this work I argue that recent tenure reforms have promoted other forms of collective forest tenure<sup>66</sup>.

In Guatemala, as elsewhere, land and resource tenure is linked to political, religious and economic conditions and has been a prime concern of people for a long time. Private property has been a central institution playing a key role in defining social, political and economic structure. Guatemala's economic structure until the 1980s<sup>67</sup> depended largely on

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<sup>63</sup> During Mayan history, title to land was acquired not only through conquest but through the rights of family (kinship) lineage. In fact, according to existing literature the principal source of rights to an area was the lineal descent from ancient kings. A similar pattern of tenure is found nowadays among *Parcialidades* in Totonicapán. These are collective land tenure forms that have remained among Quiché indigenous communities where rights to land and resources are determined according to kinship (Elias et al., 2012).

<sup>64</sup> When referring to individual property I should also note that official data show a type of "family" land ownership, however in practice the land title was usually registered under the name of the household head, generally a male. Women seldom appear as household heads unless they are widows.

<sup>65</sup> Further analysis of communal land of tenure in Petén can be found in Grunberg et al., 2013 and Reyna et al., 1999.

<sup>66</sup> Actually, the first legal reform that recognizes the existence of indigenous and peasant communal lands as collective tenure forms was approved in Guatemala in 2001 (Article 65, Law that establishes the National Cadaster) after long negotiations that preceded the 1996 peace negotiations. Reforms around communal lands in Guatemala are quite significant in terms of impact in forest areas (see for instance the report by Elías, 2008).

<sup>67</sup> In comparison, by the early 2000s, the National Bank reported that agriculture represented less than 20% of the gross national product but accounted for more than 40% of the labor force, increasing to more

agrarian production, making land ownership and tenure an inherent source of economic and political power. That is why in their discussion of the role that skewed land tenure distribution had in the internal armed conflict, Melville and Melville argue that “he who owns the land in an agricultural country, rules” (1971:5). The most important efforts to reform land tenure structure occurred with the Revolution of 1944<sup>68</sup>. From 1944 to 1954, the two revolutionary governments introduced structural changes in the legal, education, political and economic systems. The first agrarian census in 1950 showed a highly skewed land tenure situation, with 2.1% of the landowners possessing more than 70% of the available land area, while 85% of the farmers possessed less than 30% of the available land<sup>69</sup>. Among the most novel of land tenure reforms, the new Constitution of 1945 was the first political effort to include the social function of land (article 91) in Guatemala. This was a way to break down the existing quasi-feudalistic structures based on the *habilitacion*<sup>70</sup>, debt peonage and servitude systems used to seize laborers to work for the *fincas*, existing forms of production that characterized cotton and coffee plantations<sup>71</sup>.

### **3.2. Frontier colonization during the revolutionary government period (1944-1954)**

Over time, scattered colonization initiatives populated the northern region. In 1879 President Rufino Barrios offered land to nationals and foreigners interested in colonizing the region. According to Schwartz, very few accepted this proposal (2012). In 1945, President Arévalo launched another colonization program (The Poptún Project), named for the municipality in the south of Petén where it was implemented. This project was active between 1945 and 1948. Reduced by malaria and food shortage due to poor road systems, the new settlers either migrated or died. According to Melville and Melville (1971) this project was Arévalo’s attempt to quiet those who maintained that colonization of the Petén region was the answer to all of Guatemala’s land access problems. However, the lack of communications required for connecting this region to the rest of the country made the effort more difficult and highly expensive. All labor and equipment were dedicated

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than 50% in the rural areas (Banco de Guatemala,

<http://www.banguat.gob.gt/inc/ver.asp?id=estaeco/sr/sr024&e=46337> accessed September 30, 2015).

<sup>68</sup> The democratic movement led by young military officers and a working class movement that aimed at stopping the feudal system dictatorship of President Ubico and resulted in democratic elections that put Juan José Arévalo to the presidency. He was followed by Jacobo Árbenz, overthrown in 1954.

<sup>69</sup> Land access due to existing tenure concentration continues to be one of the major structural problems in the country as the most recent census (INE, 2002) shows that the Gini index of land concentration is 0.84, which means that less than 15% of the population owns more than 70% of the available land.

<sup>70</sup> A system where money was lent or goods were given on credit in exchange for work. In this way many laborers ended up virtually enslaved. Another form during the dictatorial period of Ubico (1931-1944) was that of *vagancia* (Vagrancy) a law that allowed the movement of people (usually indigenous and rural peasant populations) found in cities with no ID documents.

<sup>71</sup> Studies published by Elias (2013) show that forms of *colonato* settlements still remain in northern regions of Guatemala nowadays. These systems predominate in regions with large coffee plantations.

almost exclusively to building roads, at the expense of the settlers' other social needs. By 1948, the government had spent several million on the Poptún Project, and its advisability was being questioned. The rest of Petén<sup>72</sup> continued to rely on mules, waterways (the Usumacinta River was used to get timber out of the forest) or airplanes (mainly for transporting rubber) to communicate with the rest of the country.

It was also during these years that the revolutionary government promulgated an agrarian reform law (Decree #900, 1952) based on a review of other reforms underway in Italy, Mexico and Russia. In Guatemala, the law had four main objectives. The first was to enforce the social function of land (article 1). The second was to eliminate all forms of feudal property (article 1) by assigning State lands to organized production cooperatives as well as expropriating large landholdings. The third was to abolish all forms of servitude in rural areas and the fourth was to guarantee *ejido* lands and indigenous lands<sup>73</sup> (article 2) that were declared inalienable, imprescriptible and guaranteed against seizure. About one million hectares of arable land became subject to expropriation<sup>74</sup> (about half of them belonging to the United Fruit Company (UFCO) representing about 70% of the land owned by the company in this country) mostly in the departments of Escuintla, Alta Verapaz and Izabal.

### **3.3. Colonization programs during the counter agrarian reform (1954-1956)**

Social unrest led by dissatisfied larger landowners resulted in the overthrow of President Árbenz two years later and Colonel Castillo de Armas quickly took over the government as a result of the military coup.<sup>75</sup> New reforms on land tenure, i.e. the counter-agrarian reform, were promoted. These reforms had the overall aim of restoring the “*institution of private property upon which the social structure of Guatemala is based*, producing a lack of confidence in the economic sector and the flight of capital necessary for the development of resources” (speech by President Castillo Armas cited in Melville and Melville 1971, emphasis added). Over 95% of the lands confiscated during the agrarian reform were

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<sup>72</sup> Existing settlements included Flores and San José in the center of Petén and Fallabón (Melchor de Mencos), east of Petén in neighboring Belize (Rodriguez, 1969).

<sup>73</sup> *Ejido* lands are formally registered as municipal lands, but historically they have followed a communal administration regime. Although both regimes have coexisted in time, increasing pressures and interests on these lands as well as overlapping claims have exacerbated conflicts around resource tenure and control (Arifin-Cabo, 2011).

<sup>74</sup> With the distribution of about 1.8 Million ha, this Agrarian Reform Program benefitted more than 60,000 peasants, about 90% of them men (based on data by Brockett, 1998; Handy, 1994 and Melville and Melville 1971).

<sup>75</sup> According to Cullather (2006), the impact the reform had on the UFCO, of American capital, resulted in US support for this military coup to overthrow this government, considering it a communist menace for the region.

returned to its previous owners (Handy, 1994). A new Constitution was enacted in 1956 enshrining private property as a “necessary condition for development.” As stated in Article 63 of this Constitution, “private property is guaranteed. The State has the obligation of assuring the proprietor the necessary conditions for the development and utilization of its goods.”<sup>76</sup> New agrarian regulations were enacted. First, Decree #31 (1954) was promulgated one month after Castillo was in office and later on, the Agrarian Code, Decree #559 (1956). These regulations established new reforms that would be made to “open those regions of the national territory that have remained at the margins of the national economy for lack of communications, irrigation, healthful conditions and inhabitants. Consequently it will be a fundamental policy of this government... an intense colonization of the national territory (Melville and Melville 1971, emphasis added). According to these authors, it is clear that in this speech Castillo de Armas was talking about Petén.

**Table 8. Summary of regulatory reforms around land and tenure regimes affecting the lowlands (1944-1956)**

| Year | Law                              | How it affected land and resource tenure   |
|------|----------------------------------|--|
| 1945 | New Constitution                 | <ul style="list-style-type: none"> <li>▪ Included specific provisions that recognize the social function of land</li> </ul>  |
| 1945 | Colonization project in Poptún   | <ul style="list-style-type: none"> <li>• Introduced road infrastructure in the region</li> </ul>   |
| 1952 | Decree #900. Agrarian Reform Law | <ul style="list-style-type: none"> <li>▪ Eliminated all forms of feudal property</li> <li>▪ Promoted the expropriation of large properties and the redistribution of land</li> </ul>                           |
| 1954 | Decree #31. Agrarian Code        | <ul style="list-style-type: none"> <li>▪ Declared the opening of new areas for colonization to solve land claims and favor the increase of productivity</li> </ul>   |
| 1956 | New Constitution                 | <ul style="list-style-type: none"> <li>▪ Included specific provisions to guarantee private property</li> </ul>   |
| 1956 | Decree #559. Agrarian Code       | <ul style="list-style-type: none"> <li>▪ Introduced new changes in agrarian institutions including the establishment of Agrarian Zones and the registration of idle lands for colonization purposes</li> </ul> |

Source: Based on a review of the above mentioned decrees, plus analysis of these regulations by Melville and Melville, 1971; Braconnier, 1979; Schwartz, 1990; and Handy, 1994.

Table 8 lists the most important regulatory reforms regarding land in the 1944 – 1956 period. Apart from the initial efforts to promote colonization in Poptún, the effects of the 1944 revolution and the 1954 counterrevolution had no effects on the land tenure structure in Petén (Melville and Melville, 1971; Schwartz, 1990). In fact, Petén was left out the

<sup>76</sup> Provisions that guarantee private property are included in Article 39 and 41 in the current Constitution (1985).



implementation of Decree #900; no expropriations or land distribution efforts took place in this region, mainly because there was hardly any property record there (Milian, 2008). Instead, access to land was based on usufruct and municipal permission to work it. With limited access to market and difficult transportation, people relied on agriculture for subsistence. The region's cash economy rested largely on extraction of valued forest products, mainly timber of hardwood species, and of non-timber forest products, in particular rubber tapping and was mainly based on trade with Belize and Mexico (Schwartz, 2012; Schoonover, 1996).

### **3.4. Post-revolution colonization programs in Petén (1957 - 1970)**

Colonization initiatives became the most important land policy to consolidate private property regimes across the country during the counterrevolutionary government of Castillo de Armas (Melville and Melville, 1971; Braconier, 1979). In 1958, colonization<sup>77</sup> of the northern regions of the country was declared of “public utility and national urgency” and was a policy addressed specifically to the lowlands. The main purpose of these colonization programs was the economic integration of these lands mainly by changing land use for agricultural production. Presidents Ydigoras (1957) and Peralta Azurdia (1958-1966) included specific provisions in their government programs to ensure implementation. Two major regions were declared subject to colonization initiatives: the northern strip region (*Franja Transversal del Norte* or FTN)<sup>78</sup> and Petén, respectively (See Figure 5). A quick review of these two colonization initiatives highlights the major regulatory reforms and their implications on land and resource tenure. Although this thesis work focused mainly on Petén, the brief reference to the FTN is because I argue that it had later implications in the region.

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<sup>77</sup> Colonization here is understood as the opening of hinterlands, mainly forested areas that formally are claimed as public but have remained isolated, as defined by Melville and Melville (1971): colonization initiatives did not aim at changing political, economical and social structure (1971:163)

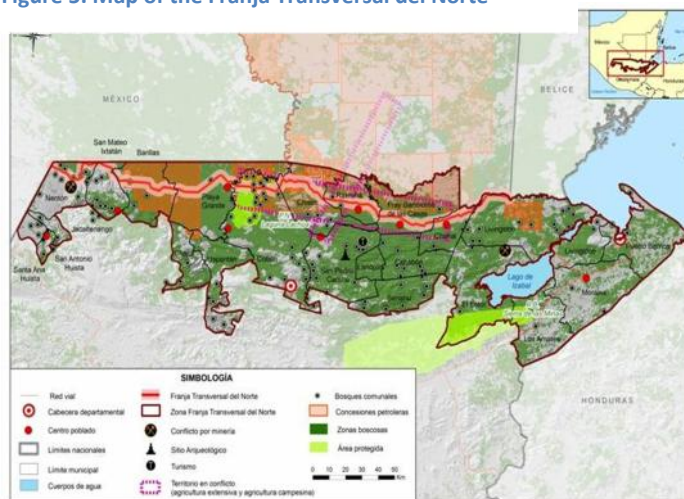
<sup>78</sup> Defined as the “Lowlands of the North” in Melville and Melville (1971), the FTN region refers to the northern lowlands, which included the regions of Huehuetenango, Alta Verapaz, Quiché, Izabal and southern Petén. These regions shared similar biophysical characteristics; most of them had remained barely populated until the end of the 1800s. As stated in Law 1551, this region represents one-third of the country's total area, and as of 1960 held less than three percent of the national population; its terrain is largely unbroken, under 200 meters elevation and has a tropical climate (Braconier, 1979).

### 3.4.1. Franja Transversal del Norte (FTN)

The first law that promoted colonization of the FTN was issued in 1962 (Decree 1551 – *Ley de Transformación Agraria* / The Agrarian Transformation Code). These new land

regulations promoted colonization programs on national lands on the one hand and allocation of (individual) property rights on fallow lands on the other. These land tenure policies intended to resolve the land issue with the assumption that expanding the agricultural frontier into forest areas and developing new “agrarian zones”<sup>79</sup>,” allocating land to families while improving means of

Figure 5. Map of the Franja Transversal del Norte



Source: <http://www.prisma.org.sv>

communication, would favor access to markets and reactivate local and regional economies. They were also promoted as a way to quiet down demands for land redistribution as the internal conflict worsened. All expropriation policies had been abolished, and constitutional guarantees to private property were ensured, thereby protecting existing large land concentration structures.

This law established the Institute of Agrarian Transformation / *Instituto de Transformación Agraria* (INTA), as the institution responsible for implementing land policy including the titling and registering of lands<sup>80</sup>. According to data provided by Melville and Melville (1971) and Braconnier (1979), four land programs for colonization were launched in the northern regions of Alta Verapaz, Huehuetenango, Quiché and Izabal. The military governments<sup>81</sup> assigned their own officers the role of leading the colonization efforts. Braconnier argues that underlying interests in accessing land as well as controlling the exploitation of key resources, particularly mining and petroleum, were major incentives that consolidated the

<sup>79</sup> This is the name given to lands that were part of colonization programs.

<sup>80</sup> INTA's institutional mandate lasted until 2000 when these functions were transferred to the National Land Fund / *Fondo de Tierras*, an entity created to follow the Peace Accords regarding land issues.

<sup>81</sup> Between 1956 and 1986 Guatemala was ruled by military governments with the exception of Julio Cesar Montenegro (1966-1970).

military not only as a political but also an economic power structure (1979)<sup>82</sup>. In fact, several military officers became major landowners<sup>83</sup>. In addition to the national government investments, these programs also relied on external financial aid. In his analysis of colonization efforts, Braconnier recounts that in the 1960s – 1970s, the United States via its Agency for International Development (USAID) invested at least US\$12 million (for a detailed analysis of US involvement in Guatemala's northern colonization, including military and donor aid, see Grandia, 2009:109-113). The expansion of internal conflict and need to restore political stability, fear of the "threat of communism" and interest in avoiding violent confrontations were the major discourses that ensured foreign support<sup>84</sup>. Meanwhile, government land policies argued that families needing land should be colonized on land not in use rather than disrupting enterprises already in operation. This argument disregarded the fact that the agrarian census had already showed that two-thirds of existing privately-owned lands remained unused by the end of the 1950s.

Existing research on the effects of colonization programs in the FTN lands after the 1970s highlights the impacts of these policies on tenure structure, arguing it led to the consolidation and predominance of individual property regimes in colonized areas. The most important changes in tenure include the privatization of major portions of state lands in the region. According to Oyarzun (2002), only 25% of these lands were in private hands before the colonization of the FTN; the rest were either public or communal lands. Oyarzun data show that of the 70% of the land registered as public lands in 1970s, only 3% remained in state hands in 1978<sup>85</sup>. Most of the land was given as individual property with the exemption of a few cooperatives in Ixcán, Quiché. Colonization of "virgin lands" was also included in the National Development Plan of President Arana Osorio (1970-1974).

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<sup>82</sup> For a more recent analysis of military strategies to control strategic regions and resources is found in the work of Gonzalez-Izas 2014.

<sup>83</sup> Braconnier (1979) and Solano (2000; 2005) have recounted how different military officers – usually engaged in colonization programs – acquired large land in Petén and the FTN during the 1970s. Grandia (2009) and González-Izas (2014) explain how authority and power were usually bargained to control resources in these frontier areas. Melville and Melville tell how President Ydigoras himself was accused of fraud in 1967 as it had been discovered he had been giving land in Petén to military officers, members of the Agrarian Service, in charge of land colonization programs before INTA and FYDEP. These officers had formed a cooperative to access land and had gone later into the lumber business (1971:167).

<sup>84</sup> Armed revolts started in the eastern part of the country in Izabal and Zacapa by the 1960s. Guerilla armed forces appeared initially there. Smashed by military forces, they moved to the other regions of the country. A major guerilla movement in Petén has been recorded between 1971 and 1979 led by the Armed Revolutionary Forces / *Fuerzas Armadas Revolucionarias* (FAR). Vela (2010) provides a careful analysis of important events in this region in an expert report prepared as evidence during the trial of the Dos Erres Massacre in Petén. In Guatemala the civil war lasted until 1996 when Peace Accords were signed (ODHAG, 1999)

<sup>85</sup> Effects of these colonization programs in communal lands in the Qeqchi area can be found in Grandia (2009) and Hurtado (2008).

They were considered the core of its economic and agrarian policies.<sup>86</sup> Additionally, major initiatives to promote the allocation of rights for the petroleum extraction and mining projects took place in different regions of the FTN and Petén.<sup>87</sup>

### 3.4.2. Petén: The process of instituting land tenure and ownership rights

President Peralta Azurdia (1958-1966) included the “development of Petén” as a major goal in his government program and the “economic development of Petén was declared of national urgency” (cited in Melville and Melville, 1971). In 1959, Law 1286 was enacted to promote the intensification of the “colonization process in this region and facilitate the *scientific exploitation* of lands and resources” (article 1, emphasis added). This law initiated the process towards institutionalizing land ownership in Petén, with the establishment of the first central government institution with a direct presence in the region, The Enterprise for the Economic Development and Promotion of Petén / *Empresa de Fomento y Desarrollo Económico de Petén* (FYDEP). Between 1950 and 1988 this institution was in charge of promoting the colonization of the region and allocating tenure rights on land and other resources, among other functions.

With jurisdiction in the largest region of Guatemala, FYDEP was created as an autonomous institution that responded directly to the presidency (article 4). According to the memoirs of two former FYDEP directors, this position was directly appointed by the presidency, and was usually held by military officers<sup>88</sup>. Following an executive decree in 1962, FYDEP became a division under the direct supervision of the National Defense Bureau (Rodríguez, 1969). Article 6 in this law defined the functions to be implemented by FYDEP: (1) to administer construction of infrastructure to foment agricultural, industrial and tourist development in Petén; (2) *to administer and to exploit Petén’s natural resources*, except

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<sup>86</sup> According to Braconnier, the heart of these policies was the interest of the Guatemalan State, led by military governments, to control the guerrilla movement in these regions of the country. Around the time that these colonization movements were established, they also established military bases in charge of organizing the land allocation programs and military corps of engineers in charge of building roads (1979).

<sup>87</sup> According to Braconnier (1973), these concessions included more than 350,000 ha in San Andrés, San José and Sayaxché that were given to the companies Shenandoah Inc, Basic Resources Ltd and Saga Petroleum in 1970, all of them in Laguna de Tigre, Petén. Meanwhile the Exmibal concession of more than 250,000 ha in Izabal was allocated to Centram S. A., Zamora S. A. and Hannah Mining Co (Canadian capital). Other regulatory reforms promoted by the new Constitution allowed allocation of nonrenewable resource concession rights to foreigners. Further studies that analyzed the political ecology of mining and petroleum concessions can be found in Solano, 2005. These reforms were included in the new mining law, the year after Castillo de Armas became president (Decreto 272, 1955).

<sup>88</sup> FYDEP functioned between 1959 until 1980 when a settlement committee was set up to take over all the files and processes in the hands of this institution. However, due to the large amount of pending initiated land claims, the transfer of the functions of FYDEP to INTA was not concluded until 1988.

oil, for internal use and overseas export; (3) to sponsor colonization and thereby increase production of food staples and provide landless peasants with new lands for agricultural production; (4) to “plant” settlers along the Usumacinta River – the western border with Mexico – primarily to bar a proposed Mexican hydroelectric project from flooding Guatemalan soil and to prevent Mexican colonists from encroaching on Guatemalan land; and (5) to promote medium-scale capitalized cattle-ranching in central and south-central Petén (Decree 1286, emphasis added). Integration of new lands for agricultural development was central to FYDEP's mandate (FYDEP, 1971).

Much of Petén's socioeconomic life prior to the colonization process was based on extractive activities of timber and non-timber forest products, in particular rubber tapping and collection of palms. According to Schwartz, rubber tapping was the economic basis of the region from the 1890s until the beginning of the 1970s, becoming for several years one of the most important export products and creating an enclave production system (1990). This author argues that the rubber-tapping industry integrated the region's economy into world capitalist markets<sup>89</sup>. For years, *Peténeros* called chicle white gold (*oro blanco*). The technology and ecology of chicle production in combination with laws prohibiting private ownership of chicle trees<sup>90</sup> largely determined relations between labor and management in the chicle industry (Schwartz, 1990). During these years, limited by precarious communication infrastructure, the economy of Petén depended more on trade relationships with Mexico and Belize than with Guatemala City. According to Schwartz, “*Peténero* elites were more concerned with commerce – even during the heyday of *oro blanco* – than with dominion over land and labor (1990:74).” The fall in rubber prices, affected both by the establishment of major plantations in Asia and by the emergence of new synthetic products in 1960s and early 1970s, overlapped with state-led efforts to colonize and develop the northern lowlands.

### **3.5.Organizing resource access and tenure rights in Petén: The commoditization of resources in the lowlands**

As the basis of the scientific exploitation of resources referred to in article 1, FYDEP commissioned studies to analyze land use options for the region. Between 1972 and 1979, the United Nations' Food and Agriculture Organization (FAO) implemented the project

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<sup>89</sup> In fact, Schwartz (1990:9) argues that even though both Mexican and Belizean companies had accessed Petén to extract and export lumber from there before the 1890s, “it was the rubber-tapping industry that integrated the economy of the region into world capitalist markets.”

<sup>90</sup> The first law to regulate rubber-tapping activities was enacted in 1979 (Decree 79-79). Other reforms in these regulations include Decree 99-96 in 1996.

FAO/72/006 which resulted in numerous studies, including forest inventories, soil analyses, valuation of standing timber (FAO, 1970) and other research that was considered key to define land uses and promote natural resource management – in particular timber and rubber extraction in the region. Outcomes of this project became central in the analysis of deforestation processes since the 1960s not only for the Petén region but also nationally, as the forest inventories produced by FAO represent the first national forest cover data available, becoming the basis for comparison of subsequent national forest inventories (INAB, 2012). Results from the soil analyses were used for defining land use areas and their distribution across the region (See Table 9). Following the results of these studies, FYDEP defined that about 1.8 million ha of land would be destined for organizing population settlements. The rest of the land, as stated by President Peralta Azurdia (1965), would be dedicated to productive activities: “590,000 ha of Petén would be incorporated into the national economy, 330,000 for cattle and 260,000 for agriculture” (Melville and Melville, 1971). The region farthest to the north would be allocated to extraction rights for timber and non-timber resources (Milian, 2008). Even with all the timber and rubber extraction already occurring since the late 1800s, FAO data demonstrates that more than 95% of the Petén region still had forest cover prior to the colonization efforts. What is surprising is that this scientific analysis produced by FAO (1972) was used to make recommendations to reduce the forest area and expand agriculture and cattle ranching (see Table 9), supporting the economic development projects that would come afterwards.

**Table 9. Analysis of existing land use (1970 - 1990) and recommendations based on soil analysis by FAO**

| Land use class   | Existing land use as of 1970 | Recommended land use area (Based on FAO soil analysis, 1972) | Land use 1976/1978 | Land use 1987 | Land use 1993 |
|--|------------------------------|--|--------------------|---------------|---------------|
| Forest area: Commercial and potentially commercial forest land | 74.28%                       | 48%  | 85.6%              | 76.6%         | 62.9%         |
| Forest area: Non-commercial forests                            | 22.31%                       |  |                    |               |               |
| Agriculture and ranching                                       | 0.23%                        | 18%  | 14.4%              | 17.4%         |               |
| Other land (water bodies, roads, swamps)                       | 2.24%                        |  |                    |               |               |
| Cattle ranching  | 0                            | 33%  | NA                 | 6%            |               |

Source: Based on FYDEP, 1971; FAO, 1972; UNEPET et al., 1992; INAB et al, 2012. The method of analysis used between 1970 and 1990 varies over time. Since 1986 forest-monitoring information is based on analysis of time-series satellite imagery using Landsat Thematic Mapper imagery (Milian, 2008).

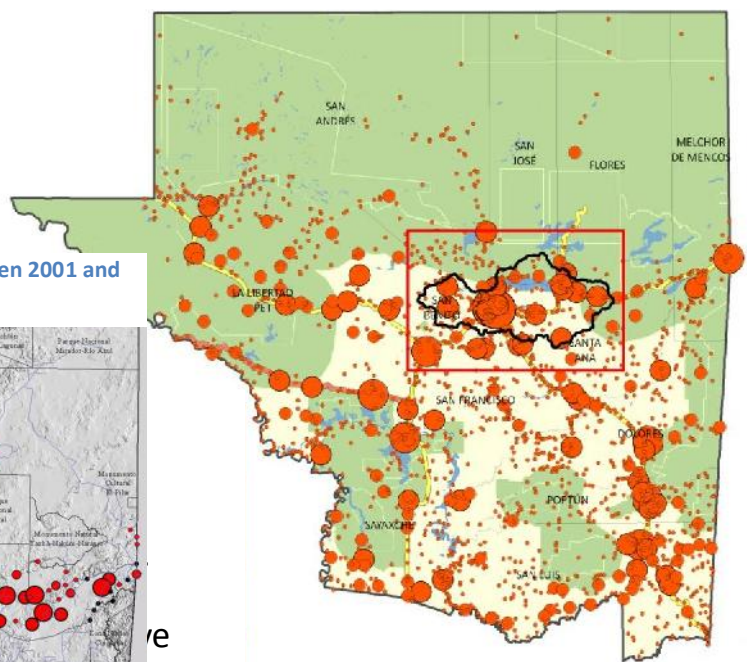
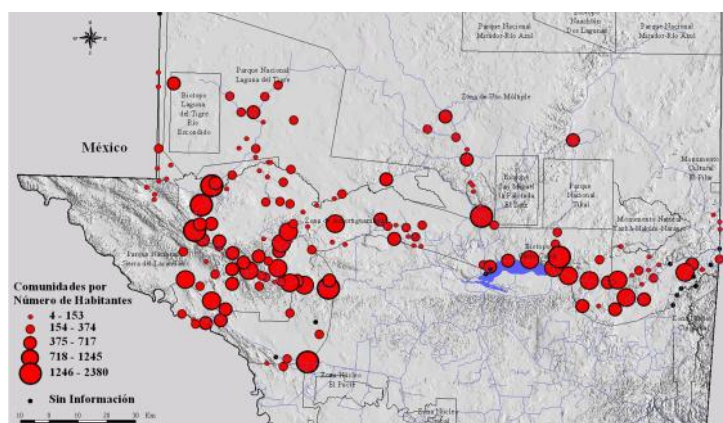
In their analysis of the evolution of property right systems in Petén, existing literature agrees that prior to these regulations, existing land tenure regimes consisted of common rights, sometimes open access situations, where communities were able to freely collect and extract from the forests (Milian, 2008; Grandia, 2009). Agricultural lands were accessed through usufruct and municipal permissions to work lands closer to the town centers (Schwartz, 1990). Milian (2008) recounts that before the land allocation and registration process began in Petén, only 71 plots were registered as private land in 1959, most of them in the hands of the Flores *elite*<sup>91</sup>. According to this author, these land titles accounted for about 1% of the total of Petén, the rest remained as idle lands (2008). In fact, most of the existing legal titles of direct ownership prior to colonization dated from the colonial days. As indicated by Schwartz, prior to the colonization of the region “land ownership as such is not given any special cultural value, this perhaps distinguishing *Peteneros* from other

<sup>91</sup> Schwartz recounts that 54 land titles existed – usually allocated to government *Petenero* officials – and most of them were located around the central urban area of Flores (1990).

Guatemalans” (1990:71). Dense forests, scant population, poor road systems and nonexistent or unknown mineral and petroleum reserves facilitated the isolation of Petén. Regional elites focused rather on controlling trade and commerce networks, which during the 19th century had been even more important than the control of labor and land (Schwartz, 2012; Schoonover, 1996). These particular conditions differentiated Petén’s socioeconomic and political history from the rest of the country (Melville and Melville, 1971).

The granting of property rights in the colonization areas followed different modes: lands allocated for cattle ranching purposes, lands allocated for small-scale agricultural production, lands allocated collectively to cooperatives and lands allocated to local governments. FYDEP distributed large plots (from 94 ha up to 675 ha) for cattle ranching in about a fifth of the available area. According to Milian (2008:64), “the local population showed little interest in these parcels, because their customary property system did not required formal titles, and because most of them did not have enough economic resources to finance high large or even median-scale livestock production.” Therefore, most of these lands remained in the hands of private entrepreneurs, military officials and politicians, some of them living outside Petén – despite the law obliging people to live on and work the plots. Meanwhile people interested in agriculture would receive between 4.5 and 90 ha. FYDEP also allocated lands to municipalities assigning land rights to areas of about 11,000 ha to establish *ejidos* to compensate the fact that Petén was the only department with no registered *ejido* lands (see Footnote 8). Municipalities would later assign land use permission rights to the local population and by mid-2000 Milian

**Figure 6. Maps showing the increase of population between 2001 and 2012**



Source: To the left (in gray), population data based on CEMEC, 2001; to the right (in green), population data based on SEGEPLAN 2013



said that there were at least 5,000 *ejido* users (2008:74). See Table 10 for a review of the tenure regimes and land use rights established by FYDEP.

**Table 10. Distribution of land use rights across different tenure regimes**

| Tenure regime                         | Land use                     | Suitable area as defined by FYDEP (hectares) | Number of plots assigned by tenure regime             | Actual area allocated under this tenure arrangement                         |
|---------------------------------------|------------------------------|--|---|---|
| Individual                            | Cattle ranching              | 94 - 675 ha/ranch                            | 180   | 200,000 ha (according to Milian) 466,000 (according to AHT and APESA, 1992) |
| Individual                            | Small-scale agriculture      | 4.5 – 90 ha/plot                             | 63,000 individual plots                               | 423,557 ha  |
| Collective                            | Small-scale agriculture      | Depended on the number of families           | 15 cooperatives (700 families established since 1965) | 17 cooperatives (368 families by 1990)                                      |
| State – local governments (municipal) | Municipal <i>ejido</i> lands | Up to 11,000 ha/municipality                 | 12 municipal <i>ejidos</i>                            | 137,525 ha  |

Source: Based on FYDEP, 1971; Grandia, 2009; Milian, 2008 and UNEPET et al., 1992

The rest of Petén, north of the 17°10' parallel, remained as a reserve for allocating future timber and non-timber concession extraction rights. Grandia (2009) argues that beginning in 1962, FYDEP awarded logging concessions in areas of 50,000 hectares each. The time span of these rights was usually between five and ten years. A similar policy followed the allocation of concession rights for the extraction of xate<sup>92</sup> and rubber. As part of the same project, a number of studies were done to analyze options for developing a timber industry in Petén (See for instance the reports from FAO, 1970; 1972). Two-thirds of FYDEP's budget (between 50 and 75 percent) came from taxes on non-timber forest products, the sale of timber, land payments, and tourism. During 1971 alone, FYDEP reported that about 59 percent of the total budget came from taxes on rubber (FYDEP, 1971). This gave FYDEP substantial financial autonomy (Grandia, 2009:168).

This marked the beginning of what was defined as spontaneous migration movements of people from other regions of the country, especially eastern and southern regions, to Petén

<sup>92</sup> *Chamaedorea sp.* is a palm used for ornamental purposes

(for a detailed analysis of migration patterns in Petén, see Grandia et al., 2001). Between 1960, the year when the first colonization programs of Petén started, and the early 1990s, the population of Petén grew 20 times, from a population that was below 25,000 to one that surpassed 500,000 (CEMEC, 2001; see Figure 6).

### **3.5.1. The colonization program of Petén**

The colonization of this region was viewed by some as the political means to dwindle the claims for agrarian reform, impaired by counterrevolutionary policies, allowing landless peasants access to land in Petén. However, other underlying interests in these projects included establishing property rights to be able to gain access to and control of natural resources with the possibility of accessing new markets for resource exploitation, particularly in timber and petroleum (Grandia, 2009; Schwartz, 1990). According to Melville and Melville, the promotion of investments was what propelled state efforts to organize rights around land and forest resources in Petén (1971). These authors tell of the interest in accessing timber rights by different foreign investors such the Warren Coastal Timber and Pulp Company, which offered to invest US\$100 million in Petén's lumber industry (Melville and Melville, 1971).

Decree 1286 delegated FYDEP the role of studying the convenience of bringing in immigrants, preferably “those who are specialized in particular crops, techniques of forestry, animal husbandry or industry.” This idea that not just anyone should participate in colonization initiatives was also stressed in Decree 48-72 (article 7 modifying article 16 in Decree 71, which defined the criteria of people who could participate; mainly “those who can prove their capacity to contribute to the economic development of Petén and have no properties above 45 hectares elsewhere in the country.” On this same issue, one of FYDEP's promoters, Casasola, wrote in his memoirs that “to govern is to populate but to do so one should promote demographic growth by selecting migrants who are ethnically suitable” as “...Indigenous populations are not the human contingent that Petén needs to progress” (1968:42-43). This reveals that the colonization effort did not aim at solving the existing inequalities that affected the majority of the indigenous and rural population, but rather was an effort to promote economic development based on the commoditization of natural resources and consolidation of the market economy.

While the regulations in 1959 opened Petén for colonization, it was not until 1962 that FYDEP started to organize colonization projects in the region (Milian, 2008). It opened its colonization department in 1964, and by the end of that year had already received more than 1,000 land requests that exceeded a million hectares of land. More than 80% of these requests came from persons living in departments other than Petén (UNEPET et al., 1992)<sup>93</sup>. Specific provisions to add land titling and registration as major roles for FYDEP were included in Decree 266 (1964). This meant that while INTA assumed the titling process in the rest of the country, FYDEP was the only state institution mandated to administer land and resource access claims and allocate property and resource extraction rights in Petén. In 1965, Decree 354, established a colonization program along riverbanks in Petén to promote agricultural production. These projects brought people from different regions to colonize the banks of the Usumacinta River. According to Centeno (1973), 15 cooperatives had been established in the Usumacinta riverbanks by the late 1970s. More than 700 families<sup>94</sup> were moved from the highlands and south regions of the country. After these cooperatives were set up, FYDEP technicians, using FAO analysis on land use surveying in Petén, would later accept that lands on the banks of the Usumacinta River were far from suitable for agriculture due to their high susceptibility to flooding. In 1967 FYDEP declared that the actual objective of the project was to prevent the implementation of Mexican projects to build a hydroelectric dam on the Usumacinta River (Casasola 1968). The Guatemalan State invested important resources in these colonization programs, however private investments were also promoted, as in the case of the FTN. Melville and Melville (1971) argue that private corporations opened national businesses and invested more than US\$30 million in colonization programs during the 1960s in Petén<sup>95</sup>. These authors argue that this was mostly due to their interest in investing in timber and petroleum extraction.

Between 1959 and 1987, FYDEP led in total 9 colonization projects encompassing about 1.5 million ha<sup>96</sup>. It did so first by surveying and registering two huge idle landholdings - (*Finca* 292,

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<sup>93</sup> According to Milian (2008) by the end of the 1990s about 29,500 land requests had been submitted to FYDEP. Data generated by the regional administration project UNEPET indicates that FYDEP was unable to respond to these land claims, as more than 75% remain undetermined.

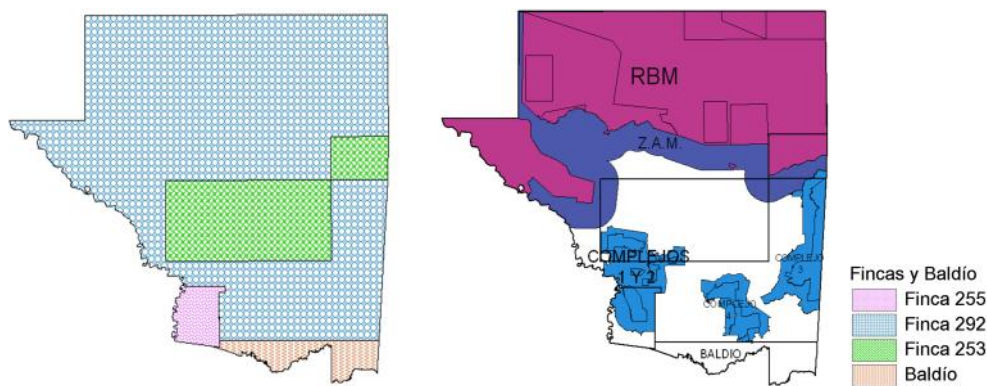
<sup>94</sup> A socioeconomic analysis of the conditions of these families was done by Centeno and colleagues 10 years later (1973). According to their findings only 368 families remained at the time of their study. More recent research on these colonization project and the cooperatives of the Usumacinta Riverbanks are found in Rodas (2009) and Arriola (2005).

<sup>95</sup> These companies included the Murphy Pacific Corporation from California, which opened CIANSA Compañía Impulsadora del Norte SA.

<sup>96</sup> For a detailed analysis of the colonization programs as subsequent land administration policies in Petén, see Milian, 2008, and Grunberg et al., 2013.

253 and 255) - as state property in the National registry (See Figures 7 and Figure 8). Colonization efforts took place, most of all in *Finca* 255 and 253 plus portions of *Finca* 292 – while most of the land in the north region was set up for allocation of extraction rights. Registration of idle lands as public property was key, as apparently no government had even bothered to register this huge territory as national land until the government of Peralta Azurdia (1963-1966) (Melville and Melville 1971). Major issues halting the advance of colonization projects included the inability of FYDEP to provide land titles as existing laws did not clearly authorize its role in property rights allocation until Decree 38-71.

**Figure 7 Figure 8. Maps of Petén indicate lands registered as state property (1964) and their overlaps with the Protected Area System (1990).**



Source: Milian, 2008

*Baldío* idle land in Spanish.

In the 1970s, under the presidency of Carlos Arana Osorio (1970-1974), new regulations were enacted to regulate the distribution of state lands in Petén, including the allocation of property rights and handling of land titles by FYDEP. This was done through Decree 38-71, later modified by Decree 48-72, which followed the land distribution regulations approved for the FTN in 1970. The implementation of these regulations was a political priority for the government. These regulations established a Land Commission directly lead by the Ministry of Agriculture that responded directly to the Presidency and met twice a month (article 1 and 2). The implementation of these regulations modified the tenure structure in Petén tremendously by assigning private property rights in a region where common rights and open access had predominated. According to Milian (2008), about 58% of Petén’s land had been distributed in private ownership by 2008 while the remaining 42% was declared as state forest reserve areas. The review of the main regulatory reforms affecting land and tenure regimes in Petén between 1959 and 1989 is shown in Table 11.

**Table 11. Regulatory reforms to land and tenure regimes affecting the lowlands in the 1959 – 1988 period**

| Year      | Law   | How it affected land and resource tenure   |
|-----------|---|--|
| 1959      | Decree 1286 Law that creates the Petén Economic Progress and Development Enterprise   | <ul style="list-style-type: none"> <li>▪ Declared the economic development of Petén a national urgency,</li> <li>▪ Called for Petén’s integration into the nation’s economic life</li> <li>▪ Provided provisions to ensure the “scientific exploitation” of forests and natural resources</li> <li>▪ Continued the implementation of colonization programs</li> <li>▪ Established regional public land rights registries.</li> </ul> |
| 1962      | Decree 1551 – <i>Ley de Transformación Agraria / Agrarian Transformation Law</i>  | <ul style="list-style-type: none"> <li>▪ Promoted the establishment of agrarian zones and colonization programs as new forms of access to agricultural land.</li> <li>▪ FYDEP becomes a division under the mandate of the National Defense Bureau</li> </ul>   |
| 1964      | Presidential Resolution #57   | <ul style="list-style-type: none"> <li>▪ Declared Petén as state land and registered it to FYDEP.</li> </ul>   |
| 1964      | Decree 266  | <ul style="list-style-type: none"> <li>▪ Assigned specific provisions to FYDEP for the registration and allocation of public land (this provision extended only to the Petén region - competences that were in the hands of INTA by Decree 1551)</li> </ul>  |
| 1965      | Decree 354  | <ul style="list-style-type: none"> <li>▪ Defined the declaration of “Reserved Regions for the production of staples” a national urgency for agricultural production purposes</li> <li>▪ Opened the banks of the Usumacinta River for colonization and land distribution</li> </ul>   |
| 1970      | Decree 60-70  | <ul style="list-style-type: none"> <li>▪ Declared the establishment of Agrarian Zones in the areas of the Northern Lowlands <i>Franja Transversal del Norte</i> a national urgency</li> </ul>  |
| 1971      | Decree 38-71  | <ul style="list-style-type: none"> <li>▪ Organized land allocation, tenure and land use system in Petén</li> </ul>   |
| 1972      | Decree 48-72  | <ul style="list-style-type: none"> <li>▪ Law that reforms Decree 38-71</li> </ul>  |
| 1978-1982 | Upsurge of violence in Petén (guerrilla and military clashes), displacement of people and emigration                                  |  |
| 1980-1988 | Settlement committee established to dissolve FYDEP - Land use and natural resource allocation roles are transferred to INTA and CONAP |  |

Source: Based on a review of the abovementioned decrees, plus analysis of these regulations by Melville and Melville, 1971; Braconnier, 1979; Casasola, 1968; Schwartz, 1990; Handy, 1994; and Pellecer, 2010.

### 3.5.2. Outcome of colonization efforts

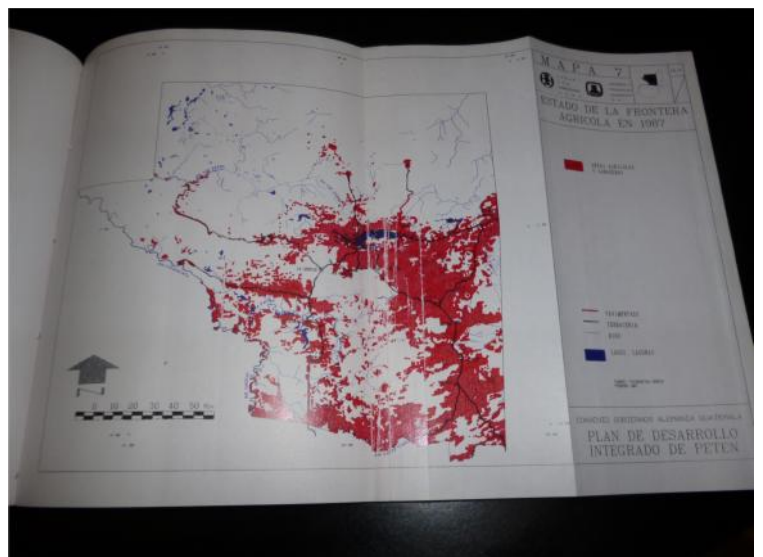
The colonization programs had unforeseen consequences as the increasing population, mostly landless peasants, started to self-organize and emigrate to Petén: “What had been an isolated, relatively peaceful hinterland was now an increasingly well-populated, turbulent

new frontier attracting landless *campesinos*” (Schwartz, 1990:74). After 1966, this population increase as well as the farming, ranching, logging, oil exploration, illegal drug planting, roads and commerce in Petén were also marked by extensive deforestation, environmental degradation, decreasing land access, increasing economic inequality and political unrest. According to Berger (1997), ill-planned and poorly executed colonization projects further increased the environmental destruction and social inequalities. Colonization was central in the government policy between 1958 and late 1986 when FYDEP was dismantled. Land was distributed to large and small landowners and roads were built to favor economic integration. Colonization, according to Ybarra, became "the patriotic duty to ensure the integration of this vast territory into the national economy" (2012:485).

A powerful indicator of the advancing environmental degradation in Petén is the deforestation rate between the 1960s and 1990s (Berger, 1997). By 1990 deforestation in Petén had affected about 40% of the land area while forest degradation affected another 10% of the area (using data from a UNEPET Forest inventory, 1992). Nations and Komer reported annual deforestation of 60,000 ha during the 1980s (1983). Other authors suggest that 30,000 ha were deforested

Figure 9. Map showing agriculture and cattle ranch areas in Petén by 1987

annually in Petén between 1976 and 1987, while 42,000 were cleared annually between 1987 and 1993<sup>97</sup> (UNEPET, 1992). By 1990, development programs analyzed the potential for introducing cattle onto more than 450,000 ha. These policies promoted access to land and facilitated credit for cattle purchase, encouraging forest conversion (PDI, 1992, See Figure 9). Since 1979, pasture area in Petén grew about 252,000 ha, holding more than 300,000 head of cattle, a considerable increase compared to the 21,000 reported in 1977 by



Source: UNEPET et al., 1992. Integrated Development Plan for Petén (PDI).

<sup>97</sup> Information on forest cover in Petén has been collected since the 1950s by Holdridge, Lamb and Mason (UNEPET, 1992). Two forest inventories have been taken, the first between 1963 and 1969 by FAO (1981), which was updated by UNDP in 1983. In 1991 the UNEPET Plan for the Integrated Development of Petén project (financed by Kreditanstalt für Wiederaufbau KfW) conducted the second forest inventory.

FYDEP (data for 1991 from UNEPET et al., 1992; data for 1977 obtained from Latinoconsult (1968). According to Schwartz, an increase in export quotas from the United States stimulated large cattle ranchers to expand (1990:249).

Also central to this policy was the construction of roads. During the first ten years, most of the institutional budget of FYDEP was dedicated to development infrastructure, in particular roads and bridges (FYDEP, 1971). The analysis of FYDEP's 1971 budget indicates that 66% of the institutional budget was dedicated to the construction of roads; the budgets of previous years report higher amounts (FYDEP, 1971). FYDEP promoters considered roads "the source of progress and development initiatives" (1971:7). By 1978, FYDEP concluded the first road that connected the Modesto Mendes in Izabal to Flores, the main city of Petén,<sup>98</sup> and to the border city of Melchor de Mencos (in Belize) and Frontera Corozal (in Mexico)<sup>99</sup>. Roads were considered a precondition to facilitate Petén's economic integration by making available market access and resource extraction and transport. Results from Shriar (2006) show that in the case of agricultural production, in contrast to what FYDEP proponents had argued, roads were not as successful in decreasing production costs, increasing profits for farmers by eliminating intermediaries or improving market access conditions. On the contrary, his work demonstrates that roads favored the entry of products from elsewhere so that local producers now faced growing competition from producers outside Petén (2006:110). Schwartz reports that by 1975 Petén was the leading producer of maize and black beans in the nation (1990:275). By 2000, agriculture continued to be an important activity in Petén, employing more than 60% of the labor force in the region (Grandia et al., 2001). Most agriculture and cattle ranching takes place in southern Petén, next to the most important access roads (See Figure No. 9).

Northern Petén, an area surpassing 1.5 million ha was exempted from colonization and established as a forest reserve set aside for logging and collection of forest products including rubber, allspice and palms. Logging, in particular of species such as cedar and mahogany, escalated to unforeseen levels during FYDEP's administration (Rodriguez, 1969; FYDEP, 1971). Although rubber tapping production had dwindled since the white gold period (from 1940s until 1960s), the collection of taxes from this product continued to be an important source of revenue to sustain FYDEP's activities. In 1990 Schwartz

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<sup>98</sup> It was a road of about 200 km that connected Izabal with the island of Flores, considered the main city of Petén. Not until mid-2000 was another road finished to the west, connecting Alta Verapaz to Petén.

<sup>99</sup> While most of the roads that connect the south of Guatemala with Flores, Petén, are now completely paved, those that lead to the frontier regions of Belize remain unpaved.

reported that while the central government contributed between 20 and 50 percent of the budget, the rest was covered by other activities including "commercial logging, land sales, fees and taxed derived from sale of *chicle*, taxes on forest products such as *shate* and various licenses" (1990: 253).

Central to these policies was the institution of private rights on holdings. According to Arriola, by 1960 private property was limited to an area of around 700 km<sup>2</sup>, less than 2% of Petén (2005). About 90% of these titles belonged to people in urban areas (Schwartz, 1990). FYDEP was in charge of handling land titles, but was unable to respond to existing land claims. Land clearing became the common system to claim possession over land and ensure that FYDEP followed the administrative titling process. "Improvements" over land such as forest clearing, increasing cropping areas, building fences, increasing pasturelands and/or building a house were central to legitimize these claims over land (Arriola, 2005). Only a limited area of the landholding (around 20%) was allowed to remain as forest reserve (Ybarra 2012). Different authors refer to this informal system of claiming possession over land by means of improvements as *agarrada*. This customary form of land tenure allowed for land to be informally traded, and even inherited, based on the value of investments rather than the actual value of the land (Arriola, 2005).

Since the 1970s land tenure structure in Petén has been based on private rights to land. Initially promoted by FYDEP, government policies continue to consolidate private tenure regimes by implementing different titling programs. Private rights were allocated to individuals and collectives that organized around the cooperative system. Corporate usufruct rights were also granted to private companies through government concessions for extraction of timber and non-timber forest products under short-term contracts and oil under fifty-year extraction concession contracts (Schwartz, 1990). Reports analyzing changes in land tenure structure in Petén argue that there is an increasing tendency towards land concentration (IARNA et al., 2006; Grandia et al., 2001). This trend was originally predominant in cattle ranching areas, but has now been associated with the expansion of agroindustry, mainly oil palm, and illegal activities such as drug trafficking and money laundering (Grunberg, 2013:121).

### **3.6.Change in territorialization strategies used by the State around resource access and control**

In the analysis of land claims in Petén, different social actors emerge and employ different strategies to access, use and control land and resources. Central to the analysis is the State's



role in deploying different territorialization mechanisms to organize space in Petén in relation to land and resources as well as strategies used to establish authority (Ribot et al., 2006; Brenner and Elden, 2009). Between 1959 and 1988 FYDEP was the most important state institution with a presence in this region, with the objective of incorporating Petén into the socioeconomic dynamics of the country. Colonization programs, the institution of a private rights tenure system and the definition of usufruct rights over resources were the most important territorialization mechanisms the Guatemalan State used to accomplish this task. Leading these efforts were the military, which was the most important political force controlling the executive branch between 1954 and 1985 (Schrimmer, 1999). Discredited by their counterinsurgency measures, the military lay the groundwork for civilian rule by the late 1980s.

Responding also to a political shift towards international conservation interests, FYDEP was downsized at the end of the 1980s and superseded by the recently created National Council of Protected Areas (CONAP, Decree 4-89). This change in the state entity in Petén also modified the role and the mechanisms to establish authority from one whose main objective was the colonization towards one that focused on conservation and the preservation of ecosystems. Different state authorities and mandates were distributed into two main regions. While agriculture and cattle ranching would continue to be promoted in southern Petén, the north was to be set aside for the creation of protected areas. National parks, biotopes and other categories of protected areas became new territorialization mechanisms used by the State to establish authority and control resources in Petén (See Table 12).

**Table 12. Evolution of territorial mechanisms used by State actors to define resource access and control in Petén**

|      | State entity  | Main functions   | Territorial mechanisms used to establish authority   | Other relevant forest users   |
|------|---|--|--|---|
| 1959 | Enterprise for the Promotion of the Development of Petén, FYDEP | <ul style="list-style-type: none"> <li>• Agricultural colonization of the lowlands</li> <li>• Natural Resources Administration</li> <li>• Land distribution and establishment of communities in Petén</li> </ul>   | <ul style="list-style-type: none"> <li>• Land titling (private and collective)</li> <li>• Establishment of a Forest Reserve</li> <li>• Establishment of short-term industrial concessions</li> <li>• Promotion of agricultural production and cattle ranching incentives</li> <li>• Heading up of colonization activities</li> <li>• Road infrastructure to favor integration</li> </ul> | <ul style="list-style-type: none"> <li>• Timber loggers</li> <li>• Extractive groups (gum-tappers and xate-palm collectors)</li> <li>• Communities</li> </ul> |
| 1990 | National Council of Protected Areas CONAP                       | <ul style="list-style-type: none"> <li>• Halt spontaneous migration movements</li> <li>• Establish the protected area system in Petén</li> <li>• Promote biodiversity conservation and sustainable use of resources</li> <li>• Generate mechanisms for increasing social participation in protected area management</li> </ul> | <ul style="list-style-type: none"> <li>• Cancellation of industrial timber concessions</li> <li>• Eviction of local communities from protected areas</li> <li>• Restricting the titling process to southern Petén</li> <li>• Establishment of a community/industry concession system</li> </ul>  | <ul style="list-style-type: none"> <li>• Industrial concessions</li> <li>• Extractive groups</li> <li>• Organized Communities</li> </ul>                      |

This generated an important shift in the logic of state presence in the forest and challenged existing *de facto* rights of forest dwellers. Some communities saw their assertion of land rights hindered by the declaration of their land as a protected area (Ybarra, 2012). It also opened up an opportunity for a shift in claims over forests and the strategies used by social groups to ensure access to forest resources (See Table 13). Dominant perceptions of Petén changed from a wild area to be dominated for economic benefit to an important reservoir of biodiversity and wildlife to be protected. Table 13 shows how interests in and perception of forests in this region have varied over time, principally driven by the distinct mandates of the two central governmental institutions with authority over forests in the region over the last fifty years: FYDEP and CONAP.

**Table 13. Evolution of claimants and claims over forests after the establishment of the Protected Area in Petén**

| Period                                    | Claims over forests and strategies used by claimants  |   | Relevant political and economic context elements   |
|---|---|---|--|
|   | Civil society actor (rights receiver)   | State actor (rights granter)  |  |
| 1959-1989                                 | <ul style="list-style-type: none"> <li>- Ensure access to land and resources either as individuals or as cooperatives</li> <li>- Avoid violent confrontations</li> <li>- Halt spontaneous emigration movements</li> <li>- Ensure claims over land either by forest clearing "land improvements" or by land titling</li> </ul>   | <ul style="list-style-type: none"> <li>- Reinforce state presence and authority by establishing FYDEP</li> <li>- Promote subsidies to convert forests to increase land for agriculture production and cattle ranching</li> <li>- Allocate private tenure rights around land and resources</li> <li>- Facilitate resource extraction by means of short-term (timber and non-timber) and long-term (oil) concession contracts</li> <li>- Build road infrastructure</li> </ul> | <ul style="list-style-type: none"> <li>- On-going civil war; need to reduce social pressure over land access</li> <li>- Counterinsurgency measures implemented throughout the country (including Petén)</li> <li>- First colonization program succeeds in opening forest areas to development</li> <li>- Provide infrastructure to facilitate economic integration of Petén to the rest of the country</li> <li>- Most land is registered as state land under open access mechanisms.</li> </ul> |
| Establishing protected area (1989 – 1994) | <ul style="list-style-type: none"> <li>- Open (at times violent) confrontations</li> <li>- Illegal logging</li> <li>- Lack of awareness (and later ignoring) of the protected area boundaries</li> <li>- Poaching and encroachment</li> <li>- Aggression toward state forest guards (protected area office)</li> <li>- Desire to ensure recognition of historical access and use rights over forests within protected area</li> </ul> | <ul style="list-style-type: none"> <li>- Halt deforestation rate</li> <li>- Control illegal activities</li> <li>- Reinforce state presence (authority) by increasing the number of park rangers</li> <li>- Cancellation of timber contracts*</li> <li>- Cancellation of land regularization processes in National Parks and the Multiple Use Zone</li> <li>- Eviction of communities established within the protected area</li> </ul>                                       | <ul style="list-style-type: none"> <li>- Dissolution of the Petén Forest Enterprise Development office (the only central government entity with a presence in the region)</li> <li>- Establishment of a Protected Area Office (CONAP)</li> <li>- Dependence on extractive economies (gum tapping and palm leaves)</li> </ul>   |

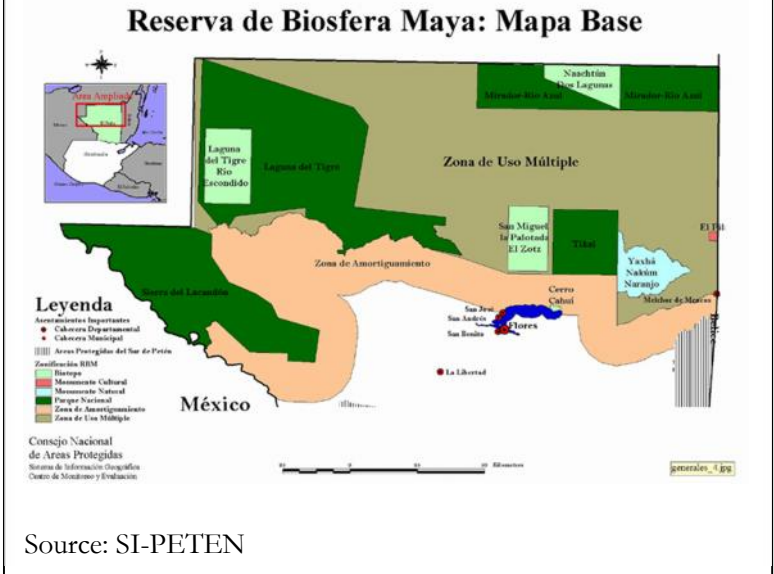
|   |   |   |  |
|---|---|---|--|
| Establishing the concession system in the Multiple Use Zone (1994 – 2002)             | <ul style="list-style-type: none"> <li>- Promote collective action through formalization of community organizations</li> <li>- Establish a second-level organization</li> <li>- Advocacy with state organizations</li> <li>- Ensure legal recognition of use and management rights over timber and non-timber forest products</li> <li>- Improve livelihoods</li> </ul> | <ul style="list-style-type: none"> <li>- Halt deforestation rate</li> <li>- Reinforce state presence</li> <li>- Control illegal activities</li> <li>- Solve violent confrontations</li> <li>- Establish new mechanisms (concessions) for allowing management activities within the Biosphere Reserve</li> </ul> | <ul style="list-style-type: none"> <li>- Peace Accords signed in 1996</li> <li>- Recognition of claimants as rights receivers</li> </ul>                           |
| Consolidation of the concession system in the Multiple Use Zone (2002 – present time) | <ul style="list-style-type: none"> <li>- Advocacy with national and international organizations</li> <li>- Reinforce forest management capacities</li> <li>- Control and surveillance of concession boundaries to avoid encroachment from outsiders</li> <li>- Improve livelihoods</li> </ul>   | <ul style="list-style-type: none"> <li>- Halt deforestation rate</li> <li>- Control illegal activities</li> <li>- Promote community forest enterprises</li> <li>- Regulatory compliance</li> </ul>  | <ul style="list-style-type: none"> <li>- New conflicts over forest areas associated with the emergence of external interests over petroleum and tourism</li> </ul> |

\*Timber contracts were five-year clear cutting agreements signed between the State and the local industry.

### 3.7. Protected areas as state territorialization strategies

In 1990, the Guatemalan State established the Mayan Biosphere Reserve (MBR) via Decree 5-90, encompassing over 2 million ha, the largest area under a protected regime in the country (CONAP 2001). The establishment of this reserve in the forest area of northern Petén, (and the finalization of a 32-year-long war) was characterized as a major attempt to change the logic of forest values and use, introducing conservation as the overarching goal. The reserve's master plan created three management zones (See Figure 10).

Figure 10 Biosphere Reserve Map



The largest portion (over 40 percent) was established as a **multiple use zone** (beige) to promote sustainable activities but with no human settlements involved. The original proposal was that this area be given out in concession to private timber industries held to commitments of strict sustainable

management criteria. The **core zone** (dark green) is a restricted area for the conservation of natural and archeological resources. This area is made up of five national parks and two protected biotopes, and represents 36% of the MBR. Only strict conservation activities are allowed and no population settlements or productive activities are permitted. The **buffer zone** (pink) is a 15-kilometer strip located in the southern part of the MBR. It represents 24% of this protected area. Productive activities as well as population settlements are allowed in it under sustainable management plans (Source: SI-PETÉN, 2001).

According to Berger, the establishment of the MBR marks the emergence of an environmentalist movement in Guatemala (1997). Regional democratization, according to this author, created an opening for an elite environmental movement to influence the creation of new conservation policies (Berger, 1997). He writes that "the focus of the environmental movement was not civil society but the State" (1997:215). The movement became closely linked with the main political party during the negotiating of the 1985 Constitution. Taking advantage of the political opening, it was able to include specific provisions in the Constitution (articles 125, 126 and 127) that lay the groundwork for environmental legislation in the country (1997: 106). This was followed by the approval of the Law for improving and protecting the environment (Decree 68-86) and the Protected Area Law (Decree 4-89). The movement was also successful in integrating environmental

issues into the peace agenda<sup>100</sup>. Table 14 provides a brief overview of major regulatory reforms between 1985 and 2000 affecting land and resource tenure in Petén.

**Table 14. Regulatory reforms in the 1985 - 2000 period around land and tenure regimes affecting the lowlands**

| <b>Year</b> | <b>Law</b>            | <b>How it affected land and resource tenure</b>  |
|-------------|-----------------------|--|
| 1985        | Constitutional Reform | <ul style="list-style-type: none"> <li>▪ New provisions (Articles 125, 126 and 127) laid the groundwork for environmental regulations, including the establishment of the national protected area system</li> </ul>  |
| 1986        | Decree 68-86          | <ul style="list-style-type: none"> <li>▪ Law for improving and protecting the environment</li> <li>▪ Created the National Environmental Commission (a division under direct supervision of the President).</li> </ul>  |
| 1989        | Decree 4-89           | <ul style="list-style-type: none"> <li>▪ Established the national protected area system</li> <li>▪ Re-zoned the region, modified existing land use patterns</li> <li>▪ Created the National Council of Protected Areas (a division under direct supervision of the President)</li> </ul> |
| 1990        | Decree 5-90           | <ul style="list-style-type: none"> <li>▪ Established the Mayan Biosphere Reserve</li> <li>▪ Reorganized northern Petén into management zones</li> <li>▪ Modified land use patterns and redefined land tenure rights</li> </ul>   |
| 1994        | Policy Document       | <ul style="list-style-type: none"> <li>▪ Policy that regulated the creation of community forest concessions (modified in 1998 and 2004)</li> </ul>   |
| 1996        | Peace Accords         | <ul style="list-style-type: none"> <li>▪ Negotiations around land required that at least 100,000 ha would be turned over to organized communities for natural resource management within protected areas.</li> </ul>   |
| 2000        | Decree 90-2000        | <ul style="list-style-type: none"> <li>▪ Downsized CONAMA and created the Ministry of Environment and Natural Resources MARN in 2000</li> </ul>  |

The environmental institutions, however, lacked political and financial support and relied on international funds for functioning. From 1990 until 2000, at least US\$50 million was channeled by USAID to support the MBR management (USAID, 1990). While USAID became the primary funder of the MBR, funds from other sources including the Inter-American Development Bank and KFW financed the creation of protected areas in southern Petén and strengthened the private tenure right system outside protected areas by financing titling programs. Via international conservation organizations, USAID continued

<sup>100</sup> It also kept lands established as protected area lands – even if not formally registered – in a public registry outside areas that could be claimed for reallocation by conflict refugees. In fact, not until 2000 were some parks and management units within the MBR formally registered (National Cadastre Office, Petén, personal communication).

financing the allocation of individual property rights in the buffer zone. By 2010 most of the land in the MBR's buffer zone had already been titled. According to Sundberg (1998), the formalization of land rights – via individual property rights – was to halt the informal colonization process. It promoted immigration flows into the region (UNEPET et al., 1992) and provided enough incentives to work and introduce improvements to the land. Nonetheless, deforestation continued between 1990 and 1999, during which about 115,000 ha were deforested. The highest deforestation rate took place in the buffer zone (about 3 percent) while the lowest took place in the Multiple-Use Zone (0.17 percent), which was even below that of the core area (CONAP et al., 2005).

Several NGOs emerged in the context of pro-democracy struggles, most of them obtaining funding from international sources (Berger, 1997). They became the means to legitimize the role of the state authority around conservation by promoting different development activities (Bebbington and Thiele 1993). However, in their rush to legalize the reserve, the national protected area service and environmentalists neglected to include local residents and other important state actors such as local governments (Sundberg, 1998). The new conservation scheme in the north changed the mechanism to access land and resources, requiring that in order to legally occupy the area residents had to comply with the compatible land uses established in the Master Plan. This also restricted the possibility of acquiring private title to land and limited autonomy and the type of productive activities allowed. It was an important shift from the system established by FYDEP and created an array of conflicts between local populations and the new state entity, CONAP. The complex history of contested property, land and territory claims continue to resurface in the current conflicts over conservation and development cooperation discourse but also in the establishment of management zones in the MBR (Sundberg, 1998).

The shift towards conservation interests was followed by a key political moment in the mid-1990s, with the finalization of the Peace Accord negotiations related to land rights. These agreements established that new government decisions over natural resources should ensure greater participation of communities in protected areas. At that time, with the civil war winding down and in the midst of the tenuous implementation of Peace Accords, the Guatemalan government faced a new and somewhat unpredictable conflict. In a region characteristically lacking normal communication channels between the local, regional and central governments, and minimal governance mechanisms (to inform, discuss, deliberate, etc.), the newly established protected area government offices made little visible effort to

reach out to the distant and atomized community settlements throughout the vast forest area (Sundberg 1998; 2002). This resulted in significant “pushback” from longer-term forest-dependent and resident communities.

In 1994, the Guatemalan government had legalized a formal community concession system within the Multiple Use Zone. The outcome was recognition of the historic and recent settlement rights of existing communities, while simultaneously addressing the underlying logic of the forest and biodiversity conservation agenda and avoiding a complete alienation of the industrial timber sector. The rationale behind this decision held that granting these large forested areas to community forestry concessions would satisfy the competing interests of all parties: industry, conservation and communities. Community access and settlement rights were recognized and management rights were conferred on the basis of a heavily regulated scheme of independent, certified production of high-value timber species, transforming the previously conflictive forest landscape.



## Chapter 4. Legitimacy of forest tenure reform: outcomes in Petén, Guatemala<sup>101</sup>

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<sup>101</sup> This chapter is based on the publication Monterroso and Barry (2012). The content has been reviewed and modified to update information and align to the objectives of this dissertation. Authors: Monterroso, I. and D. Barry. 2012. Legitimation of forests rights: The underpinnings of the forest tenure reform in the Protected areas of Petén, *Guatemala Journal of Conservation and Society*. 10(2): 136-150

This chapter analyzes and discusses the reform process of the community forest concessions system in the Mayan Biosphere Reserve (1994 - 2013). Chapter 3 analyzed the major historical factors underlying the reform's emergence while this chapter focuses on understanding the outcomes. First, it discusses from the institutional point of view how the reform promoted changes in tenure rights by closely examining changes in those social groups whose claims over forests were recognized, which I will refer to as "rights receivers" and those state actors who become the authorities granting those rights, i.e. "rights granters." Second, it discusses the strategies used to legitimate the process of acquiring, authorizing and sustaining those rights, the outcomes on changes livelihoods and forest conditions. The chapter argues that securing rights to forests over time is fundamental for sustaining outcomes. Lastly, the chapter explores emerging challenges and how changes in the underpinnings of legitimacy can undermine rights. In the case of Petén, understanding the underpinnings of the legitimacy behind forest tenure reforms is central to identifying ways in which these processes can work better for both forest and livelihood outcomes (Cousins, 2007).

#### **4.1. Emergence of the community forest concession system**

Although Guatemala is a small country with relatively limited extensions of temperate and tropical forests, innovative changes in forest tenure have been underway for over a decade. This chapter analyzes the process of recognizing and expanding community rights in Petén where community forest concessions – 25-year concession contracts between the State and organized communities – have been granted for over 400,000 ha within the largest protected area of Mesoamerica, the Mayan Biosphere Reserve (MBR) (See Section 3.8).

Regulations recognize two types of forest concessions within a protected area: industrial and community. Community concession contracts are legal agreements between the state and an organized group composed of members living in a given community. This system of community concessions in the Multiple Use Zone (MUZ) represents about 15 per cent of the country's total forest cover, including national parks (IARNA, et al, 2006). Together with the national parks, these concessions constitute the largest conservation area within the Mayan Forests (a system of protected areas that encompass 155,020 km<sup>2</sup> including parks in Mexico, Petén and Belize).

There are two particularly interesting characteristics of this reform compared to other reform process in Latin America (See Section 2.3. Forests tenure reform in Latin America).

First, land titling – the granting of full ownership rights – was not the mechanism employed by the State to secure rights. Instead, the rights granted came about through the introduction of a protected area. This provides a unique and useful example to support the work of various authors (Cousins et al., 2005; Broegaard, 2005; Benda Beckman and Von Benda Beckman, 1999) that have focused on analyzing mechanisms that ensure tenure security beyond private property. Second, the tenure reform in Guatemala did not grant alienation rights – the right to sell or lease the land itself – but it has recognized significant use, access, management and exclusion rights to the forests. This creates a unique opportunity to observe the changes in the claims to these forest resources.

To understand the origins, nature and initial outcomes of the tenure reform in Guatemala I examine the emergence of community concessions as a model for forest conservation in Petén, the role of forest user groups with access claims to the area, the complex set of rights recognized, the state entities (rights-granter) involved in the recognition process, and the social groups (rights-receivers/holders) benefitting from this reform. When studying forest tenure reforms, it is very important to understand the logic of or justification for recognition of the right, and the entity authorizing the right. Equally important are the sources of legitimacy behind the local and government structures involved in the process, and the ability of local groups to develop institutions that can defend those rights *vis-a-vis* state entities. In the case of Guatemala, new legislation regulating community concessions created a demand for new institutions. Different forms of collective action emerge in order to exercise new rights, derive direct benefits from management activities and ensure the ability to exclude outsiders.

The following sections will provide information on the study sites and present research results evidencing major changes derived from the recognition of community forest rights in the Multiple Use Zone of the Mayan Biosphere Reserve. This chapter analyzes the underpinnings of the legitimacy of the rights-receivers and the rights-granter, and demonstrates how that legitimacy is established as a process of mutual recognition of authority over these rights. Two processes are analyzed: how Guatemalan state institutions legitimate their authority in Petén and how the local concessions became legitimate forms of access to and management of forest resources. The section below briefly reviews relevant theoretical and methodological aspects on the issue of legitimacy. Following sections present and discuss major findings and challenges to sustain reform outcomes. Finally, the last section reviews the main conclusions of this chapter.

## **4.2. Theoretical and methodological aspects**

Various authors (Clark, 2000; Cousins et al., 2005; Sikor and Lund 2009) argue that the granting of tenure rights is one where the process of authorizing those rights is closely linked to the legitimacy of both the rights-granter and rights-receiver. These two sets of actors play key roles in maintaining the security of those rights and the larger tenure model they sustain. This section discusses the theoretical framework used to analyze fieldwork results. First, I analyze those issues related to legitimacy and the process of exercising authority and legitimating claims over forest resources. The outcome of this legitimation process is the recognition of rights, the basis of forest tenure reforms. Second, I discuss the analytical tools used to understand changes in the allocation of rights derived from the tenure reform process.

### **4.2.1. The legitimation process: exercising authority and legitimating access claims and claimants**

In his discussion, Suchman (1995) defines legitimacy as the “processes of legitimation” i.e. acquiring, maintaining and sustaining those forces behind the claims that empower social actors. Therefore for this author, the study of legitimation efforts involves analyzing the strategies employed in terms of the objectives and outcomes they pursue. This requires distinguishing between the goals of the social groups requesting that the claims be recognized as rights – i.e. rights receivers such as organized groups and nongovernmental organizations – and those interested in legitimating their authority as rights granters (e.g. the State).

The definition of the claims and those claiming them (the rights receiver) and of the rights granter is context and time dependent. First, in the analysis of the forest tenure reform in Petén (1989 – 2010), changes in the economic and political context (before and after the tenure reform) influenced the emergence of new social and state actors who themselves had different claims over forests. Second, historical analysis was key to delineate this process and demonstrate the changing roles of the state entities (and the social groups associated with these processes) over time (See Section 3.7. Change in territorialization strategies used by the State around resource access and control). Strategies for sustaining tenure security also varied depending on whether or not the concession contract had been signed. When examining the changing role of the State, particular attention was paid to

those spatial ordering mechanisms, i.e. territorialization strategies<sup>102</sup> (Sikor and Lund, 2009), as one form of legitimation used by the Guatemalan State to establish its authority in Petén. It reinforced a set of regulations to establish its authority and thereby created demand for a new set of organizations (See Chapter 3).

In the analysis of legitimacy dynamics, claimants of the tenure model include those individuals who became members of the concessionaire organizations as well as other forest users with access claims over resources within the MBR. This means that in the process of guaranteeing access rights for concessionaire members, the Guatemalan State denies the same guarantee to other existing claimants. Conflict may result from this exclusion as in the case where formal regulations recognize extraction rights to different groups in the same territory. This is a clear indication that legitimacy, as a social construct, is often contested.

The legality of formal regulations and procedures is not enough as an overall source of legitimate authority (Habermas, 2004): while the role of the State is important, political authority is not exclusive to state actors. During recent years there has been a clear shift away from state entities and increasing participation of nongovernmental actors in the governance sphere. Therefore, questions that emerge regarding the legitimacy underpinning social institutions – particularly with respect to representation and accountability (Lemos and Agrawal, 2006) – require an examination of other spheres where power and authority are exercised. For instance, third-party certification of the sustainable extraction of forest products has also been discussed as a legitimation instrument, strengthening standards for ensuring regulatory compliance in forest management activities (Cashore, 2002 and Eden, 2009). Other studies have explored the conditions that explain participation in co-management arrangements in protected areas, and have found that legitimacy is a key factor favoring the participation of women (Nuggehalli and Stalker, 2009). In addition, when discussing secondary-level associations in the community concessions in Petén, Taylor (2012) argues that effective organization is important to maintain representation, equity and legitimacy (see Chapter 5).

However, while the legitimacy of outcomes and actors are relevant subjects, these elements are not enough to understand how forest claims are transformed into rights. Therefore, this chapter will also explore the process and strategies shaping the legitimacy of the tenure

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<sup>102</sup> According to Sikor and Lund (2009), territorialization is a legitimation form employed by States to control spatial ordering and the people within the space (See Section 1.5.7. Tenure reform as practices of territoriality).

reform process. Clark (2000) studied the lack of legitimacy of prior land tenure institutions in Petén to demonstrate how state policies and strategies around colonization in the past encouraged deforestation and forest conversion. He based his findings on three case studies, one of them related to the MBR. Other related works include Larson (2010), who emphasizes the configuration of authority. In her analysis of indigenous territories in Nicaragua, this author discusses the process of configuring territorial authorities and how representative powers become legitimated as rights-receivers under constant negotiation.

In addition, Sikor and Lund (2009) argue that one way to understand how access claims are legitimated as rights is through the analysis of the processes by which these access rights become authorized. According to these authors (2009:6), “the exercise of authority is intimately linked to claims of legitimacy of the particular institution.” Therefore, legitimacy, authority and power are closely linked. Weber (1921) discussed the process of establishing authority as linked to the ability to exercise power in a way that is “legitimate.” This definition characterizes authority as the ability to influence other social actors. Therefore when analyzing legitimacy it becomes important to examine the processes whereby authority is established, strengthened and contested.

Finally, it is important to note that there are different politico-legal institutions legitimating authority. When access claims are hotly contested and power relations become diffuse, as in the case of Petén, Sikor and Lund suggest focusing on “how state institutions establish, consolidate and expand their authority”; these authors also warn against considering the state as “a set of congruent institutions” (2009:12). In other words, there can be competing state authorities as well as competition between the State and others.

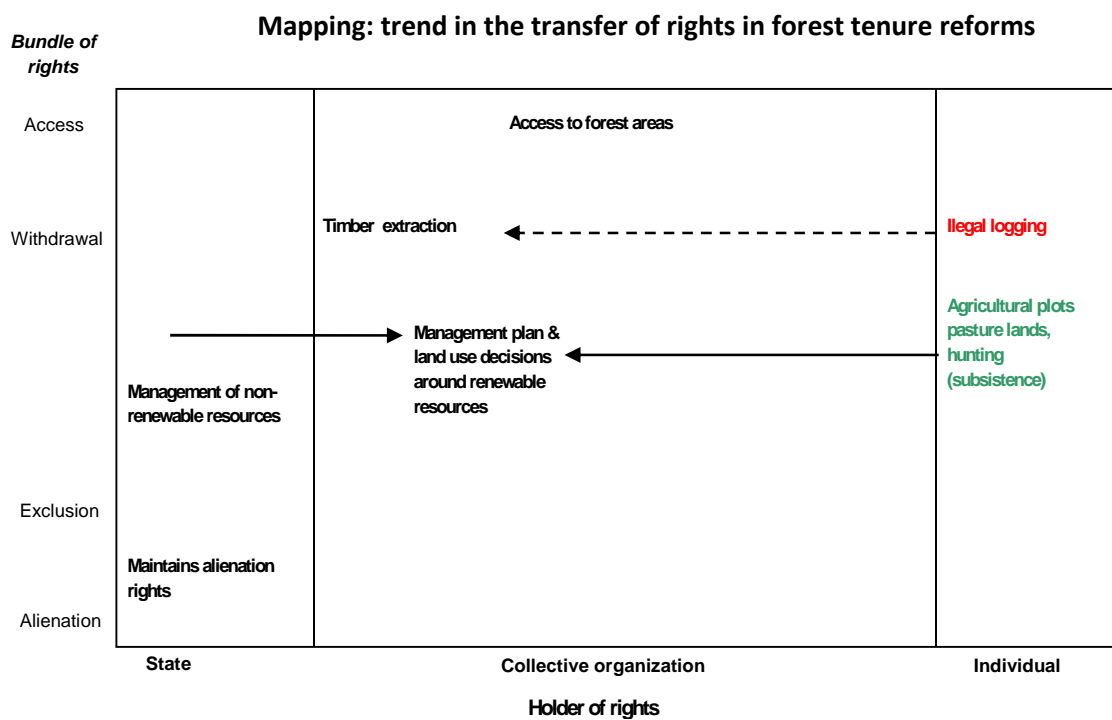
#### **4.2.2. Introducing the tenure box to understand the complexity of rights and rights holders**

In the analysis of forest tenure reform processes, this chapter takes a rights-based approach (Colchester 2008; See also Chapter 2). Forest tenure as the bundle of rights is made up of user rights (access, use) and decision-making rights (management, exclusion and alienation).

The empirical work that forms the basis of this chapter focuses on the application of the conceptual “tenure box” tool for interpreting tenure as a “bundle of rights.” The bundle of rights is visualized as a matrix (see Figure 11) where both axes have been “opened up,” allowing for a more specific description of both the types of rights in the bundle and the rights holders (See Section 1.5.2. Using the bundle of rights to analyze distribution of rights). In the tenure box, the arrows indicate the direction in which the right has evolved:

either being transferred by the State to the collective, becoming individualized or the opposite. . The color associated with the rights implies the regulatory basis either established formally – *de jure rights* appear in black – in national regulations, or informally – *de facto* appear in green – recognized by the collective holder of rights. Finally, illegal actions not recognized by any group are shown in red. A breakdown of rights holders into specific actors allows for greater differentiation of the institutions, organizations and agencies that hold or cease to hold these rights. This becomes important to better grasp the distribution of each set of rights.

Figure 11. Tenure box for the analysis of changes in rights



Source: Adapted from Barry and Meinzen-Dick 2009

Understanding the changes that occur across the gamut of social institutions of the holders and losers of these multiple rights is equally important for gauging the trade-offs and possible conflicts being established. Forest resources are many and the internal systems – within the perimeters of the titled forestland – for managing those rights are often invisible to outsiders, including the State. These can range from clearly defined customary institutions to cultural or religious norms, or simply those constructed around repeated patterns of natural resource dependence. In the process of claims becoming rights, it is important to register the differences between the individual, group and collective holders of different rights with claims on different resources within the forest, as some form of this

internal social structure will be recognized and will become the interlocutor with the State. The act of titling itself will need to recognize a collective structure or require the formation of a new one, in order to transfer these rights.

### **4.3. Case study work and methods**

General information on methods and data collection tools has been previously discussed in Chapter 2 (Section 2.1. Methodological approach). In the case of Guatemala, information was collected at the national (Guatemala) and regional (Petén) levels and at the level of local community and concession organizations. This section details the data collection methods used at the local level<sup>103</sup>.

Data was gathered from both community<sup>104</sup> member and non-member concessionaires (See Figure 12). According to the regulations, there are two types of community concessions in Petén. The first group includes concessions whose constituencies live in the same location within the perimeters of the forest area in the MUZ. The second group is non-resident concessionaires whose members may belong to more than one community settlement outside the perimeters of that forest area. Relevant groups involved in the configuration of the concession model in Petén were identified and different techniques were used to gather information (See Chapter 2, Section 2.2. Data collection tools). Target groups included government officials, representatives of nongovernmental organizations working at the local and regional levels currently and in the past. Major user groups (timber and non-timber) were identified and questions regarding the elements that influence the success of the community concession model were included (See Annex 1).

Socioeconomic information presented on Carmelita is based on 42 household surveys in Carmelita (65 percent of its total number of households) and 25 in Ixlu and El Naranjo, two of the nine communities belonging to Árbol Verde. The survey addressed both members and non-members of these concessionaire organizations. Questionnaires were divided into three sections, the first gathering information on family composition and socioeconomic conditions, the second focusing on livelihood strategies and the third gathering information on organizational and institutional aspects (See Annex 3). Additionally, a guide at the community level was used to gather information on population

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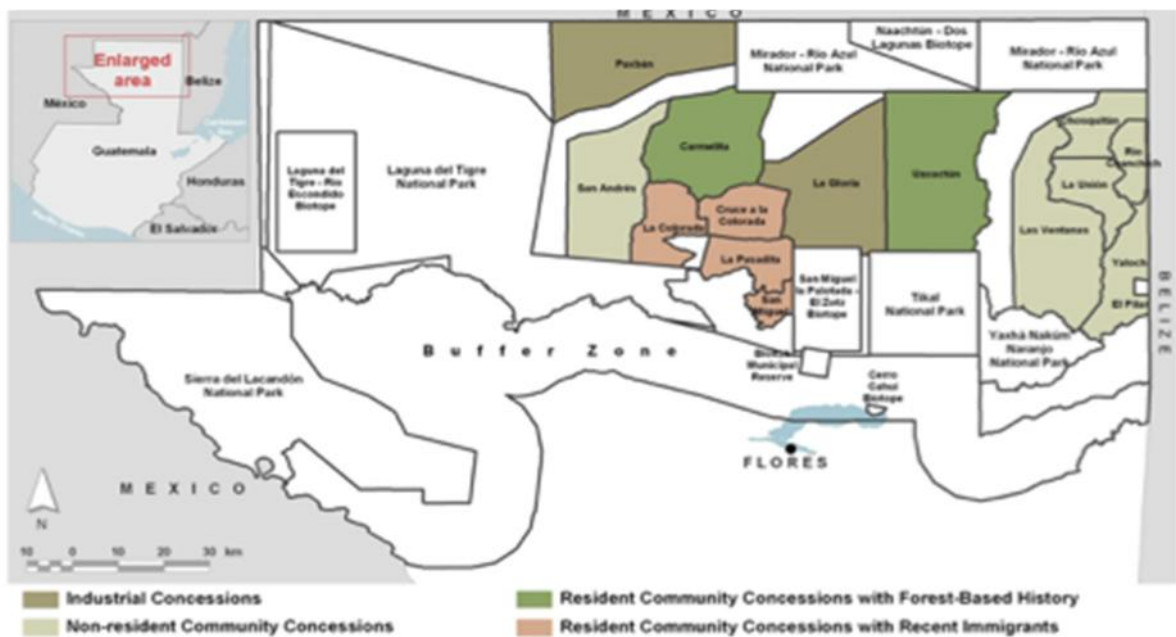
<sup>103</sup> Detailed information collected as part of a larger research project is available at <http://www.cifor.cgiar.org/tenure-reform/> (See Prologue). Four types of research reports were produced: one at the regional level, two at the community concession level, and one integrating analysis and discussion of findings.

<sup>104</sup> In this dissertation the term community refers to a rural settlement whose members share certain common social and cultural characteristics.



composition, public services, current community organizations, existing development projects and major community problems and perceptions (See Annex 1). Additionally, 37 semi-structured interviews (See Annex 2) were done at the community level with members and non-members of the concessionaire organizations (16 in Carmelita; 14 in Ixlu and 7 in El Naranjo communities which have members in Árbol Verde); 6 group interviews were conducted with concessionaire organizations (4 with the Carmelita Cooperative and 2 with the Árbol Verde Association); and 1 focus group was held with organized women in Carmelita.

Figure 12. Map of MBR showing concessions within the Multiple Use Zone



Source: Radachowsky et al., 2012:20

The information gathered via the interview guidelines included the perception of major changes occurring since the establishment of the MBR and the concession system, and challenges and problems faced by the concessionaire organizations.

Specific information on major forest products, identification of groups extracting resources from managed forest, rules and norms associated with access and extraction of major forest resources (timber and non-timber), perceptions of dependence on forest resources, perceptions of the major problems and conflicts within the community related to the forest and perceptions of the role of external organizations regarding the community and concessionaire organizations were also collected.

While general information at the local level was gathered for all 12 community concessionaire organizations (see Figure 12), detailed information for two concessionaire organizations was gathered to discuss changes in tenure rights. The selection of these two organizations as study sites was based on the location of community settlements, inside or outside the forest management unit, previous history and livelihood strategy, type of organization and initial forest management conditions (Table 15). The forest management unit establishes the boundaries of the concession contract where concessionaire organizations have rights. In some cases (six out of twelve) management units are found within the same boundaries as the communities where they live. In the rest, concessionaires belong to communities located outside the forest management unit.

In the analysis of communal tenure regimes in South Africa, Cousins (2007:293) highlights the importance of looking into embedded social structures for understanding how tenure systems operate in practice. A new set of social relationships emerges in the case of community concessions, one that derives from the status as a member of a collective 'community concession' organization that influences relationships between individuals and the community on one hand, and between the collective and the State on the other. The relationship between the community concession organization and the state organization is marked by recognition and allocation of rights but also by compliance with norms that are important in terms of governance schemes.

As a result of constant negotiations in the midst of these political shifts, a total of 12-community concession contracts (for areas ranging from 7,000 ha to 85,000 ha for a total of 390,000 ha) were signed between 1994 and 2001 with organized resident and non-resident local community groups. Two additional contracts were signed with industries for timber production (140,000 ha). All concession contracts required collective organization – a legal entity that would become the right receiver (community concessionaire) – and resource extraction based on management plans approved by CONAP. In order to get concessions to scale, communities negotiated based on the use of maps calculating areas needed for livelihoods and incomes, based on projections for non-timber uses and sales (Cortave, Pasos pers. comm.). Here there are two important bases for the struggle to obtain concessions, one advocating allocation of forest resource rights based on historical uses and another one advocating for recognition of informal forms of access to non-timber forest resources as well as the willingness to embrace a model of community-based timber production.

Table 15. General characteristics of community concessions in the Mayan Biosphere Reserve

| Management Unit                                   | Río Chanchich                        | Chosquitán                           | Uaxactún   | La Unión                             | Yaloch                     | Las Ventanas (Site 1)      |
|---|--------------------------------------|--------------------------------------|--|--------------------------------------|----------------------------|----------------------------|
| <b>Concessionaire organization (legal entity)</b> | Sociedad Civil Impulsores Suchitecos | Sociedad Civil Laborantes del Bosque | Sociedad Civil Organización, Manejo y Conservación | Sociedad Civil Custodios de la Selva | Sociedad Civil El Esfuerzo | Sociedad Civil Árbol Verde |
| <b>Year the organization was formed</b>           | 1994                                 | 1998                                 | 1998   | 1999                                 | 1999                       | 1998                       |
| <b>Year the contract was granted</b>              | 1997                                 | 2000                                 | 2000   | 2002                                 | 2002                       | 2001                       |
| <b>Concession contract status</b>                 | Active                               | Active                               | Active   | Active                               | Active                     | Active                     |
| <b>Extension (hectares)</b>                       | 12.173                               | 19.390                               | 83.558   | 21.176                               | 25.386                     | 64.974                     |
| <b>Number of concessionaire members</b>           | 50                                   | 96                                   | 225  | 96                                   | 41                         | 344                        |
| <b>Number of woman members</b>                    | 0                                    | 33                                   | 55   | 23                                   | 9                          | 28                         |
| <b>Number of beneficiaries (population)</b>       | 191                                  | 392                                  | 688  | 423                                  | 250                        | 1491                       |
| <b>Number of cattle</b>                           | 0                                    | 0                                    | 0  | 0                                    | 0                          | 0                          |
| <b>Area affected by land grabbing</b>             | 0                                    | 0                                    | 0  | 0                                    | 0                          | 0                          |
| <b>Location: resident, non-resident</b>           | Non-resident                         | Non-resident                         | Resident   | Non-resident                         | Non-resident               | Non-resident               |

| Management Unit                                   | La Colorada                              | El Cruce a la Colorada                           | San Miguel La Palotada                  | La Pasadita  | Carmelita (Site 2)                                 | San Andrés                              |
|---|--|--|---|--|--|---|
| <b>Concessionaire organization (legal entity)</b> | Asociación Forestal Integral La Colorada | Asociación Forestal Integral Cruce a La Colorada | Asociación de Productores de San Miguel | Asociación de Productores de La Pasadita                       | Cooperativa Integral de Comercialización Carmelita | Asociación Forestal Integral San Andrés |
| <b>Year the organization was formed</b>           | 1999                                     | 1999   | 1995                                    | 1999   | 1999   | 1999                                    |
| <b>Year the contract was granted</b>              | 2001                                     | 2001   | 1994                                    | 1997   | 1997   | 2000                                    |
| <b>Concession contract status</b>                 | Cancelled                                | Suspended  | Cancelled                               | Suspended (2004)   | Active   | Active                                  |
| <b>Extension (hectares)</b>                       | 22.067                                   | 20.469   | 7.170                                   | 18.817   | 53.797   | 51.940                                  |
| <b>Number of concessionaire members</b>           | 40                                       | 65   | 30                                      | 74   | 88   | 178                                     |
| <b>Number of woman members</b>                    | 15                                       | 20   |   |  | 31   | 16                                      |
| <b>Number of beneficiaries</b>                    | 168                                      | 337  | 145                                     | 386  | 355  | 1015                                    |
| <b>Number of cattle</b>                           | 0  | 1000   | 500                                     | 150  | 25   | 0                                       |
| <b>Area affected by land grabbing</b>             | About 50% affected by land grabs         | Private title claims on 1.800 ha                 | About 45% affected by land grabs        | Private title claims on 400 ha (plus land grabs affecting 30%) | Land grabs affect around 5% of the area            | Conflict on an area of 540 was solved.  |
| <b>Location: resident, non-resident</b>           | Resident                                 | Resident   | Resident                                | Resident   | Resident   | Non-resident                            |

Source: Information based on reviews from Radachowsky 2012; Monterroso, 2007a. and Cancino and Maas, 2001; concession contract documents; forest management plans and FSC certification documents (SW-FM/COC-063; SW-FM/COC-252; SW-FM/COC-161; SW-FM/COC-1303; SW-FM/COC-1192; SW-FM/COC-219; SW-FM/COC-1469; SW-FM/COC-100; SW-FM/COC-158).

Over the past 10-15 years, the community organizations have built their own local governance systems based on an expanded set of rights over natural resources (timber and non-timber forest products, and increasingly a claim based on the ecosystem services provided by the MUZ). This includes developing management and fiscal mechanisms to finance the constant protection of boundaries of the concession as part of their responsibilities. From 12 contracts signed with community-based organizations, only 8 are fully active as of this date. Two resident community concessions have been cancelled due to contractual incompliance, while annual harvest permits of two others have been suspended due to increase contractual compliance such as the cancellation of forest certification contracts. Regulations require that, in order to keep contracts active, organizations must obtain sustainable forest management certification from the Forest Stewardship Council during the first three years of the contract. Between 1998 and 2005 all community concessions became certified.<sup>105</sup>

#### **4.4. Study sites: Carmelita and Árbol Verde**

For this dissertation, two concessionaire organizations were selected for in-depth research at the community level based on two criteria. The first was the location of the community settlements with respect to the forest management unit. Carmelita, the first community concession, is physically located within the forest management unit, while Árbol Verde is not, but rather is an association that allows individuals from nine different communities located along the buffer zone to access a distant forest management unit inside the ZUM through collective action, specifically by forming a community organization. The second criterion concerned the type of forest resource dependency or forest-based livelihood systems; Carmelita is known to be a resource-extractor community while people from those belonging to Árbol Verde have livelihoods based on agriculture and cattle ranching.

##### **4.4.1. Previous history and livelihood strategies**

Carmelita, the first concession, is also the name of a community established by gum tappers and xate palm collectors as a harvesting center in the 1930s. It is a resident community, located within the Multiple Use Zone of the MBR. Gum production was organized from gum-tapping camps situated in the forests surrounding the village of Carmelita, where the product was gathered and transferred to the capital city by air, using the landing strip (built in 1942) that connected this small community to Flores and to Guatemala City.

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<sup>105</sup> Smartwood certification number for community concessions: SW-FM/COC-063; SW-FM/COC-252; SW-FM/COC-161; SW-FM/COC-1303; SW-FM/COC-1192; SW-FM/COC-219; SW-FM/COC-1469; SW-FM/COC-100; SW-FM/COC-158. Two certification contracts were suspended.

By 2001, a total of 88 families<sup>106</sup> in Carmelita subsisted from the extraction of natural resources: gum, xate palm and allspice collection. Over the last twenty years some families have begun to work in timber management, small-scale tourism and taking small groups to the Mirador Mayan monuments<sup>107</sup> as part of an ecotourism project which enable them to obtain complementary income.

Public services in this community are very poor; even though 60 percent of the community members have drinkable water, there is no sewage system or electricity service available in the community. Carmelita has a community health center that provides assistance in case of emergencies. By 2001 the illiteracy rate had reached 41.2 percent of the total community.

The second concession analyzed was *Árbol Verde*. In contrast to the first site, *Árbol Verde* is an organization composed of individuals from nine different communities, all located in the MBR buffer zone (See Table 16). All nine communities were established along the paved highway that connects Flores with Melchor de Mencos, a border city with Belize. The number of families in these nine communities ranges from 52 to 311. To collect information for *Árbol Verde*, two of nine communities were selected for in-depth fieldwork activities: El Naranjo, which has 249 families (10 percent of which are represented in *Árbol Verde*), and Ixlu, which has 300 families (24.4 percent of them belong to *Árbol Verde*). These communities were established after the 1960s (Shriar, 2006).

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<sup>106</sup> Population growth during the last year according to Census data (2007) varies between 1.3 and 2.1 percent. By 2010 the total population was 1,235 inhabitants.

<sup>107</sup> Mirador is a Mayan city that is located 65 km from Carmelita. This is a pre-classic compound that has been said to have unique archaeological characteristics. It takes five days to arrive to Mirador. During the last five years there have been an increase number of tourism operators that control the tourist route to Mirador.

**Table 16. Membership composition in Árbol Verde**

| Community | Members of the community concessionaire organization |                   |                     | Total number of families in the community | Total Population | Concessionaire membership per community (%) |
|-----------|--|-------------------|---------------------|---|------------------|---|
|           | Total # of members in concession organization        | Total men members | Total women members |   |                  |   |
| Viñas     | 25   | 22                | 3                   | 176                                       | 953              | 7.3   |
| Zapote    | 15   | 14                | 1                   | 138                                       | 708              | 4.4   |
| Naranjo   | 36   | 28                | 8                   | 249                                       | 1183             | 10.5  |
| Macanché  | 31   | 29                | 2                   | 243                                       | 1245             | 9.01  |
| Ixlú      | 84   | 63                | 21                  | 300                                       | 1350             | 24.4  |
| Remate    | 45   | 41                | 4                   | 232                                       | 1174             | 13.10                                       |
| Zocotzal  | 34   | 25                | 9                   | 52  | 240              | 9.0   |
| Porvenir  | 7  | 6                 | 1                   | 73  | 360              | 2.0   |
| El Caoba  | 67   | 54                | 13                  | 311                                       | 1589             | 19.5  |
| Total     | 344  | 282               | 62                  | 1774                                      | 8802             | 100   |

Source: Based on reviewed data from CEMEC (2001).

While livelihoods in Carmelita historically show higher rates of dependence on the extraction of natural resources, the livelihood base of people belonging to Árbol Verde (who emigrated to Petén for different reasons) were not based on forests, but on agriculture and raising cattle. By 2001, more than 40 percent of Árbol Verde's community members depended on agricultural and cattle raising activities, and plots were much larger than those found in Carmelita (15.28 ha/family). Other important economic activity is trade (20 percent of families). In contrast to Carmelita, extraction of non-timber forest products NTFP in Árbol Verde does not represent a relevant activity (less than 10 percent) in comparison to Carmelita where most households (above 70 percent) depend on extraction activities for income. Most of these communities have basic public services including water, sewage and electricity. Illiteracy rates are similar to those found in Carmelita (45 percent).

#### **4.4.2. Concessionaire organization: type of organization**

By the mid-1990s, community residents of Carmelita organized themselves first as a development committee and then formed a cooperative. Their claim was to guarantee use and management rights over forests where they resided and which they had been accessing informally for decades. Community members had *de facto* usufruct rights for non-timber forest products but industrial concessions prohibited their access to timber. Now, through the community concession contract (1997), they were guaranteed the rights to access, extract, manage and sell trees commercially and their informal usufruct rights over non-timber forest products were formalized.

Árbol Verde, in contrast, signed a concession contract with the Guatemalan Government in 2001, four years later than Carmelita. Though the organization's forest management claims in the MUZ were similar, individuals were dispersed across several community settlements, requiring a greater investment of time and effort to coalesce as a group. This explains the time lag between the different community contracts signed. Thus, the members are non-residents of the forest area and gain access through collective action via the establishment of their community organization. During this time period, the Community Association of Forest Communities in Petén (ACOFOP) was established as a second-level association of community organizations, constituting an important step in mobilizing the collective claims for concessionaire status to the State and conservation NGOs (See Chapter 5).

Members of Árbol Verde established a civil society organization (Civil Society Árbol Verde) with little external technical assistance from NGOs or legal advice. There are now 344 members (292 men and 52 women). The percentage of Árbol Verde members to their community of origin varies from 10 percent of total membership to 24 percent (See Table 17). The difference in the type of legal entity chosen has implications for the organizational requirements to comply with regulations, including tax payments, ability to engage in commercialization of forest products and distribution of profits, including dividends. For instance, Carmelita follows the law that regulates cooperatives, which exempts the organization from paying certain taxes (Chapter 5, Decree 82-78, 1978) and requires that at least 30 percent of the profits should be set apart as social benefits and another 30 percent as education to members. This is very different from the civil society association, which leaves the definition of the distribution of profits to the organization's internal bylaws<sup>108</sup>.

Concession contracts established detailed guidelines to regulate access to and use and control of timber resources. Here, it is important to point out that the reform of tenure rights via concessions initially focused almost exclusively on timber resources, which became highly regulated, while only superficially addressing the non-timber forest products or agriculture that formed the basis of most of the livelihoods prior to the reform (See Table 17).

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<sup>108</sup> There are three different types of organizations in the community concession system (See Table 1). Decisions on the type of legal entity used by community members to gain legal recognition mainly depended on the advice of NGOs supporting the initial process (or lack thereof) and exchange of experiences between the organizations already recognized and the ones that took longer to be legally recognized.



Table 17. Concessionaire contracts compared

|                                     | <b>Árbol Verde</b>   | <b>Carmelita</b>  |
|-------------------------------------|--|---|
| Year of Contract                    | 2001   | 1997  |
| Management Unit Area (ha)           | 64,973   | 53,797  |
| Membership                          | 344 members  | 160 members   |
| Type of organization (legal entity) | Civil Society  | Cooperative   |
| Payment terms and conditions        | <ul style="list-style-type: none"> <li>• The contract requires that after the grace period the community concession must acquire the FSC certificate to be valid while the contract is in force.</li> <li>• 22 annual payments of (US\$2,953) - The rate is Q7.50/ha (US\$1.00/ha)</li> <li>• 3-year grace period (no payment required)</li> </ul> | <ul style="list-style-type: none"> <li>• There is no reference to FSC certificate in this contract</li> <li>• First payment of 5 percent (US\$3,586) of the total amount and 23 annual payments (US\$2,962.73). The rate is Q9.60/ha (US\$1.28/ha)</li> </ul> |

Source: Contracts between the National Council of Protected Areas and the organizations: Carmelita Cooperative, 1997; Civil Society Association Árbol Verde, 2001

#### 4.4.3. Initial forest management conditions

The last aspect analyzed in both case studies was the forest quality and type. Forests in the MUZ are classified as tropical broadleaf forests (Nations and Komer, 1984). They represent the largest remaining lowland forests in the country, some of them seasonally flooded. The variables used to assess forest conditions are listed in Table 18. In both sites, forest areas had been previously logged under “selective logging methods,” by formal agreements between industrial concessions and FYDEP between 1960 and 1990, then illegally logged after the establishment of the MBR, when all contracts were revoked (Nittler and Schinkel, 2005). In both cases, communities were allocated rights to large extensions of forests (between 50,000 and 60,000 ha), although this is not the norm for the rest of the community concessions found within the MUZ of the MBR<sup>109</sup> (Mean concession area ranged between 13,000 and 23,000 ha).

Today, forest management activities in community concessions include commercialization of hardwood timber species and non-timber forest products including allspice, breadnut seeds *ramón*, xate palm and gum (Radachowsky et al., 2012). Initially, however, timber management was a new activity to concessionaire members. While tree diversity is high – more than 300 trees per ha according to the forest management plans – commercial-value timber analysis is based on the presence of two species, mainly mahogany and cedar (Propeten, 1997; NPV, 1999). Nonetheless, other species such as *Callophyllum brasiliense*, *Bucida burseras*, *Vatairea lundellii*, *Aspidosperma stegomeris*, *Lonchocarpus castilloi*, *Metopium brownei* and *Astronium graveolens* have been marketed in

<sup>109</sup> The community concession with the smallest area is 7,000 ha while the largest is over 93,000 ha. Together community concessions encompass more than 350,000 ha. Certified community forests surpass 250,000 ha.

increasing volumes. According to Radachowsky et al. (2012:22), harvest intensities in the MBR are among the lowest worldwide (between 1.2 - 3.0 m<sup>3</sup>/ha).

Not all of the forest area is assigned for timber extraction; according to the forest certification documents, a portion of the concession area should be classified under conservation status (ranging between 5 and 30 percent across active concessions). This usually includes lowland forests, archaeological sites and water sources where it is either difficult to extract or there is ecological value in stronger regulation for conservation. Though the conservation area in Árbol Verde is smaller (10 percent) than the one set aside for that purpose in Carmelita (30 percent), conservation areas are usually allocated for management of NTFPs. Following concession norms, all community concessions should obtain Forest Stewardship Council (FSC) certification of timber management and production.

**Table 18. Forest management conditions in study sites**

|  | <b>Árbol verde</b>   | <b>Carmelita</b>  | <b>Mean (n=10)</b> |
|--|--|---|--------------------|
| Number of hectares under concession                        | 64,973.37  | 53,797  | 60,000             |
| Land use distribution                                      | 50% area under sustainable timber management plan<br>10% protected area<br>40% NTFP extraction | 1.47% agriculture and pasture lands<br>0.19% urban area<br>63% area under sustainable timber management plan<br>30% reserved area |                    |
| Area under FSC certification                               | 100% of the area under concession  | 98.34% of the area under concession   |                    |
| Annual timber management area (ha)                         | 900  | 450   | 680                |
| Hardwood volume available per hectare (m <sup>3</sup> /ha) | 0.93   | 2.1   | 2.8                |
| Annual timber volume managed (m <sup>3</sup> )             | 1,029  | 1,365   | 900                |
| Number of trees extracted per hectare                      | 1-3  | 1 -3  | 1-3                |
| Rotation period  | 30 years   | 40 years  | 25-40 years        |
| Minimum diameter (DVH)                                     | 55 cm  | 60 cm   |                    |

Source: Own calculations based on NPV (1999); Propeten (1997); CONAP (2012, unpublished data)

Harvest planning activities consist of 30-40 year management plans; 5-year harvest plans and detailed annual operation plans defining the area that will be used for timber extraction and a census of marketable species. Árbol Verde shows a higher annual area under management, which can be explained by the lower volume available per hectare of commercially valuable timber species (0.93 m<sup>3</sup>/ha) in comparison to the species of commercial value found in Carmelita (2.1

m<sup>3</sup>/ha). Such reports specify the average number of trees extracted per hectare for all species extracted. Rotation periods show that this exceeds the duration of the 25-year contracts for both cases. Minimum diameters surpassing 50 cm in both cases are evidence of a conservative measure that tries to account for the complex functioning of tropical ecosystems.

#### **4.5. Main results and discussion**

This section combines the main results and discussion of the analysis of forest tenure reform outcomes at the community level. It highlights the main characteristics of the forest tenure reform in Petén and discusses the changes in the redistribution of rights among rights holders, focusing on the processes of authorizing, acquiring and sustaining rights. Internal and external elements underlying legitimacy are analyzed, as understanding these legitimacy aspects is key for sustaining reform outcomes in the long term.

##### **4.5.1. Main characteristics of the forest tenure reform in Petén**

Forest tenure reforms tend to be complex in nature, given the multiple functions of forest resources for goods and service provision, and the wider range of actors who share rights to common resources (Larson et al. 2010a.). Certain characteristics make the concession model unique in comparison to other tenure reforms taking place in the region (See Section 2.4. Processes shaping forest tenure reform in Latin America). It is important to note that this is a recent reform (1994) and is ongoing. Second, as it developed in a protected area, the underlying logic of the concession emerged from conservation interests and not from forest decentralization or forest policy reforms per se. Ensuring conservation outcomes was at the heart of the reform and sustainable forest management became one of the vehicles to ensure this. Indigenous and peasant land struggles leading reforms in other countries such as Brazil, Nicaragua or Bolivia (Pacheco et al, 2008; Larson et al., 2008) did not play out in this case.

Despite the fact that communities were seen as an important beneficiary group under this model, community concessions were originally defined to be scattered forest small landholdings adjudicated only to groups whose existing customary and de facto rights of permanence had been recognized (settlement before the MBR). From the perspective of the State (and powerful donor interests), these groups were seen primarily as local agents who should play the role of guardians and stewards, protecting these areas from incursion by landless peasants and illegal loggers. Concessions are temporary, for periods of 25 years, through renewable contracts between the State and an organized community group that transfer to the latter the ability to use and manage timber and non-timber forest products within the MUZ. Alienation rights are held by the State including subsoil rights, i.e. management, extraction and usufruct rights over

nonrenewable resources (e.g. petroleum, mining and gas). The State, therefore, continues to have a strong influence in regulating access rights.

The negotiations of conflicting interests (peace for the government; conservation and industry profits for USAID and NGOs; and livelihoods and improved incomes for communities-) are what led to a reformulation of regulations. This reform focused more on tenure rights over natural resources than over land (as in the case of agrarian reform). Forest resources (timber and non-timber forest products, mainly goods and services associated with provision) are at the center of this reform. Rights-receivers are collective entities formed by local community members<sup>110</sup>; therefore collective action becomes an important catalyst behind the tenure reform. These are specific bodies (concessionaire organizations, see Table 15) that govern access to and use of resources, and were legally approved to become formally recognized rights-receivers.

#### **4.5.2. Evolution of forest users and uses in Petén**

Forest products in Petén have been used for both subsistence and market purposes. Resources valued highly by the market include hardwoods and non-timber forest products such as gum resin, allspice and palm leaves. Subsistence extractions include firewood, medicinal resources and some hunting. There is some low-scale agriculture and cattle production within protected area management zones<sup>111</sup>, however these important economic activities are more commonly outside the protected areas (See also Table 15). Because some historic settlements are found within protected areas, forest users include both people living inside and outside the protected areas. Historically, several other groups migrated seasonally to this forest area during the rubber-tapping season. Some of these groups actually settled in the area, while others went back to their places of origin.

Rubber tapping was the most important economic activity before the establishment of FYDEP in Petén (See Chapter 3). The first regulations to increase public income taxes from its extraction appeared in 1979 when the central government approved the rubber-tapping law. In the same period, collection of palm leaves and allspice became important activities, but were not regulated. Extraction of non-timber products was organized through small mobile camps. These user groups were not formally organized<sup>112</sup>; most of the extraction activities were organized around

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<sup>110</sup> Although formally defined as community forest concessions, these are formed by both a portion of the community members inhabiting the forest management units and members of localities outside of the management unit, sometimes representing more than one community.

<sup>111</sup> In some areas illegal cattle ranching has reached significant levels (See area affected by land grabbing in Table 15).

<sup>112</sup> Gum collectors were organized in 1979 under the National Rubber Council CONACHI and the National Union of Rubber Tappers SUCHILMA. Neither organization is fully active at this time.

middlemen (contractors) who controlled the value chain and benefitted largely from a system characterized by enclave economy as described previously by authors Stoian (2000) and Stoian and Rodas (2006a. and 2006b.) and Monterroso (2007c.).

Timber extraction was organized first as short-term logging concessions – with no management obligations – controlled by industrial or individual concessionaire owners, oftentimes associated with the military or FYDEP (See Chapter 3). By the time concession contracts were signed, most areas had previously been logged for mahogany and red cedar, high-value timber species.

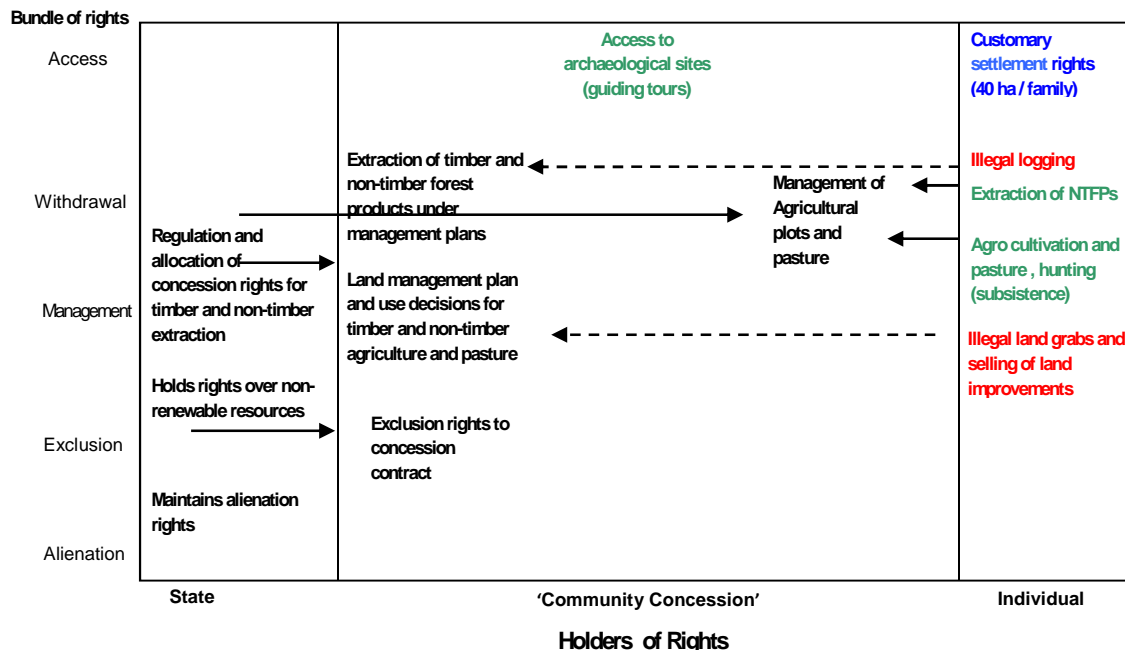
#### **4.5.3. Changes after recognition and redistribution of forest rights across rights holders**

This section discusses major changes in the recognition of rights and their redistribution across different rights holders after concession contracts were signed (See Figure 13). One element in this analysis is related to the differentiation between the resident and non-resident status of groups represented in community concessions. For resident communities, the geographical location of the communities and the management area, usually distant from the socioeconomic and political centers of Petén, influenced the definition of land and resource rights under informal arrangements, which have their social base in households and kinship networks. For non-residents, the relationship between the individual concession member and the community differs, as does the relationship between the concessionaire member and the forest.

In both resident and non-resident community concessions, two processes may influence changes in internal community dynamics and thus their rights. The first emerges from the establishment of a formal collective organization. The concession models “open up” and allow for the recognition of a collective entity in large forest areas. This new legal framework in support of communities required the existence of a collective entity with legal recognition to substitute the industrial firms that previously had access to the forest through concessions. The concessionaire organization that holds the concession right becomes the allocator and manager of those rights. The weight of this new organization in the community varies based on whether it is a resident or non-resident, especially as the number of members within a community increases. The second important process with the new concessionaire organization is the relationship between individuals in the community and the new organization that grants these individuals membership status. This relationship is important, as it transfers decision-making rights from the State to the collective, or in this particular case, from the Guatemalan State to the members of the concessionaire organizations. The analysis of the Carmelita and Árbol Verde concessions shows that when concessionaire members are from only one community and are forest residents, the

link to the community is far stronger than the case where the concessionaire organization is made up of individuals from several non-resident communities.

Figure 13. Distribution of the bundle of rights in community concessions



| *Regulatory basis |                 |
|-------------------|-----------------|
|                   | <i>de jure</i>  |
|                   | <i>De facto</i> |
|                   | Customary       |
|                   | Illegal action  |

Arrows  
 —————> Indicates the direction of the right either transferred to the state to the collective or from individual to collective management  
 - - - - -> Indicates the formalization of an illegal activity

Source: Monterroso and Barry, 2012:144

Major changes in the distribution of rights among forest users in concessions are illustrated in Figure 13. As previously described, this figure shows that communities have formally recognized access, use, management and exclusion rights, meaning a transfer of these rights from the State to the collective. Alienation rights are held by the State, which means that concessionaires do not have the right to either lease or sell land within the forest management units. However, all rights over subsoil resources such as oil are maintained by the State, even if they are found under the concession lands.

The distribution of such rights varies. Access rights for families living in resident concession areas are recognized as a customary right for both concessionaire members and non-members (CONAP 2004). Concession contracts ratify this right and delegate the making of overall or general land use planning decisions to the village government organization and to the community

development committee, which represents claims of both members and non-members of the concession organization. Nevertheless, in practice, community land use decision-making around residential, agricultural cultivation and areas for minimal animal husbandry areas are still managed under *de facto* agreements (Figure 4) by individuals and families.

Access to non-timber forest products was claimed by different subgroups including gum-tappers and xate palm collectors living within or outside the concession area. Previously, use rights over non-timber forest products of commercial value were usually allocated under an informal contractor system. This is due in part to the fact that, aside from some regulations – mainly taxes from commercialization – over gum extraction, other non-timber forest products were not yet legally regulated. Recently, recognition of this regulatory gap has driven the government to move in the direction of regulating access and management to non-timber forest products with norms and rules similar to those of timber. This required the development of specific management plans and certification schemes for non-timber forest products as well. The same will apply to agriculture and pasturelands, although regulations have not become operational yet. While decisions over which areas should be used for these activities were previously taken at the household level, resident concessions are now organizing larger landscape-level land use plans<sup>113</sup>.

Planning and management of specific forest resources, such as xate palm, allspice and gum, and of tourism activities is permitted for subgroups that are often organized as local committees within the larger concessionaire membership. The State developed formal regulations for commercially valuable resources, mainly timber and gum, but without taking into consideration their relationship to other forest resources. No thought was given to the ways in which the user rights of one group could affect those of others. For example, the National Gum Tapping Law (1979<sup>114</sup>) states that all Guatemalan citizens are entitled to extract gum resin within national borders. A series of conflicts emerged from this overlap, as a large number of gum tappers do not belong to community concessions. Rather, they migrate during the tapping season and do not follow informal or formal regulations established by the cooperative or the concession contract.

At the same time, the community concession contracts give the cooperative exclusive rights to the concessions, which are seen as the basis for the additional responsibility of defending its perimeters, allowing for sustainable timber management within the unit. Strict environmental

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<sup>113</sup> Agricultural areas vary within resident concessions; Carmelita – one of the resident concessions studied – had about 2 per cent of the managed area under this land use.

<sup>114</sup> This law was reformed by Decree 99-96 in 1996.





such as the *avales* functioned for xate-palm collection during the first five years of the contracts, a formalization process began in 2000.

With the new regulations formalizing access to xate palm approved in 2004, xate-palm collection and commercialization is now controlled only by concessionaire organizations and only their members are allowed to extract in the assigned forest areas. In 2008 several concessions obtained FSC certification on xate management (SW-FM/COC- NTFP000161). No collection by non-member extractors is allowed. Therefore, as of this year, both xate-palm and rubber are now being extracted under management plans. In most non-resident organizations, traditional users not belonging to the concessionaire organization, who previously extracted non-timber forest products under *de facto* agreements in these areas, have lost their claims.

A significant difference for non-resident concessionaires lies in the fact that without the concession contract, these members would not have had access to the usufruct or management rights of timber and non-timber resources. As they are not forest residents, no agriculture and pasture activities are permitted. Since concessionaires have taken legal “possession” of management areas, the open-access conditions that favored illegal activities including logging and archaeological looting have been significantly reduced. Concessionaire organizations have allocated important resources, time and money for patrolling and driving out transgressors, thus securing tenure rights. Concessionaire organizations are required under contract to report any transgression to government agencies. Yet due to the lack of instruction in the penal code to sanction environmental transgressions, these efforts remain “unpunished.” Rarely does an environmentally related case find its way into courts.

#### **4.6. Transforming claims into rights: legitimation strategies and purposes**

##### **4.6.1. The process of authorizing the right: i.e. of the rights granter acquiring legitimacy**

In this section, I will discuss the legitimation strategies used by the Guatemalan State to validate its authority in Petén. I do so by examining interactions between this and other social actors that intervene in the authorizing of access claims.

The configuration of the Mayan Biosphere Reserve as a spatial ordering mechanism implied two major changes. One was the “set aside” of large forest areas for strict conservation purposes with surrounding zones coming under highly regulated land and resource use. The other was the physical expansion of the State in this territory. With a history of almost no physical presence of state institutions until the late 1950s, establishment of the protected area brought different state agencies into the forest regions and it was assumed that this would be sufficient to validate their

authority within the management zones (Clark, 2000). The establishment of a specific state entity regulating protected areas and the demise of previous state institutions – the ones linked to land colonization programs – required a significantly increased presence of this government *in situ* (See Chapter 3). Although its principle function was to guard protected areas, penalize trespassers and monitor the evolution of the forest, it eventually found that its authority would instead stem from playing the role of accompaniment and mediator with respect to the community concession, industry and other actors within the forest region.

According to Tschinkel (personal communication, 2007) lack of clarity and the need to craft new regulations and approve concession norms delayed the allocation process between 1994 and 1998 (only three community concessions were allocated during this period). Cardona points to the need to craft regulations and negotiate within the related government institutions - including the Congress to approve laws and regulations – to put the system in place (2015). Fieldwork data revealed that coordination among government entities was scarce, worsened by their limited presence in Petén, with most decisions still being made in Guatemala City. For instance, important government agencies such as the Forest Service, as well as the Tourism and Archaeological History Institutions had little presence in the area. Moreover, in the mid-1990s, the local municipal governments had little or no participation in defining the MBR and concessions, despite the importance it could have played in mediating local conflicts (interview with mayors of San Andrés, San José and Melchor de Mencos). Increasing social mobilization (Sundberg, 1998) and strong influence by external aid agencies such as USAID and several large international conservation NGOs on project design and direction at initial stages were key to consolidating the protected area and making the concessionaire system work, oftentimes having a stronger presence and more authority than the government agencies themselves.

Analyses of financial aid flows to the MBR between 1990 and 2005 (Monterroso, 2007) concur with previous works (Gomez and Mendez, 2005) that discuss the key role of external institutions such as USAID in mobilizing significant funding and channeling it to the region over a relatively short period. This was not free from conflict, as already discussed in the works of Sundberg (1998) and Ybarra (2012). The purpose of these efforts was to completely change the logic of land use, and thus converting the region from an agricultural hinterland to the national center of conservation. Model enforcement was promoted by the new government agency (CONAP), which paid little attention to previously existing national agencies and institutions and demonstrated almost no knowledge of the degree to which communities were actually settled, living and working throughout this forest region. Ultimately, USAID and its partner NGOs

played an important role in legitimizing the authority of Guatemalan government institutions and thus displaced the option of establishing more robust and local authority, greater legitimacy and capacity for long-term governance in conjunction with communities during initial stages of the process (Sundberg, 1998).

#### **4.6.2. The process of acquiring the right: Legitimizing access claims**

Strategies employed by concessionaires for acquiring and maintaining legitimacy include formalizing their organizational structures through the establishment of legal entities in order to obtain “community concessions” status, complying with forest certification criteria and production processes (FSC standards) and formalizing their NTFP access strategies and rules. Regulations establish that communities must meet the standards and comply with the timber production and gum extraction regulations on a yearly basis in order to renew their concession rights (CONAP, 2004). All concessionaire organizations submitted environmental impact assessments in addition to their forest management plans. FSC certification contracts should be renewed every five years. Annual operation plans require the submission of six-month reports providing information on timber management activities.

Timber regulations are extremely complex, costly and time consuming, increasing transaction costs related to rule compliance (Monterroso and Barry 2009:40-43). This becomes more problematic as the organizational and technical expertise of some community concession groups is limited. Additionally, when matters require full collective support, communities require more time for reaching consensus (if compared, for instance, with a private timber industry). This is more relevant in cases such as the processes required to export mahogany<sup>115</sup> or obtain the annual certification evaluations, not to mention that intentions to export non-timber forest products require separate procedures for each product (as do the certification procedures and development of management and annual operation plans).

The community organizations have established their own local governance systems, based on an expanded set of rights of access, use and decision-making over their forest resources. This includes organizing and paying for the constant deployment of vigilance and patrol of the concession boundaries as part of their responsibilities. While most of them have stabilized encroachment and poaching activities, albeit not without considerable investment, deforestation dynamics have been more aggressive in community concessions with histories of recent establishment (less than 25 years using Radachowsky et al., 2012; Bray et al. 2008 data).

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<sup>115</sup> Trade of mahogany is regulated by CITES Convention and requires specific permits (<https://www.cites.org/eng/disc/text.php#IV>). Export costs are between US\$1,500 and US\$2,000 (Monterroso and Barry, 2009).

#### **4.6.3. The process of sustaining the right: tenure reform outcomes**

Community concessions in Petén are tenure arrangements resulting from negotiation among a series of actors, including conservation authorities, community concessionaires, the timber industry and local government. Here I differentiate the strategies of legitimating claims externally and internally.

##### **External legitimacy of claims**

In order to sustain legitimate claims over resources within the MUZ, community concessions should prove that the original purpose they were created for has been fulfilled. In the case of Petén, the purpose is to ensure forest conservation and establish sound governance co-management of forest systems (provide an interlocutor for the State). During the last 10 years there have been a number of efforts to systematize the outcomes of community management systems in the MBR. Table 19 shows a review of available works discussing indicators to evaluate changes in forest conditions during the last 20 years in community concessions.

Increasing deforestation rates have been an important concern since the creation of the MBR. About 30 percent of forest cover was lost between 1970 and 1990 (See Section 3.5 Organizing resource access and tenure rights in Petén, Chapter 3). Within the MBR, most of the land use change has taken place in the Buffer Zone. Radachowsky et al. (2012: 10) report that by 1986, 36 percent of this area had been deforested. Data are discussed based on the different settlement patterns of communities in regards to the forest management unit. Resident communities (with a history of settlement above 50 years) show lower values of deforestation and area burnt annually compared to the mean value for other active community concessions. Non-resident community concessions show smaller areas for indicators analyzing forest integrity such as incidence of forest fires (See Table 19).

Table 19. Indicators used to analyze forest conditions in community concessions

| Indicator   | Reference <sup>116</sup>   | Location in regards to the community   |                                      |   |
|---|--|--|--------------------------------------|---|
|   |  | Non-resident community concession n=6  | Resident (>50 years) n=2             | Mean value (active community concessions) n=8 |
| Annual Deforestation Rate % (2001-2013)               | Hodgon et al., 2015:9  | Árbol Verde = 0.00 (Range 0.00 - 0.01) | Carmelita = 0.03 (Range 0.01 - 0.03) | 1.054 (Range 1.7-2.9%)                        |
| Annual Deforestation Area in ha (2001-2009)           | Radachowsky et al., 2012: 22 -24; CONAP et al., 2003; 2004; 2005; 2006 | Árbol Verde = 0.7 (Range 0.2- 2.4)     | Carmelita = 17.4 (Range 17.2 - 17.5) | 268.7 (Range 92.2 - 433.8)                    |
| Area burnt annually in ha (1998 - 2010)               | Radachowsky et al., 2012; CONAP et al., 2003; 2004; 2005; 2006         | Árbol Verde=300                        | Carmelita = 200                      | 925.7 (Range 1311.7 - 1353.8)                 |
| Forest fragmentation (km edge / km <sup>2</sup> area) | Radachowsky et al., 2012: 22-24  | Árbol Verde = 0.05 (Range 0.01 - 0.10) | Carmelita = 0.22 (0.19 - 0.24)       | 3.47 (Range 0.01 - 4.90)                      |
| Mean distance from permanent roads (km)               | Bray, 2008:56  | Árbol Verde 45.4 (Range 12.1 - 45.4)   | Carmelita = 16.2 (13.1 - 16.2)       | 15.3 (2.3 - 45.4)                             |

Based on a selection of ten variables including existing population, distance to roads and deforested areas among others, Bray et al., (2008:56) did statistical analyses to identify variables explaining deforestation in the MBR. Regression analyses identified the distance to human settlements as a key variable leading to deforestation. Information gathered on this shows that when average distance from permanent roads in resident communities (< 25 years) is less than 5 km, forest fragmentation is higher and extension of areas deforested or burnt are larger.

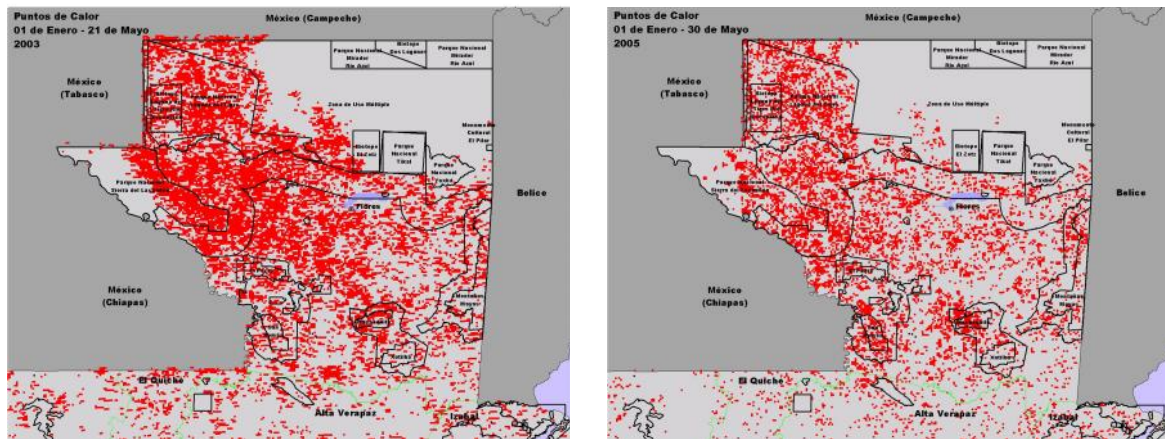
Significant work has also been done to monitor forest fires<sup>117</sup>. Data for Árbol Verde and Carmelita show that deforestation and fires have affected between 200 and 300 hectares of forest areas, however these extensions are below the mean value of active community concession contracts (925 ha). More significantly, most fire hotspots identified within the MBR are outside the Multiple Use Zone, with 40 percent of areas affected by fires in National Parks and the Buffer Zone (CONAP, 2010). Figure 15 shows fire hotspots in Petén during 2003 (left) and

<sup>116</sup> For this, I have also reviewed information collected by the CONAP Monitoring Program (CEMEC, Centro de Monitoreo y Evaluación de CONAP) in the two information databases: Information System of Petén (SI-Petén) and Forest Concessions Information System (SI-CONFOR). Documents reviewed include management plans, environmental impact assessments, technical reports and other gray literature produced between 1994 and 2005.

<sup>117</sup> According to Radachowsky et al., fires are not part of the ecology of Petén, however since the 1960s they have been used to clear land for agricultural and cattle ranching purposes. Between 2000 and 2010 active fire hotspots have been monitored to better understand the effect of forest fires (2012).

2005 (right). These years what is known as *El niño* phenomenon increased the fire threat, especially during the dry season (between January and May).

**Figure 15. Fire hotspots identified in Petén (2003 and 2005)**



Source: CONAP et al., 2005

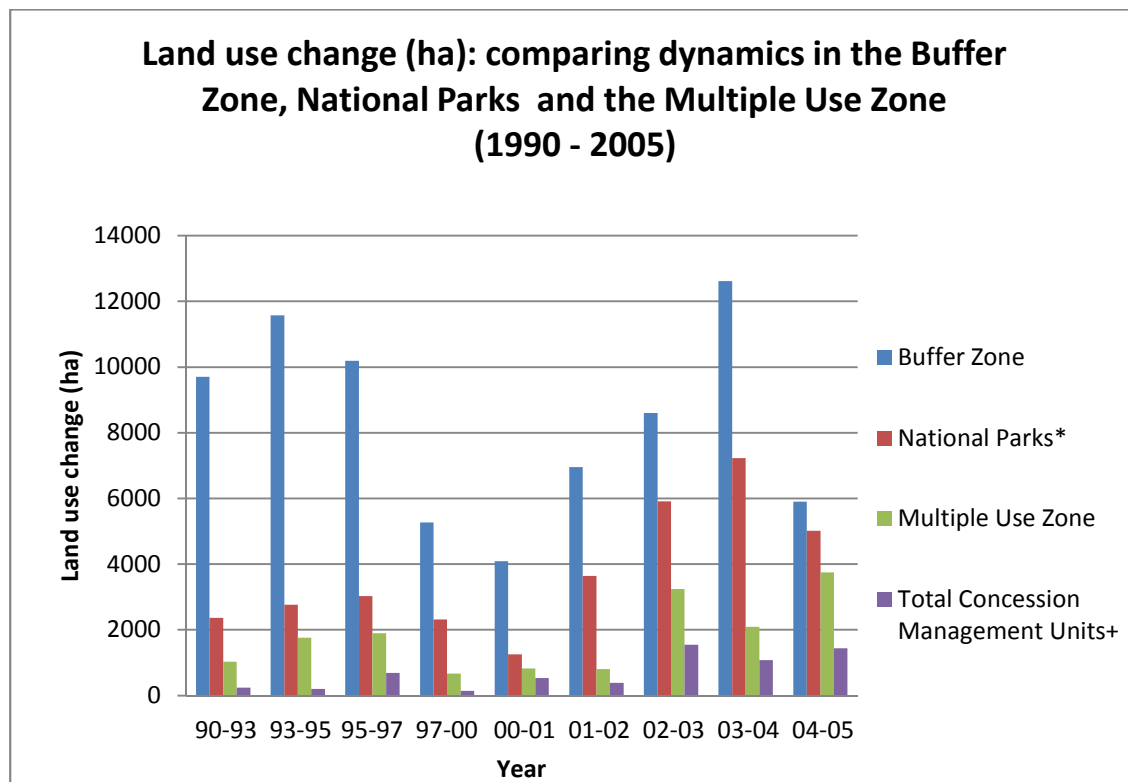
Despite incursions and subsequent land use changes in a number of community concessions, particularly those where initial forests were highly degraded<sup>118</sup>, information comparing land use change data (in ha) in community concession systems and the three management zones within the MBR (Multiple Use Zone, Buffer Zone and Core Zone – National Parks) between 1990 and 2005 shows that the rate of land use change in the management zones analyzed is higher for both the Buffer Zone (losing between 4,000 and 12,000 ha per year) and National Parks (losing between 2,000 and 6,000 ha per year) in comparison to the MUZ (maintaining rates under 2,000 ha per year). The national parks studied include Sierra del Lacandón and Laguna del Tigre, which together encompass over 65 per cent of the Core Zone (See figure No. 16).

Recently, stable forest cover conditions in community concessions are supported by the work of Hodgson et al., 2015. Their work analyzes the spatial data produced by CONAP's Center for Monitoring and Evaluation (CEMEC) since 2000. Using geographic information systems (GIS) to process LANDSAT imagery data collected for 2000, 2007, 2010, 2011, 2012 and 2013, they assess changes in forest cover and generate information on deforestation rate based on Puyravaud (2003 in Hodgson et al., 2015:4). While numbers change for communities with resident and non-resident status, particularly relevant for those communities with a history of

<sup>118</sup>Specifically the community concessions of La Pasadita, San Miguel La Palotada, Cruce a la Colorada and La Colorada where land grabbing and illegal sales of rights have occurred. According to fieldwork interviews and other documents (UAESPNN, 2004; PRISMA, 2014; McSweeney et al., 2014), these processes are more related to expanding drug trafficking and other related illegal activities than to landless peasants expanding agricultural frontiers.

residency, this has been sustained by previous research examining deforestation dynamics in Guatemala and Mexico (See for instance the work of Radachowsky et al., 2012; Bray et al., 2008).

Figure 16. Comparing land use change dynamics in different management zones within the MBR



\*National Parks used in the analysis include Laguna del Tigre and Sierra del Lacandón, which together represent close to 65 per cent of the Core Zone (over 450,000 ha).

+Multiple Use Zone data is based on the total area while concession management units include data for both industrial and community concessions.

Source: Based on data produced by CONAP et al. 2002-2005

### Internal Legitimacy of claims

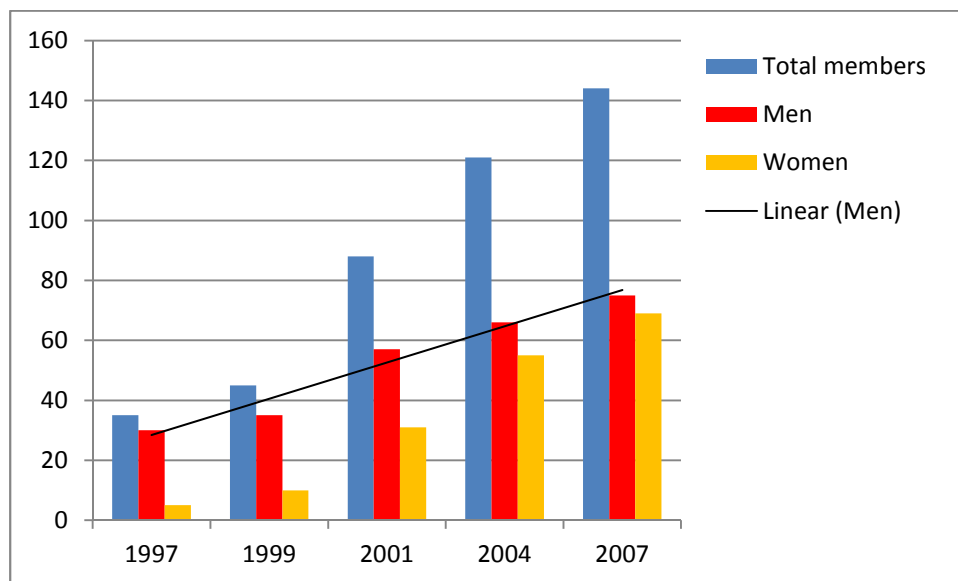
A different set of factors defines the internal legitimacy of the claimants, or community concessionaires. The most important element for legitimizing resource rights is whether or not they generate benefits for the communities themselves. While benefit generation is usually associated with income generation, our research in these concessions demonstrates that there are at least five other ways in which concessionaire organizations generate benefits for their constituencies: through membership status; reinvestment in the community enterprise; distribution of income from commercially-valued forest product sales to individual/family members; employment generation; and finally social investments in the communities, such as clinics, schools, roads, etc. This means at least two types of social structures need to be taken into account when analyzing benefit generation and distribution: one associated with membership and the other related to residency status. The relationship between concessionaires

and their communities can be analyzed in terms of employment generation and by observing the investments of concessionaire organizations within the broader community.

### Evolution of membership status

Membership is more dynamic in resident concessions versus non-resident ones. In Carmelita, only 35 people from the community signed the concession contract in 1997. Locals considered timber-related activities more damaging than other extractive activities such as xate-collection or rubber tapping; several community members questioned the concessionaire process, even leading to violent confrontations that resulted in the first cooperative president to be killed by another community member right around the time the first timber extraction occurred. By 2015, the number of members registered has increased to 160, 85 men and 75 women (ACOFOP, 2015), a fivefold membership increase since 1997 (See Figure 17). Membership represents 90 percent of the total community population above 18 years old. Interestingly, women membership has increased considerably in Carmelita, allowing equal participation together with men.

Figure 17. Evolution of membership in Carmelita



In the case of Árbol Verde, membership increased 60 percent from 230 members in 2000 (211 men and 19 women) to 344 in 2007 (292 men and 52 women). Since this date, no new members were accepted by the concession organization. Organization members interviewed argue that once the concessionaire organization became profitable, more people became interested in joining. Former members considered it unfair that new members did not invest as much effort into making the organization work. Árbol Verde is, after all, the community concession with the largest constituency (see Table 15). Unlike the case of Carmelita, women members of Árbol Verde represent only 15 percent of the membership. Interviews highlight a series of factors



explaining this. First, as members of this concession come from nine different communities, only one individual per household was allowed as a member (usually it was a man). Second, initial interest in the concession was to manage timber, an activity usually associated with men's work. Finally, as a start-up organization, it required time and money investments, so women were less able to participate. The same trend in female membership is observed in other non-resident concessions (See Table 15). Women's participation in concessionaire work is a challenge to this date, but organizations have managed to incorporate them in productive activities related to non-timber forest products such as xate-palm classification and *brosimum sp.* (breadnut), *ramón* or *ojoche* seeds. The latter is processed locally as a nutritional supplement.

### **Changes in livelihoods and income generation**

Benefits associated with income can be obtained directly, through either job creation or the distribution of profits from timber sales and commercialization of NTFPs. While the first will encompass benefits for members and non-members, income from timber sales is distributed only among members of the concessionaire organization. These benefits however, are also related to the livelihood base of community members involved in concessionaire organizations.

Fieldwork in the communities of Árbol Verde and Carmelita reveal that dependence on forests for livelihoods is significantly different in the sites analyzed. While most people in Carmelita depend on forest-related activities for income generation; members of Árbol Verde are mostly engaged in agriculture or as wage laborers. In Carmelita, maize and bean cultivation is practiced by barely 30 percent of the households, and mainly only in small areas (mean 3.61 ha/family) for subsistence purposes.<sup>119</sup> In Árbol Verde, about 40 percent of the members own individual plots. They are also larger (15.27 ha/family) and are used for both agriculture and cattle ranching purposes. As these communities are close to paved roads, more people are also involved in wage work (an average 17 percent of the population compared to only 3 percent of Carmelita's population by the late 2000s.)

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<sup>119</sup>Karstic soils in Carmelita are very poor in nutrients; therefore agricultural yields here are very low. All of the households surveyed admit that those who cultivate maize need to buy additional amounts of it to fulfill their annual requirements.

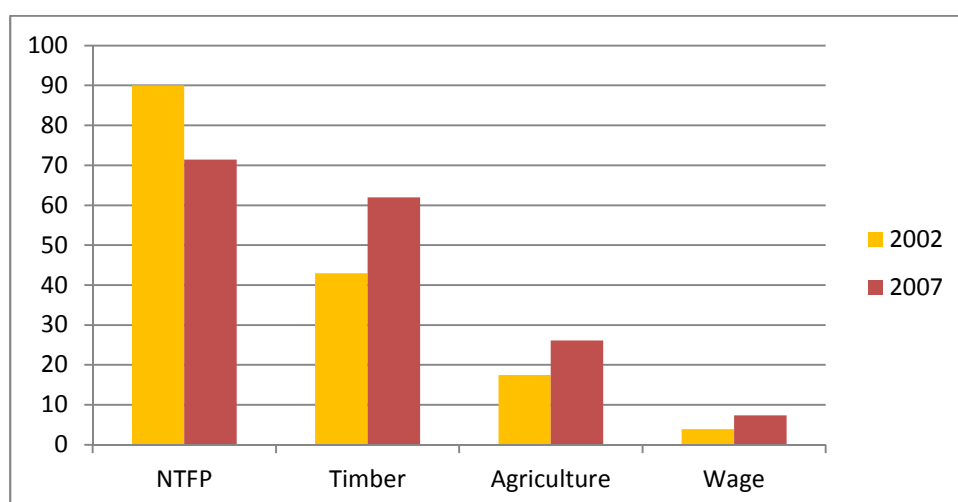
Table 20. Productive activities in Árbol Verde and Carmelita communities

|             |           | Main productive activities (% of the population) |  |  |                                      |            |         |       |                                |
|-------------|-----------|--|--|--|--------------------------------------|------------|---------|-------|--------------------------------|
|             | Community | Agriculture                                      | Extractive (subsistence purpose: hunting, fishing) | Extractive (Commercial purpose: xate, gum tapping, allspice, timber) | Extractive (Other: crafts, woodwork) | Wage labor | Tourism | Trade | Other activity (Not specified) |
| Árbol Verde | Viñas     | 50.4   | 2.1  | 0  | 0                                    | 11         | 0       | 15    | 21.5                           |
|             | Zapote    | 53.0   | 0  | 0  | 1.3                                  | 4.2        | 0       | 8     | 33.5                           |
|             | Naranjo   | 23.2   | 0  | 0  | 0                                    | 18         | 0       | 9     | 49.8                           |
|             | Macanché  | 41.1   | 0.6  | 0.7  | 0.4                                  | 18.2       | 0       | 12    | 27                             |
|             | Ixlu      | 27   | 0  | 0  | 3                                    | 35         | 14      | 9     | 12                             |
|             | Remate    | 58.4   | 0  | 0  | 8.8                                  | 7.1        | 3.3     | 15    | 7.4                            |
|             | Zocotzal  | 19.2   | 2.5  | 47.5   | 0                                    | 31.7       | 0       | 0     | 0                              |
|             | Porvenir  | 30.3   | 0.3  | 11.1   | 0                                    | 5.8        | 0       | 1     | 51.5                           |
|             | El Caoba  | 26.9   | 14.3   | 14.3   | 0                                    | 26         | 0.3     | 9     | 9.2                            |
|             | Carmelita | 18   | 0  | 75   | 0                                    | 3          | 2       | 2     | 0                              |

Source: Based on household surveys for the case of Carmelita and analysis combining information collected in household surveys (Carmelita, Naranjo and Ixlú) and data provided by CEMEC (2001) for the rest of the communities.

The relationship between members and forest management activities differs across communities (See Table 20). In the case of Árbol Verde, less than 40 percent of the members are involved in forest management activities, while forest-related activities are the most important productive activity in Carmelita. Most people are involved in timber (e.g. logging, sawmill) and non-timber forest products (e.g. collection, classification of palm leaves, tourism), which provide employment for most community members. Forest-income dependence is much higher in Carmelita where 90 percent of its families depend on forest-related activities for income compared to Árbol Verde where fewer than 45 percent of the families depend on those activities. There have been changes in livelihood strategies since the 2000s. For instance, Figure 18 shows the changes in Carmelita. Since forest activities are seasonal, people are increasingly able to diversify their livelihoods by incorporating timber management activities. Timber will generate work between December and June; xate collection takes place all year long; and rubber tapping takes place during the rainy season between March and October.

Figure 18. Changes in livelihood activities (2002-2007) in Carmelita (# of people engaged in activities)



In the analysis of the twelve ACOFOP concessionaire reports (unpublished data for 2015), forest management activities have created over 50,000 days worked since 1995, directly involving 2,000 families (members) and an additional 3,000 or more indirect individual beneficiaries (non-members)<sup>120</sup>. In the case of NTFP extraction, job creation is more relevant for resident concessions. Employment conditions also differ. Concessionaire organizations offer higher earnings compared to the minimum wage in agricultural activities. As required by the FSC forest certification, organizations also cover social security benefits (to members and non-members) and life insurance (to members only).

While job creation opportunities provide a constant income stream through salaries and wages, dividend distribution implies the year-end sharing of profits. Increased household incomes derived from the distribution of timber sales profits represented over a 33 per cent increase between 2000 and 2010 (according to field data). This is calculated as the additional income households received specifically from timber, as this activity was new to communities.

Table 21 provides a review of the evolution of net income from timber activities in research sites between 1997 and 2006. In this period, over 40 percent of timber sales came from the sale of mahogany, which represented 40-55 percent of the extracted volume. As a whole, the supply of highly valued timber by community concessions ranged between 6,400 m<sup>3</sup> and 7500 m<sup>3</sup> (ACOFOP, 2015; Stoian, 2006a and 2006b), of which about 3,000 m<sup>3</sup> was mahogany (Carrera et al., 2006). About 80 percent of the timber is exported to the United States, Mexico and the Caribbean, while less than 20 percent of it is sold domestically. Income from collective timber sales is distributed to members, reinvested and/or invested in social infrastructure on an annual

<sup>120</sup> Employment in forest-related activities is seasonal.

basis, with the percentage distributed varying according to the internal rules each group has established.

**Table 21. Evolution of net income from timber in research sites**

| Year        | Carmelita                                      |  | Árbol Verde                                    |  |
|-------------|--|--|--|--|
|             | Average annual income from timber sales (US\$) | Average extracted volume (m <sup>3</sup> ) | Average annual income from timber sales (US\$) | Average extracted volume (m <sup>3</sup> ) |
| 1997 - 2000 | 75,886   | 781  |  |  |
| 2001 - 2005 | 237,658  | 1,396                                      | 202,000  | 1,530                                      |
| 2006 - 2007 | 283,732  | 969  |  | 1,006                                      |

Source: based on CONAP (unpublished reports); Carmelita (2008); NPV, 1999 and Propetén, 1997.

To leverage dependency on mahogany extraction, in 2003 concessionaires created the Community Enterprise of Forest Services Ltd. (FORESCOM), an association of nine community organizations, seven of which had community concession contracts. It was created to develop a market for lesser-known tropical tree species, provide technical assistance and upscale industrial timber processing (<http://www.forescom.com.gt/>). ACOFOP (2015) reports that concessionaires involved in FORESCOM obtained an annual net income of over US\$1 million between 2010 and 2014.

Data on income generation from timber and non-timber forest products sales between 2007 and 2015 are shown in Table 22 aggregating data for all active community concessions. Annual income varies by year, depending on the volume of products extracted and variations in market demand. However it is clear that since the contracts were signed communities have increased their economic benefits as they have been able to control the timber value chain. For instance, all active concessions invested in their own lumber mill. While this decision was highly questioned, it created more job posts. Some have also invested in carpentry machinery, as a project for engaging the youth. As concessionaires, they are able to integrate other non-timber activities mainly to increase employment, diversify livelihood options and generated value added. Increased income is not related to higher extraction volumes, as volumes are strictly regulated in management and annual operation plans, but rather as the result of product diversification.

Table 22. Income from timber and non-timber forest product sales

| Year          | Timber forest product sales | Non-timber forest product sales | Annual income          |
|---------------|-----------------------------|---------------------------------|------------------------|
| 2007          | \$3,689,729.32              | \$144,433.39                    | \$3,834,162.71         |
| 2008          | \$4,975,125.53              | \$210,521.43                    | \$5,185,646.96         |
| 2009          | \$4,435,131.75              | \$480,131.64                    | \$4,915,263.39         |
| 2010          | \$3,369,627.16              | \$465,189.81                    | \$3,834,816.97         |
| 2011          | \$3,658,131.88              | \$383,647.84                    | \$4,041,779.72         |
| 2012          | \$4,550,101.46              | \$1,042,739.23                  | \$5,592,840.69         |
| 2013          | \$6,140,457.31              | \$365,143.78                    | \$6,505,601.09         |
| 2014          | \$5,191,672.61              | \$728,789.59                    | \$5,920,462.21         |
| 2015          | \$4,136,760.59              | \$333,366.05                    | \$4,470,126.64         |
| <b>TOTALS</b> | <b>\$40,146,737.61</b>      | <b>\$4,153,962.77</b>           | <b>\$44,300,700.38</b> |

Source: ACOFOP, 2015.

\*Data includes total income in all active concessions. Data for 2015 covers only January to September

Concessions have also worked on improving non-timber forest product collection and management and developing markets while avoiding intermediaries. Since 2004 *xate* collection and sales are controlled by the concessionaire organizations (OMYC, 2014). In 2008 three concessionaire organizations formed a committee under the supervision of ACOFOP.

Over time, there have also been changes in product demand. In the last forty years the production of chicle (gum) has dropped from a production of 6,501 q in 1970s to 923 q in 2010 (ACOFOP, 2015, see Table 23). At least two reasons explain this change. First, the appearance of synthetic substitutes for rubber in the 1950s reduced the international demand for this product. Second, national regulations establish that 52 percent of the income from chicle should be distributed among four different institutions, some of which are no longer active. Extractors are able to keep only 48 percent of the income from sales, this not only discourages extraction but also increases the pressure for over-extracting if the rubber tapper wants to increase the economic benefits.

Table 23. Changes in chicle production in community forest concessions

| Year        | Production (q*) | Income US\$ | Price (US\$/q) |
|-------------|-----------------|-------------|----------------|
| 1990 - 1995 | 4,001           | 660,245     | 166.80         |
| 1996 - 2000 | 1,325           | 244,498.40  | 186.40         |

\*1 quintal (q) is equivalent to 100 pounds=46 kg

Source: ACOFOP, 2015

Despite the decrease in rubber extraction, concessionaire members are increasingly managing other forest products. For instance, a women's committee is promoting local processing of

breadnut (*Brosimum sp.*), with the possibility of processing around 1,000 pounds per week. Concessionaires have had more difficulties in participating in tourism activities, partly due to different visions of the tourism model they want for the MUZ, which has even threatened the dissolution of concession contracts<sup>121</sup> (Monterroso, 2008)

The relation between community and community enterprise is often not clear, more so in cases where the concessionaire organization is made up of individuals who are non-forest resident members from several communities. This sometimes leads to decision-making problems over how profits are used, and lies at the heart of issues of participation, accountability and finally benefit-sharing (Taylor, 2010). This last issue points to the fundamentals of the internal legitimacy of the concessions.

### **Community concessions' social investments**

Social investments at the community level are an important outcome of the reform process. In the case of Carmelita, regulations establish that at least 20 percent of this net income should be invested in social development needs, 40 percent should be re-invested to cover or production costs and only 40 percent can be distributed as dividends among members. In the Árbol Verde case, regulations establish that at least 30 percent of profits should be allocated to social projects (Stoian, 2006b.). However in practice for both organizations, the distribution of net income is more arbitrary, as this is a decision taken in the communal assembly. Members interviewed report that decisions around dividend distribution have varied in time. Some years 100 percent of the net income has been distributed as dividends (between 2005 and 2007 for the case of Árbol Verde), in others dividends have not been distributed at all to cover production costs (2004). In Árbol Verde, as fewer members are employed in forest-related activities there is more pressure to distribute dividends. This was also another reason why no more members were accepted in 2007; increasing the membership base was perceived as a threat to sustained dividends.

Carmelita has recorded its social investments more systematically since 2000. Between 2000 and 2007 it has invested around US\$5,000 annually in a scholarship program to support children from the community to travel to the nearest city to continue high school education (Cooperativa Carmelita, 2008). Continued investments in education have decreased the illiteracy rate in the community from 40 percent in 2000 to 32.8 percent in 2010. The cooperative allocates around US\$7,000 annually for other types of social investments, which may include covering or salaries

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<sup>121</sup> In 2002 and again in 2005 the Guatemalan government issued two regulations that would expand El Mirador National Park, affecting five community concessions (including Carmelita) and two industrial concessions. This conflict is analyzed in Chapter 5 (also in Monterroso, 2008).

for additional personnel not paid by the local government (in particular for hiring teachers or nurses), medicines, even moving people requiring critical care to the region's hospital (Cooperativa Carmelita, 2008).

Information for *Árbol Verde* is harder to track, as is also the case for other non-resident concessionaire organizations. Investments in road repair, schools, even funerals are reported in fieldwork interviews, but these expenses are hard to find in their financial statements. Concessionaire organizations become key agents for promoting development, playing a key role in providing social services that are the responsibility of the State. Very few investments from local governments in resident communities located within the MUZ are justified by the local authorities as the population number is not very high or there is a lack of clarity about which government agency (local municipality or CONAP) should be looking after social demands. Oftentimes these organizations become the main interlocutor with the State to ensure that local population needs are being accounted for.

This analysis demonstrates that multiple mechanisms influence the distribution of benefits from natural resources to social actors. It is important to recognize that other elements come into play at the community level when discussing legitimacy and the elements that undermine tenure security. These come particularly from the ability of organizations not only to increase economic benefits in terms of income and job creation, but also their ability to create accountability mechanisms that ensure distribution of social and economic benefits among the different groups, including members (women and men) and non-members of the collective concessionaire entity.

#### **4.7. Emerging challenges to sustain outcomes**

The increased governability in the region brought peace and relative security to its population for some time. After the peace accords were signed, fears were calmed and agreements were reached among the interests and parties mentioned above. Of equal or more importance nationally, clandestine and illicit activity was held at bay, at least in the large expanse under community concessions. During the initial period of strong donor support for the projects in the MBR and the past political administrations, the government showed its support with surveillance and presence in these areas, keeping up the pressure on the outlaws. The combined efforts worked well for stabilizing the region. Nonetheless, as was to be expected, the illegal loggers and drug traffickers were forced to concentrate their activity in smaller geographical spaces, precisely within the protected areas themselves.

Meanwhile, the presence and power of the drug traffickers has risen to alarming heights in Guatemala, expanding their use of Petén as a route for smuggling into the United States (UAESPNN, 2004). At the same time, government vigilance has subsided, leaving CONAP and ACOFOP as lone actors in an increasingly dubious scenario of shrinking governability. Areas within the protected areas have come under the control of the “narcos,” who are reported to have expanded their operations into illegal land sales as a means of protection (PRISMA, 2014). This has set off a dangerous precedent in the entire region (CONAP, 2006a; CONAP, 2006b). Illegal land markets for “improvements” or falsified titles in the registry will require a higher-level intervention by the State to put things in order. Both of these conditions have serious implications for the community concessions, their collective voice –through ACOFOP – and the future of the MBR.

But the challenges also lie within. The community organizations and eventually enterprises that made up the concessionaire system were, in the beginning, nearly the only and surely the most significant ones with a presence in this forested region. They became the salient reference point for all transactions outside the government and conservation “extensionists” (international and national NGOs). Additionally, the size of their membership base varies widely from concession to concession, only reaching the majority of community households in a few cases. Lastly, the relation between community and community enterprise is often not clear, leading to problems of decision-making over reinvestment vs. benefit sharing, and eventually accountability.

A highly underestimated role of community forestry organizations is their need to defend their exclusion rights to their lands. This goes far beyond the physical role of defending borders. It implies sophisticated and healthy levels of representation with capacity for interpreting and communicating to their membership the outside threats to tenure and resource rights. Leadership must have political savvy, develop extensive external networking with a budget and have time to invest heavily in this role. In most of these remote forest areas, building the political linkages and capital with peasant organizations, government officials, human rights organizations and international donors has been crucial for bolstering local capacity to defend their exclusion rights from petroleum extraction, mining interests and now tourism. It is usually coupled with the need for internal capacity to monitor, interpret and constantly report incursions into the extensive forestlands under concession. This alone requires budget, mobilization and time.

Another major issue is the inconsistency of the State’s respect for and defense of community concession exclusion rights. These rights are defended on two levels: physical defense against



intrusion by third parties and political defense of the rights holders, or concessionaires. For the first, it is important to note that the government agencies (CONAP and the National Forest Service INAB) remain in the picture, playing a key role in the design and implementation of the regulatory framework, influencing the day-to-day execution of both the environmental (conservation) agenda and the forest production activities. However, the State, as the rights granter, has not fully complied with its role in backing up the exclusion rights of the concessionaires, as it still lacks a system for enforcing sanctions and penalties against intruders. In practice, this shifts the burden for protection against incursion to the communities. The cost of battling incursion by third parties (loggers, traffickers, outside settlers, etc.) is high, requiring constant deployment of manpower throughout the forest to track and catch trespassers. Worse, reports have observed that there is little follow-up and prosecution by the State when illegal activity is reported.

Secondly, concessionaire organizations often encounter the need to politically engage with the central government in defense of their exclusion rights against state-sponsored or private sector incursion into their forest areas. Archaeological and ecological tourism interests promoted through joint-ventures (state and private sector) have led to the undermining and erosion of the community concession's decision-making power. The expansion of infrastructure for petroleum exploration and exploitation across their forest lands can also provoke considerable damage to the forest and undermine the authority of both the community concessions and the government environmental agency itself.

Given the remoteness of the region, and the overlap and incoherence of the laws and regulations between government agencies, the local forest organizations must be constantly vigilant, outspoken and active advocates for their rights to be honored. Here the issue of legitimacy returns; the more the State considers conservation a priority and source of legitimacy, the greater the chance for community rights to prevail against others. What this points to is the need for both communities and conservation organizations to jointly advocate for their shared interests in the face of pressures from other sectors. Other options could include the search for a more integrated approach to forest use that could include different types of tourism, but only based on respect for the community concession rights and the concessionaires' legitimacy as valid interlocutors in the design of plans for the forest region.

For reform implementators, the costs involved in both levels of defense of exclusion rights are high, depending on the degree of contested interests in the forested region, and these costs are almost always underestimated. On the one hand, the physical deployment of community

members to patrol their concession areas needs to and can be calculated and incorporated into production costs or if relevant, be part of carbon mitigation costs. However, the costs related to the political defense of their rights are even higher and difficult to predict, yet vital to the security of their tenure rights. Travel to the country's capital for meetings with government officials, participation in numerous and ongoing meetings in the forest region, monitoring financial investments in the region (public and private), public information campaigns and continual negotiations that imply funding for internal meetings to share and formulate positions within the communities can be overwhelming. They imply not only financial costs, but also increasingly specialized human resources at the level of the community organizations.

#### **4.8. Conclusions**

In this chapter, I have argued that sustaining and securing rights to forests over time depends largely on the way legitimacy is established in the process of a claim becoming a right. For this I discussed the nature of the forest tenure reform process in the Multiple Use Zone of the Mayan Biosphere Reserve, where in the last twenty years the Guatemalan State has created a new set of regulations and transferred a set of rights over forest resources to organized community groups. This allowed for the emergence of a system of community forest concessions providing new opportunities to derive benefits and improve livelihoods.

Results indicate that in order to sustain this forest tenure reform process over time, it is important to understand how tenure arrangements play out in reality (or in their context) and how elements that underpin legitimation and those defining authority intervene in the process. This chapter reviews the nature and evolution of the claims over forest resources, how these became recognized (authorized) and how they were transformed into rights. At the same time I observed how the "rights granter" was simultaneously able to establish its authority through recognition by the rights receivers. Findings show that this process takes place under constant dispute and negotiation, requiring the development of different strategies to acquire and maintain legitimacy inside and outside the concession model. This is central in the analysis of forest tenure reform outcomes. Internally, they are related to possibilities to ensure livelihood improvement and the evolution of institutions to guarantee benefits within concessionaire constituencies (rights receivers). Externally, the underpinnings of legitimacy are closely linked to ensuring the conservation goals of the Guatemalan State (rights granter) within the protected area.

Finally, results show that understanding the underpinnings of the legitimacy behind forest tenure reforms is central to identifying ways in which these processes are feasible and can work, but also

that they require constant response to the evolving or changing objectives of the actors involved, to enhance both forest and livelihood outcomes. It also becomes important for developing more sound policy frameworks that fill gaps and resolve incongruence in the governmental system for forest management.

## Chapter 5. The role of collective action in tenure reform: Case Studies from Nepal and Guatemala<sup>122</sup>

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<sup>122</sup> This chapter draws on the publication Paudel et al., (2012). Content has been reviewed and modified to update information and align to the objectives of this dissertation. Authors: Naya Sharma Paudel, **Iliana Monterroso** and Peter Cronkleton. 2012. Secondary organizations and the democratization of forest governance: Case studies from Nepal and Guatemala Conservation and Society 10(2) 124-135, 2012.

Previous chapters analyzed the politics of tenure reform in Guatemala; the factors that motivated reform emergence, the tenure rights changes resulting from the reforms and the outcomes on livelihoods and forest conditions at the community level. In the analysis of the community forest concessions, different forms of collective action emerge in order to exercise the new rights and derive benefits at both the community and regional level. While Chapter 4 discussed the different local organizational forms that emerged, this chapter discusses the role of second-level organizations in mobilizing collective claims at a broader level. The chapter explores the nature of their collective action and outcomes in shaping forest tenure reform. It argues that these organizations are key to the democratization of forest governance.

At certain times, community organizations have united with similar organizations to form second-level organizations: federations, cooperatives, networks, associations and alliances. Scholars have used different terms for such higher-level organizations; secondary level grassroots organizations (Taylor, 2010), second tier, second order, supracommunal or meso-level organizations (Carroll and Bebbington, 2000). These organizations have sometimes undergone a formalization process and now play increasingly important roles in forest governance (Timsina, 2003; Cronkleton et al., 2008; Paudel et al., 2008). This chapter explores the emergence of such second-level organizations, their strategies of resistance and engagement with government, and the outcomes in terms of enhancing livelihood benefits, primarily through “democratizing”<sup>123</sup> forest governance.

While theories of collective action often focus on grassroots efforts at the community level (Baland and Platteau, 1996; Ostrom, 1999), the role played by second-level organizations in forest governance has received less attention (Colchester et al., 2003; Paudel et al., 2008; Taylor, 2010). With the emergence and growth of second-level organizations around forest governance, several theoretical and practical questions have emerged. How are these organizations different from community-level institutions? How have second-level organizations contributed to the democratization of forest governance? How has this process influenced forest tenure and benefit distribution?

The first question is relatively straightforward. Generally community-level institutions are directly engaged in managing natural resources, while the formulation of policy and rules that govern natural resource use and management are beyond the community level – usually shaped by

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<sup>123</sup> These movements have democratized forest governance because they have assured that the local communities around forest areas have been able to voice their interests and have influenced processes that determine their rights to and control over forest resources.

stakeholders with more economic and political power. As a result, communities, farmers, forest dwellers and small producers are often marginalized in key decision-making processes. As will be described, an exception occurs when local stakeholders pool their interests across multiple communities or larger landscapes, which allows them to have greater influence on public policy formulation and on institutions. Where powerful state and market actors influence forest policies and practices, local people can adopt strategies that give them recognition and a voice in decision-making and economies of scale in trade and enterprise development that offset their relative weakness as individuals. In the cases examined here, second-level organizations were by-products of forest decentralization, often further strengthening and deepening these processes through ongoing negotiation with the State and with market agencies.

By drawing on specific cases, it is possible to illustrate how some second-level organizations shape tenure reform, democratizing forest governance and increasing benefits for their constituent communities. Understanding how forest people developed this level of collective action to enable their success would allow greater understanding not only of how such organizational mechanisms work, but also what factors promote and constrain the outcomes they produce for their members, ensuring the continuity of reform processes. This chapter compares two successful second-level organizations that emerged in very distinct contexts. It explores how community-level institutions and groups of concerned citizens effectively participate in such organizations and influence forest policy and management practice at different scales of governance. The two cases examined here are the Federation of Community Forest Users, Nepal (FECOFUN), and the Association of Forest Communities of Petén, Guatemala (ACOFOP). Both are associations of community organizations involved in forest management and related social and economic activities. These organizations took on political advocacy roles to defend the interests of their members and assure that their interests were considered by decision-makers. The cases emphasize how these organizations engaged in policy advocacy to secure the communities' rights to own or obtain concession contracts for forest property, to manage those forest resources proactively and to benefit from them. It illustrates the role these organizations have in both the emergence and continuity of forest tenure reform.

Research on both cases was part of a multi-year research project that examined forest tenure reforms across 10 different countries (see Section 1.2)<sup>124</sup>. Among the sites analyzed, the cases from Nepal and northern Guatemala stood out because second-level organizations played important roles in shaping governance of the forest tenure reforms. While there are

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<sup>124</sup>The research, undertaken by CIFOR, was carried out during 2006–2008 in Brazil, Bolivia, Nicaragua, Guatemala, Cameroon, Ghana, Burkina Faso, Nepal, Philippines, and India.

socioeconomic, cultural and geographic differences between these two countries, both have recently undergone significant reforms that have transferred forest tenure rights to local people.

This chapter draws on primary data collected during interviews with key informants involved in the tenure reform processes in each country, including representatives from community, government and development organizations. In addition, literature on tenure reform was reviewed to further explore the roles that second-level organizations have played at local, national and regional levels. It analyzes topics such as how networks, social movements and other forms of community organization engage in deepening and institutionalizing tenure reform processes.

The chapter is organized into four parts. The second section provides a review of the current debate on collective action with reference to secondary organizations. The third presents the two case studies from Nepal and Guatemala. The fourth draws from them to identify some common patterns and show how collective action by second-level organizations can contribute to democratizing the forest sector and draws some lessons from the dynamics of secondary organizations.

### **5.1. Secondary level organizations of forest dependent communities: emerging debates**

The dynamics of local natural resource management institutions have been the focus of common property theory for decades (Ostrom, 1990; Baland and Platteau, 1996; Agrawal, 2001; Agrawal and Ostrom, 2001; Bromley, 2004). These theories analyze the role of local institutions in governing the commons. Many of these studies emerged to dispute the inevitability of the “tragedy of the commons” (Hardin, 1968) – a view that communal management systems produce downward cycles of resource degradation. In his article, Hardin treats common and open access resources without distinguishing between them in the development of his conclusions. Many of the later studies on the commons revealed that most of these resources were not open access, but rather were collectively managed through well-developed and culturally-rooted local institutions. Today, the focus has shifted to analyzing how collective management systems operate at a higher level when community institutions are granted a role in managing local forests, pasture lands and irrigation systems.

Although the dynamics of community-level institutions have been well documented, collective action at a secondary level beyond community institutions has received less attention. Some studies have shown that community forestry-related networks at national, regional, and international levels have popularized community forestry discourses and drawn the interest of

many national and international development agencies (Colchester et al., 2003; Wollenberg et al., 2005; Cronkleton et al., 2008; Taylor 2010). These studies have found that networks contributed to community forestry by encouraging information exchange, raising awareness, supporting national groups and providing spaces for such groups to assert their rights. They illustrate how these second-level organizations experience constant change, requiring them to balance their advocacy capacity to pursue multiple purposes. However, reliance on donor support, internal governance crises and top-down approaches to grassroots institutions were identified as the major challenges of these networks. Wollenberg et al. (2005: 11) have also observed that networks provide a wide range of resources, exchanges, capabilities, strategies and contacts to local actors in support of grassroots rights movements. Nevertheless, these studies tend to focus on international networks and alliances working on community forestry, and not on the direct representatives of community institutions. More recent work, such as Taylor (2010), points at the need to explore the links between actions at the community level and their response to external pressures while managing ongoing problems and issues of representation, equity and legitimacy.

Responding to the increased interest in secondary organizations, scholars have focused on the emergence and dynamics of such organizations (Ojha et al., 2007; Cronkleton et al., 2008; Taylor, 2010) and their general outcomes (Komarudin et al., 2008). In this chapter the approach to second-level organizations is largely through a social movement perspective. While other theoretical underpinnings employed in the analysis of second-level organizations draw from the study of agrarian federations (Bebbington, 1996, 1997; Taylor, 2010), social movement theory places collective action at the center of social change. Ordinarily, social movements emerge from resistance, reflecting grievances about perceived injustices, but they also respond to alternative agendas, such as improving local livelihoods.

The second-level organizations of community networks emerge out of local collective action. The scaling up and scaling out of collective action into a relatively larger arena is identified as a social movement. The idea of conscious collective action aimed at social change can also be called a social movement (Touraine, 1985; Neidhardt and Rucht, 1991). Through collective action, social movements are able to produce and reproduce new narratives in contexts where the movements themselves are constantly evolving to respond to changing conditions.

The cases of forest-based collective action studied here share several features. First, these forest-based social movements shifted away from state institutions and political parties, and now operate as civil society organizations creating “new spaces and new solidarities” (Cohen, 1983: 106). Unlike conventional political movements, these movements are neither guided by grand



ideological positions nor have any intent to rule the nation, though they seek more sub-national or local autonomy. Instead, they largely accept the legitimacy of the political regime and seek to influence national policies on particular issues. Second, these movements do not constitute fundamental (economic) classes (Offe 1985: 831); instead they are aggregates of various social groups across economic class, caste/ethnicity, gender and other lines. People from different social groups may share common concerns and form alliances to promote their collective interests such as stronger tenure rights or fair market prices. Third, these movements are not led by trade unions or other political organizations, instead they are consolidated expressions of the collective voices of forest dwellers, small farmers and ethnic minorities, and are targets of “accumulation by dispossession” (Harvey 2003). At this level collective action is often aimed at resisting state control or privatization of forests or other natural resources.

The pathway to democratizing forest governance through tenure reform processes is fraught with a high level of uncertainty (Ribot et al., 2006). By studying cases from six developing countries, Ribot et al. (2006) showed that central governments use a variety of strategies to retain central control by obstructing the democratic decentralization of resource governance. One possible strategy to help counter-balance this centralizing tendency and serve as a strong agent of democratic decentralization is to form broad coalitions of diverse actors, including civic interests groups. This chapter examines the potential role of second-level organizations of forest communities in promoting forest governance.

## **5.2. Case studies of second-level organizations and their struggle to shape tenure reforms**

### **5.2.1. Case 1: Federation of Community Forestry Users, Nepal (FECOFUN)**

Nepal has become an exciting example of decentralized forest governance due to its well-known community forestry program. However, forest policies have always vacillated between top-down bureaucratic management by government and autonomous community management by local people (Bhattarai et al., 2002). In fact, the rights that underlay Nepal’s dynamic community forestry sector would likely have been undermined without the emergence of an influential community federation that counter-balanced the centralizing force of the State.

Nepal introduced community forestry in the late 1970s in response to high rates of deforestation and degradation, particularly in the middle hills. The program gained momentum after political changes that led to the establishment of a multi-party parliamentary system in the 1990s. Consequently, the new Parliament ratified the 1993 Forest Act, allowing district forest officers (DFOs) to hand over portions of the national forests to registered local organizations called

community forest user groups (CFUGs) (HMG/MoLJ 1993). A CFUG is a collective entity that represents households living in proximity to a specific forest patch<sup>125</sup>, the community forest, with membership drawing on local household representatives. The 1993 Forest Act recognized the CFUGs as self-governing, independent, autonomous institutions to manage forest resources and related funds (HMG/MoLJ, 1993: Article 43).

Initially, the CFUGs sought to learn and benefit from mutual exchange and sharing with other CFUGs facing similar challenges. The emerging network provided critical technical support to its member CFUGs in preparing operational plans, keeping proper records, introducing improved forest management practices and maintaining the overall standards of sustainable forest management according to local and global standards (such as those of Forest Stewardship Council).

The communities' response to the diverse challenges and opportunities during the early phase of the community forestry program gradually led to the emergence and growth of FECOFUN (<http://fecofun.org.np/index.php>). When the community forestry program began to pick up during the late 1990s, the forests gradually regenerated and the potential for marketing various forest products increased. Along with this growing prospect of forest product sales, community forestry began to draw the interest of businessmen, influential local leaders and forest officials. Consequently, some cases of over-harvesting and mismanagement of funds were reported (ForestAction and SEACOW 2002). In response to this, the forest authorities overreacted and made a series of policy decisions that undermined the autonomy of the CFUGs. As Shrestha (2001) comments, there was a backlash against community forestry during this period as illustrated by major policy decisions that included backtracking on community rights – the para-state Timber Corporation of Nepal (TCN) was given a monopoly over the timber trade; the DFOs were empowered to take action on CFUGs; the handover of additional community forests in the Terai region was halted; and the special priority of community forestry over other forest management regimes given by the 1995 Forest Regulation was removed.

FECOFUN emerged out of the CFUGs during the early 1990s<sup>126</sup>. Today it has become the largest civil society organization in the country, representing over 15,000 CFUGs involving more than 10 million people (See Figure 19). FECOFUN's organizational structure has four different tiers – village level, range post level, district level and national level. The CFUGs are the foundation of FECOFUN, and all levels of its subsidiary organizations build from there. The

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<sup>125</sup>The average size of community forests in Nepal is 85 ha.

<sup>126</sup>FECOFUN was formally registered as a nongovernmental organization in September 1995.

leadership at each level is democratically elected by members of the level immediately below. Although FECOFUN at the national level develops its general policy and annual program during its General Assembly and other regular meetings and implements these through its networks, the lower levels are free to develop and implement their own programs based on local priorities.

Two major factors pushed the CFUGs to begin collaborating, the process that led to the formation of FECOFUN. First, while the government transferred a bundle of rights to the communities, it was difficult to comply with the terms and conditions; hence the CFUGs faced challenges in securing those rights. During the early years of community forestry, the CFUGs were poorly equipped to address many of the institutional and technical challenges, such as forming functional executive committees, preparing group constitutions and forest operational plans, and carrying out recommended forest management activities. Similarly, despite the strong legal provision, the forest bureaucracy constantly attempted to undermine the spirit of the 1993 Forest Act by issuing restrictive guidelines and operational circulars, or using their discretionary power to thwart full implementation.

Figure 19. District Federations of FECOFUN



Source: <http://fecofun.org.np/geocoverage.php>

Second, the newly established parliamentary system and access to sympathetic support from national and international agencies provided an environment conducive to the growth of FECOFUN. The new multi-party political system promoted democratic discourse, norms and principles, and opened spaces for diverse forms of citizens' groups to flourish. Moreover, international development aid for community forestry, which had focused on CFUGs and the government's capacity to support them, shifted to CFUG networking. Once established and strengthened, the resulting network grew into FECOFUN. The Ford Foundation and bilateral forestry projects of the Swiss, British and Danish governments alone supported over 95 per cent of FECOFUN's costs during its early phases (FECOFUN, 1999). Other development partners – International Centre for Integrated Mountain Development (ICIMOD), Action Aid, Cooperative for Assistance and Relief Everywhere (CARE)-Nepal, among others – have provided critical support for capacity building, institutional development and network building. In addition, some professionals with a strong faith in community management provided critical intellectual/advisory input on the one hand and supported the expansion of national and international networking on the other. Apart from supporting networking, these supporters also induced the idea that networking was inherently a good thing to do. Above all, however, the FECOFUN leaders demonstrated good vision and a high level of political commitment, which is one of the key factors behind its success.

The government's policy decisions alarmed FECOFUN, which perceived a threat to community rights. In response, it gradually consolidated its resistance movement against those decisions. The organization took to the streets against them, organized its constituent members and led the political campaign to defend community rights. During this process it also developed alliances with civil society and political activists who were sympathetic to the community rights agenda. The 1989 Forest Sector Master Plan and the 1993 Forest Act, which explicitly formalized community rights, became the main basis for FECOFUN's struggle towards this end. Apart from the resistance movement, FECOFUN increasingly began constructive engagement with policy forums and pressured for more inclusive policy processes. In fact, FECOFUN's intervention has made an important contribution to institutionalizing multi-stakeholder processes in forest sector policy-making. For example, FECOFUN is represented on the Forest Sector Coordination Committee (FSCC), the District Forest Coordination Committee (DFCC) and occasional working groups and task forces formed for revising specific policies. Consequently, the traditional unequal relationship between forest authorities and FECOFUN is gradually being changed. During this period, forest policy processes have gradually become more

participatory and inclusive in several aspects, including multi-stakeholder processes, expanded consultation on key policy issues, and diagnostic studies to provide policy feedback.

FECOFUN's active participation in the democratic movement that successfully toppled the century old monarchy and established a new republic Nepal raised the organization's political profile. Consequently, the FECOFUN leaders have developed close relations with political leaders, have mobilized political parties for community causes, have accessed critical information for forest policy decisions, and have mobilized the media. As a result, they have changed the historically unequal state-community power relations in favor of forest communities and their networks. The government can no longer ignore the views of community-level forest stakeholders, and recognizes that they play significant roles in forest management – a result that would have been unlikely if individual CFUGs had attempted to exert such influence.

As Table 24 shows, the FECOFUN-led movement has been successful in reversing some of the regressive decisions, though it has failed to influence others. For example, the decision to give TCN a monopoly over community forest products and the bank seizure of CFUGs were reversed, as there was strong public resentment against those decisions. However, the movement failed to influence the decision on the issue of DFO authority over CFUGs or on the tax issue, as the State took a very strong stand on these issues and FECOFUN could not fully mobilize public support. However, apart from partial success in influencing some decisions, the movement also strengthened the CFUGs' collective action to achieve forest management goals. For example, FECOFUN has encouraged an equity goal of reaching 50 percent representation of women in leadership, and greater allocation of CFUG funds to pro-poor livelihood activities within community forestry. Apart from internal demands, FECOFUN's inclusive democracy discourse, which emerged parallel to a Maoist movement and the influence of forest sector donors, promoted equity. Consequently, the government's recently issued the 2009 Community Forestry Guidelines institutionalized the provision for 50 per cent representation of women. Similarly, the sheer mass of people in its nationwide network and its strong presence in national and international forums has helped FECOFUN challenge the existing power imbalances between the forest bureaucracy and local communities.

**Table 24. Major policy threats and FECOFUN's responses**

| Date      | Major policy issues  | FECOFUN activities  | Achievements   |
|-----------|--|---|--|
| Feb 1998  | The para-state Timber Corporation of Nepal (TCN) granted monopoly over timber trade  | Organized street protest, press conference, informal lobbying with stakeholders                                     | The government changed its decision, implying the TCN monopoly would not be applicable to forests managed by communities and local governments                             |
| Feb 1999  | 1 <sup>st</sup> amendment to the 1993 Forest Act that sought to give more power to DFOs to take action against CFUG members required 50% investment of CFUG funds in forest management | Encouraged CFUGs to disobey the provisions and raised awareness in them about the impacts of the amendment          | Partially successful; both DFOs and CFUG members can take action against a CFUG committee for any mismanagement, while 25% of funds would be invested in forest management |
| Apr 2000  | Government circular to restrict community forestry in the Terai region   | Mass meeting, press conference, submission of memorandum, lobbying with policy-makers                               | The government has recently lifted the ban on community forestry handover in the Terai region  |
| Aug 2002  | Amendment brought to remove the “special priority” provision for community forestry  | Rejection of the decision, arguing that it opens up forests for private companies’ appropriation                    | Unsuccessful; the amendment allows government to hand over part of the national forest to private companies without prioritizing community forest                          |
| July 2003 | Financial ordinance for levying 40% tax on CFUG forest product sales   | Nationwide campaigns against the provision, street protest, mass meeting, lobbying with decision-makers, court case | Tax is reduced to 15% and limited to sale of only two timber species ( <i>Shorea robusta</i> and <i>Dalbergia sissoo</i> )   |
| 2005–2006 | The government seized bank accounts of CFUGs   | Organized rally in several districts  | Government reversed seizure of bank accounts   |
| 2006–2007 | About a dozen community forests used by the government for army barracks and Maoist rebels’ cantonments  | Submission of memorandum to the government with alternative options   | Most community forests have been returned  |

**Source:** Adapted from FECOFUN (2002)

Despite its successes, FECOFUN has faced a number of institutional and programmatic challenges. Contrary to its stated organizational values and objectives, the grooming of new leadership, especially through the involvement of women and marginalized groups, appears inadequate (Nightingale 2003; Pokhrel et al. 2007). In addition, the organization often takes a

defensive stance on many forest policy issues and supports or rejects the agenda or proposal based on a knee-jerk position that communities are always right (Ojha et al. 2008). Since many FECOFUN leaders are affiliated with one political party or another, one of the major threats is that FECOFUN could be co-opted by a party agenda at some point. Similarly, FECOFUN is often under pressure to meet increasing demands by CFUGs for various services such as institutional capacity-building, preparing operational plans, or linking with markets. Financial sustainability has become another important challenge, particularly in the context of shrinking flexible institutional funding from international aid agencies. This may ultimately limit FECOFUN's ability to meet the enormous demand from its constituent CFUGs and respond to any unfolding national forest policy processes (Timsina 2003; Ojha et al. 2007). Meanwhile, balancing responses to CFUG demands for technical support while also addressing many national forest policy issues has become increasingly challenging. In addition, FECOFUN as an influential national network has induced CFUGs to emerge as powerful local organizations, thereby creating local institutional plurality that tends to undermine local governments.

### **5.2.2. Case 2: Association of Forest Communities of Petén / Asociación de Comunidades Forestales de Petén (ACOFOP) Guatemala**

Guatemala's department called Petén has become an illustrative example of how government efforts to implement conservation policies can provoke resistance from forest-dependent people leading to the formation of an influential second-level organization. One prominent policy decision that was part of this process was the creation of the Mayan Biosphere Reserve (MBR) in 1990 (See Chapter 3 and 4). The MBR covers roughly two million ha of lowland tropical broadleaf forest, and introduced specific land use policies to conserve the region's rich biological diversity. However, once created, the government faced major challenges administering the reserve and reconciling its conservation goals with the livelihoods systems of community residents in and around the MBR. Initial plans attempted to install a strict protection regime that disregarded the long-term presence of communities and families living in, and dependent on, the area's forests, and required their eviction or severe restrictions on their livelihood activities. The intense reaction by affected communities threatened the government's biodiversity conservation objective for the MBR. In response to the growing tension, conservation organizations proposed establishing community forest concessions in the buffer zone (called the Multiple Use Zone or MUZ) around the MBR's core area, as a strategy to provide economic benefits for residents and ensure their active participation in sustainable management of the forest around the reserve. In 1994, the government formally introduced a community concession system. This system recognized the settlement rights of pre-existing communities and at the same time potentially

provided incentives for forest management and a biodiversity conservation agenda. The premise behind this decision was that granting these forested areas to communities would satisfy the competing interests of all parties – industry, conservation, and communities. However, local residents – dispersed and often isolated in rural communities – soon learned that additional collective action would be necessary if they were to fully benefit from the new opportunities.

The initial concession areas offered to communities in 1994 were small, undercutting their economic viability and failing to meet historic demands for rights over forest resources. In addition, the system set up by the government and funders like the United States Agency for International Development (USAID) placed significant authority and control in the hands of government agencies and NGOs rather than directly in the hands of participating community organizations. Because the population was dispersed in settlements throughout the forest, communication was limited and the heterogeneity of communities made it difficult for them to unite around common interests. For example, while some communities wanted to formalize their customary rights to reside in the forest and manage non-timber forest products (NTFPs), those living outside the MUZ were making claims to forest resources inside the buffer zone. Unrest by some rural people living in and around the MUZ increased, as these limitations became known. However the communities lacked a common voice that could unify their demands for resources (Sundberg 1998). Eventually, community leaders mobilized to “push back” as a united front against the centralized decisions, proposing instead an increase in concession size, greater access levels and more extensive control to be granted to communities. This prepared the foundation for the formation of ACOFOP, a second-level organization formed in 1997 to represent the common interests of communities and community organizations holding forest concessions.

ACOFOP represents 23 member communities and community organizations in and around the MBR. These communities are grouped into 12 ACOFOP member organizations each of which signed a concession contract in the MUZ (only 9 of these concessions are active, See Chapter 4). ACOFOP is governed by a general assembly of members, a board of directors composed of concession representatives, and a three-member oversight committee (Taylor 2010). Originally ACOFOP was formed to lobby for increased resource access and management rights for the communities. ACOFOP leaders continued the struggle to increase the sizes of the community concessions to an economically viable scale and helped the community organizations gain legal status. In addition, they negotiated a change in the framework to allow the allocation of concession rights to communities outside the MUZ. Although the first community concession granted was only 7,000 ha, later concession contracts ranged between 20,000 and 93,000 ha of



forest. In total, the community concessions encompass approximately 375,000 ha of certified sustainable management forests (See chapter 4). Above all, ACOFOP was key to ensuring that community groups participated actively in the decision-making around the establishment of a concession system. It subsequently assumed additional economic coordination roles, particularly in relation to timber production and, more recently, diversification to include the commercialization of NTFPs and the provision of technical services (Taylor 2010).

ACOFOP has influenced the democratization of forest tenure rights in Petén in two ways. First, it challenged centralized decisions limiting local access and use rights, and pushed the interests of members to ensure the rights to concessions at an economically viable scale. More recently, it has concentrated on political advocacy to ensure that local voices are heard, community concession rights are respected, and external actors do not encroach on their lands in violation of their exclusion rights. Second, ACOFOP also provides technical assistance and accompanies its member communities by strengthening organizational, technical and productive skills. This second-level organization facilitates community self-management, favoring the ability of member organizations to participate in decision-making processes (ACOFOP 2005). Currently, the association has a technical office that implements projects financed by donors. In addition, ACOFOP facilitates improved access to markets, reduces transaction costs associated with forest management activities and facilitates access to credit for members.

Nevertheless, it is ACOFOP's political advocacy to protect the members' management rights and exclusion rights against external interests that requires its greatest effort and investment of economic resources. Table 25 reviews ACOFOP's struggle to secure community rights over forest. For example, ACOFOP was able to remove a requirement that community management plans and activities be monitored and certified by designated NGOs.

**Table 25. Major actions carried out by ACOFOP and their outcomes**

| Date | Major policy issues  | ACOFOP actions   | Achievements  |
|------|--|--|---|
| 1998 | Establishment of community concession system in the MBR                                    | <ul style="list-style-type: none"> <li>⤴ Led contract negotiation process</li> <li>⤴ Promoted formal legalization of community organizations</li> <li>⤴ Trained member organizations through workshops and training sessions</li> <li>⤴ Channeled technical, organizational and legal assistance to protect community interests during negotiations</li> </ul>   | Government allocated 12 community concessions of about 375,000 ha   |
| 1998 | Legal norms concerning NGO accompaniment and NTFP production                               | <ul style="list-style-type: none"> <li>⤴ Challenged the provision that recognized NGOs as the legally designated technical assistance providers and required co-signees for valid contracts</li> <li>⤴ Strengthened the bargaining power of community organizations to decide which external organizations would assist them</li> </ul>  | Successful; the original norms (1994) that required NGO accompaniment was changed (1998) and the contracts allowed an integrated management approach for community concessions permitting them to extract NTFPs under a management plan |
| 1998 | Expansion of petroleum concessions   | Conducted media advocacy to bring lessons of community organizations in Petén through press releases, TV and radio spots   | Partially successful; petroleum concessions were banned, but a recent law (2009) on petroleum creates new incentives  |
| 2005 | Legal actions against concessionaire exclusion rights (expansion of Mirador Basin Project) | <ul style="list-style-type: none"> <li>⤴ Established legal action against a presidential decree that supported the expansion of the Mirador Basin Project</li> <li>⤴ Mediated and supported community concession organizations in their negotiations with the project promoters</li> <li>⤴ Established strategic alliances with other actors including government officials, NGO representatives and cooperatives</li> </ul> | The expansion of the Mirador Basin Project was outlawed but further pressure from private investors is taking place at the community concession level   |
| 2005 | Regional Development Plan for Petén (4 BALAM)  | <ul style="list-style-type: none"> <li>⤴ Represents communities in the multi-stakeholder table for the development of the Mirador Park</li> <li>⤴ Facilitated dialogue to secure benefits from the development project</li> </ul>  | Partially successful; while communities are active participants, their role in decision-making concerning the project is still weak   |

**Source:** Adapted from Monterroso 2007

Two major struggles against private investors and state agencies best illustrate ACOFOP's role in protecting the interests of community concessionaires. In one case, it fought to overturn a 1998

law that allowed the expansion of petroleum exploration and extraction within the community concession area in the MUZ. This battle has been only partially successful because the 2009 Petroleum Law created new incentives and a legal framework for extending petroleum contracts within the MBR. Although no extraction activities have taken place within the MUZ, ACOFOP constituents are concerned because approximately 90 per cent of the national petroleum reserve is found in Petén (See Figure 14, Chapter 4).

The other example relates to efforts by private investors to promote cultural-archaeological tourism in a region north of the MBR by expanding the existing national park (81 sq. km) to an area defined as the Mirador Basin Project, surpassing 2,000 sq. km (<http://www.miradorbasin.com/about.php>). This expansion could annul six concession contracts, including five community concessions. The Mirador Basin Project was approved by the Presidential Decree in 2002 (129-2002). It took ACOFOP three years and important financial and human resources to revoke the legal authorization for the national park expansion (Monterroso 2007; Taylor 2010). Nonetheless, in 2010 another proposal was already being discussed in the National Congress to approve a law that renews the Mirador Basin Project. If successful, it would restrict existing concessionaire rights to make room for an initiative led by private investors.

ACOFOP's active engagement with external actors, for instance establishing relationships directly with donors and lobbying national government institutions as the representative of community concessions, has contributed to the development of alliances with conservation authorities, community concessionaires, the timber industry and the local government (Monterroso and Barry 2009). In fact, the success of the community concession experience has become a useful example for many other community initiatives in Guatemala and beyond. A variety of outcomes have been attributed to ACOFOP. It secured usufruct and management rights over forest products for at least 25 years with the possibility of renewal. It improved local governance systems based on an expanded set of rights of access to, use of and decision-making over natural resources. The concession organizations significantly increased income-generating and employment opportunities for member communities. ACOFOP lobbied for the acceptance by local banks of annual timber management plans as collateral, allowing community concession organizations to apply for credit. Also, ACOFOP members have exercised greater control over illegal logging and fire to maintain forest cover. Finally, by integrating dispersed local organizations into a single representative body, it strengthened community voices and ensured the exclusive rights of these communities.

However, while ACOFOP has been successful in many respects, it is facing five major challenges. First, it is under intense pressure from member communities for technical support to comply with criteria and standards for contracts, such as certification standards, as well as assistance accessing suitable markets for forest products. Second, ACOFOP has to provide effective leadership to maintain community rights against competing claims, for example increased demands for land from peasant communities. Third, it must counter the lack of political will by the government to fully support those rights by reaching out to other constituencies and building alliances. ACOFOP has had to act as a vigilant watchdog to protect and advance the tenure rights of its member organizations. Fourth, ACOFOP needs to maintain its legitimacy and credibility among its members by assuring democratic representation and increased accountability, which are major institutional challenges (See Chapter 4). Finally, it must balance its political and economic roles, as they change constantly, all the while striving to manage issues of representation, equity and legitimacy (Taylor 2010).

### **5.3. Second-level organizations as emerging actors in democratizing forest governance**

The above cases focused on two important aspects of second-level organizations – their emergence and growth, and their strategic actions to ensure the continuity of forest reform processes and democratize forest governance. In this section a synthesis of these experiences draws lessons and discusses the implications of how second-level organizations contribute to forest governance.

#### **5.3.1. Emergence and Growth of Second-level Organizations**

The two cases discussed illustrate at least four factors that supported the emergence and growth of second-level organizations. First, they responded to perceived threats to the existing access to valuable resources, thus acting as a catalyst and forcing the community groups to unite and develop networks, federations and alliances. By uniting they increased their access to critical information, amplified members' voices and increased their bargaining power and capacity to hold powerful authorities responsible. Forest communities in Petén defended their rights when they saw their interests at risk due to the establishment of the MBR. As they found their rights restricted and then learned that the size of the concessions was inadequate, they began networking and organizing into an association of community organizations to defend and expand their tenure rights. Groups of communities launched these movements when they realized they faced a common threat to their collective livelihood interests.

FECOFUN developed in response to the perception that CFUGs were being treated simply as passive recipients as the government and donors expanded community forestry across the

country. They had almost no say in the way the program was being launched. This second-level organization emerged because collective action by grassroots community groups was inadequate, particularly due to complex socio-political dynamics caused by competing interests, complex negotiations and rule-making processes beyond the capacity of local communities. The community groups sought to develop their networks to engage with powerful actors in distant state entities, markets or international development agencies. In particular Nepal's CFUGs sought to organize and consolidate their voices to influence the institutional practices of the government forest authority.

Second, in both cases political transitions towards more democratic, participatory and accountable political governance provided spaces for the emergence of these second-level organizations. In Guatemala, this period was marked by the end of the civil war, the return of displaced citizens and the development of policies that allowed forest communities to establish, consolidate and institutionalize ACOFOP. Similarly, a new multiparty parliamentary political system in Nepal provided an opening for the resurgence of grassroots organizations and civic actions that contributed to the establishment of FECOFUN. Previously in Nepal, forming such community organizations, particularly building national networks, would have been almost impossible in the autocratic political regime that existed before 1990. Moreover, alliances with other civic groups and media were possible only due to the newly established liberal polity in Nepal.

Third, the role of grassroots leaders was crucial in the development of these organizations. These leaders emerged either from grassroots movements for stronger community rights over natural resources or from citizen's political movements for greater freedom. For example, many activists who fought for greater political freedom in Nepal later joined citizen's networks and provided leadership to FECOFUN. The leaders devoted their time, efforts, skill, social capital and political connections to nurture, strengthen and expand the organizations and were able to bring diverse community groups under a single umbrella. They strategically linked the forest rights movements to wider citizens' movements and kept a high profile in the power corridors of government ministries. The leaders acted as "issue entrepreneurs" through the effective articulation of grassroots interests with national interests. They identified and defined grievances, developed a group identity, devised strategies and mobilized the masses, often taking advantage of political opportunities.

Fourth, sympathetic financial and technical support from aid agencies has been instrumental at key points. Such support helped the community organizations enhance their capacity; increase

interaction among members; coordinate their actions and expand their networks at the sub-national, national and even international levels. For example, these organizations have developed functional collaborations with many international networks, including the Coordinating Association of Indigenous and Community Agroforestry in Central America/Asociación de Comunidades Indígenas y Campesinas de Centro América de Forestería Comunitaria (ACICAFOC), the Global Alliance of Community Forestry (GACF) and the Rights and Resources Initiative (RRI).

The two cases illustrate that the emergence of social movements largely depends on the political opportunities that may facilitate or inhibit collective action. As social movements, these second-level organizations emerged out of political opportunities, which were then expanded by the movements themselves, creating further opportunities for new movements. These cases demonstrate that second-level organizations flourish in a relatively liberal political regime where basic citizenry rights are respected and free media function. Similarly, they also confirm that the greater the spatial and functional decentralization of a given political system, the more effective the social movements will be (Zald and McCarthy, 1987). For example, FECOFUN would not have existed without the Nepalese government's community forestry program. The decentralized forestry program allowed more spaces for community initiatives, leading to the emergence and prospering of diverse local groups and eventually second-level organizations such as networks, cooperatives and alliances. These second-level organizations emerged as forest-based social movements. It has been observed that such movements frequently emerge precisely in a situation with minimal state presence where local communities develop a common understanding of the threat to their collective livelihoods and interests (Cronkleton et al., 2008).

### **5.3.2. Strategic Actions to Democratize Forest Governance**

The second-level organizations adopt diverse strategies to advance their agenda of promoting community rights and democratizing forest governance. FECOFUN and ACOFOP mobilized their constituent community groups' existing networks, social capital and external support to exert substantive political pressure for recognizing community rights. Four major strategies are identified: building institutional and technical capacity of their constituent members; assuring that local interests influenced public discourse on forest and environmental management; challenging through mass mobilization government decisions that did not respond to local interests; and constructively engaging with government agencies to assure that local rights were respected by forest policies and institutions.

After their formation, these second-level organizations provided constituent group training, institutional support, critical information and linkages with government agencies and the market. Both FECOFUN and ACOFOP have launched massive training, exchange and peer learning, and other empowerment tools to build the capacity of their member organizations. Their strategies have often blended technical know-how and political empowerment. The technical aspects include assistance with learning silvicultural practices, enterprise development and organizational management. The building of political capacity includes increasing policy and legal awareness, improving leadership skills and organizing campaigns and networking initiatives. Their capacity-building also includes practicing more democratic and inclusive governance within the organizations themselves.

The second-level organizations play an important role in influencing public discourse by inserting their constituents' views and needs into the national debate related to natural resource governance. The second-level organizations highlighted success stories of community management, exposed the weakness of state management, mobilized media to disseminate their messages and capitalized on international civil society networks and rights movements in support of their campaign. Although these organizations have appeared under decentralized and participatory policies, they have led the struggle to translate newly gained rights over forest resources into everyday practice. This is particularly true where the state agencies have attempted to undermine the spirit of the original policies. The forest authorities in Nepal often interpret the community forestry program from an instrumental and functionalist viewpoint that is about ensuring local participation in forest conservation. FECOFUN, however, has promoted a counter-interpretation, that community forestry is about recognizing people's fundamental rights to their natural resource base and promoting their autonomy in managing those resources. Similarly, ACOFOP has been able to argue that enhancing local livelihoods through community concessions can contribute to the broader conservation agenda in and around the MBR. Previously, conservation organizations conceived the conservation program narrowly and attempted to exclude local people. In this way the second-level organizations were able to establish and promote new environmental discourses and policies that have gradually recognized community rights around forest management. Even the conservation organizations have now asserted that community-based management could also enhance biodiversity (Bray et al., 2008; Radachowsky et al., 2012).

Resistance activities are one of the major strategies that second-level organizations adopt when they perceive that community rights are threatened or their voices are not heard. (see Table 23

and Table 24 for a list of political campaigns and actions adopted by FECOFUN and ACOFOP). In fact, the mass-based political power of these organizations has often acted as a deterrent against any government decisions that would undermine community rights. The second-level organizations provide leadership for the collective expression of a community agenda, usually by mobilizing their cadres across large regions through demonstrations to defend their interests.

FECOFUN and ACOFOP have also mounted legal defense strategies when regulations protecting community rights are violated. They have gone to court to defend their cases, representing the interests of communities and defending their rights by challenging transgressions by other actors including the State. FECOFUN, for example, has fought several court cases on behalf of CFUGs. Similarly, ACOFOP in Guatemala challenged policy decisions that undermined communities' interests and played a major role in channeling community concessionaires' demands. As the case study shows, ACOFOP was able to increase the size of the concessions and expand the bundle of rights allocated under the concession contracts through its persistent resistance and constructive engagement. Similarly, it has been able to remove the mandatory provision that management plans and other activities be monitored and certified by NGOs.

In these cases the second-level organizations, as compared to local community organizations, were able to interact with government and market actors at higher levels. They have thus created new intermediate-level negotiation spaces, effectively becoming interlocutors. With these expanding arenas, the traditional unequal power relations between authorities and communities are beginning to crumble and new configurations of power have emerged. For example, government officials and FECOFUN leaders now frequently sit together in international workshops and applaud community forestry, illustrating that their relationship has taken on a different form despite the level of conflict at home. These encounters serve as alternative channels of communication and conflict resolution. Similarly, ACOFOP's growing relation with donor agencies and international alliances has raised its status in the national policy process. Because second-level organizations are effective in mobilizing popular resistance and can draw on broad alliances, they have increased their influence to contend for power (Tilly, 1978: 78).

Second-level organizations bring another level of agency to the tenure reform process, promoting community perspectives and interests through constructive engagement in national policy-making. Conventional state-led tenure-reform processes originate at the central level and are implemented through the state bureaucracy, largely as a top-down approach in which local



communities are treated as passive recipients. In recent years, the secondary organizations have benefitted from the growing culture of multi-stakeholder policy processes. Government agencies and international aid agencies alike have begun to invite these secondary organizations as permanent stakeholders in formulating any major policy, plan or program. Consequently, they have become key actors in policy forums concerning forests and natural resource governance – FECOFUN has become an active member of multi-stakeholder policy forums in Nepal and ACOFOP has become a member of the National Council of Protected Areas in Guatemala.

Table 26 below provides a summary of the different strategies and their impacts on democratizing forest governance or strengthening community rights.

**Table 26. Strategies and impacts of second-level organizations**

| <b>Major strategies</b>   | <b>Associated activities</b>   | <b>Governance outcomes</b>  |
|---|--|---|
| Building institutional and technical capacity of the constituent community groups             | Helping expand the groups' forest management and enterprise operation skills, legal awareness, leadership capacity, networking, and internal group governance  | Enhanced performance and effectiveness of community groups, institutional strength and livelihood benefits  |
| Influencing environmental discourses that provide legitimacy and voice to community interests | Highlighting community success as a powerful critique of government failure in resource management, producing and communicating a counter-narrative to the dominant views of community management and conservation | Public support towards greater community rights and decentralized, community-based management of forests  |
| Challenging government decisions  | Street protest, mass meeting, media campaign, lobbying political and bureaucratic leaders, public litigation, non-cooperation  | Top down policies that undermine community rights opposed and in many cases not promulgated; responsive and accountable decisions by the State and private agencies |
| Constructive engagement in policy process   | Actively participating, providing critical inputs and influencing the multi-stakeholder bodies and national policy forums  | Progressive, people-oriented policies formulated and introduced   |

Despite the achievements, the second-level organizations have been facing three major challenges. First, these networks have to transform themselves constantly to keep pace of the changing context in order to adequately meet the expectations of their members and stakeholders. They are facing demands to provide technical and institutional support to member organizations, which are required to meet increasingly tough standards and criteria. Both

FECOFUN and ACOFOP face major challenges to build the capacity of their member organizations to satisfy the market and meet government requirements.

Second, these organizations must find a delicate balance between the management- and production-related technical aspects such as standards, silvicultural practices, enterprise organization, market information and negotiation skills on the one hand, and ensuring community rights and autonomy on the other. There is internal conflict regarding priorities within the organizations. Focusing too much on technical production aspects would bring them close to being just ordinary NGOs and therefore make it difficult to rationalize the presence of the federation. At the other extreme, narrowly focusing on political advocacy may ignore the many pressing needs of the community institutions in their everyday operations.

Third, there are sometimes trade-offs between the global campaign and the local agenda. When the second-level organizations get involved in wider issues of decentralization, fair trade and community autonomy at regional and global levels, they tend to ignore many important issues at home. For example, when FECOFUN or ACOFOP leaders are involved in negotiating regional and global agendas regarding governance reform and community rights, not enough attention can be paid to local agendas of tenure security, livelihoods, equity and internal democracy. This is particularly true in internally differentiated societies where such secondary organizations tend to be led by more privileged social groups. Although these organizations have made conscious efforts to address many of these internal governance issues, there are still large gaps between the organizational rhetoric and everyday institutional practice. Moreover, as argued by Ribot et al. (2008), the institutional plurality created at local levels by such influential networks has tended to undermine local government bodies, thus in some ways weakening grassroots democracy.

#### **5.4. Lessons and implications**

Analysis of these two second-level forest organizations suggests that they have played a key role in these processes, scaling up collective action, facilitating the exchange and flow of information, challenging existing inequality of power structures and gaining political strength in defending their interests. Consequently, they have become important forces in improving forest governance by deepening, sustaining and institutionalizing the local communities' role and giving voice and power to locals in forest governance.

The second-level organizations also contribute to the advancement of community forestry by building the capacity of community organizations to influence external changes. Consolidating as second-level organizations allowed the two groups studied to confront more powerful external

interests that were attempting to take advantage of forest tenure reforms, as well as to defend their exclusion rights by building political alliances. This capacity is essential if they are to enjoy tenure security over the long term. Additionally, these organizations play an important role in acquiring and maintaining the legitimacy of tenure reform efforts (See Chapter 4). ACOFOP is creating new opportunities for advocacy for grassroots organizations at the regional and national level.

Second-level organizations also assume the role of facilitating, coordinating and promoting the interests of their primary organizations, while the primary-level organizations are directly involved in everyday management of their resources. The cases studied illustrate situations in which forest-dependent people have learned to collaborate beyond their home communities and are no longer satisfied with being passive recipients of government programs for forest development. These collective actors have emerged as important forces promoting participatory and inclusive decision-making, and therefore in democratizing forest governance.

The second-level organizations have also been able to sustain, deepen and institutionalize forest tenure reform policies and practices by challenging political power structures, influencing state policies and actively engaging with market institutions. All these suggest that the second-level organizations have become important actors in shaping forest policy process, particularly in enhancing tenure security and livelihood benefits for forest communities.

The cases discussed provide greater understanding not only of how such organizational mechanisms work, but also what results they produce for members. They illustrate that secondary organizations are able to interact with government and market actors at higher levels where local community organizations have little access.

Rural forest-dependent people form second-level organizations when they perceive that community rights are threatened. However, they face major challenges. These networks have to transform themselves continuously to confront changing conditions so they can adequately meet the expectations of their constituencies. Another important challenge is that these organizations must find a balance between the economic and production demands of members on the one hand and political advocacy and negotiation on the other to ensure community rights and autonomy. Also, when the secondary organizations get involved in wider issues of reform processes such as fair trade, and community autonomy at regional and global levels, they may lose track of many important issues at home.

## Chapter 6. The Dynamic Forest Commons of Central America: New Directions for Research<sup>127</sup>

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<sup>127</sup> This chapter draws on the publication Monterroso and Larson, 2013. Content has been reviewed and modified to update information and align to the objectives of this dissertation. Authors: Monterroso, I. and Larson, A. 2013. The dynamic forest commons of Central America: New directions for research. *Journal of Latin American Geography* 12(1): 87-110.

Previous chapters analyzed the factors that played into the emergence, outcomes and continuity of forest tenure reforms in Guatemala, Nicaragua and Nepal. They analyzed the internal and external legitimacy underpinnings of reform and the role of collective action at different levels, arguing that these are critical to sustaining outcomes regarding livelihoods and forest conditions. This chapter compares three forestland reform cases, including the community forest concessions in lowlands Petén, the communal indigenous lands in the Guatemalan highlands and the collective indigenous land titling process in Nicaragua's lowland Caribbean Coast. It reviews the use of institutional approach and common property theory for analyzing tenure reform processes in forestlands.

The chapter is organized as follows: The next section briefly reviews research on the commons in Central America to date, then draws on critical commons scholars to discuss the limitations of traditional research in the field. Section 3 presents the research methods for the cases presented here and the three case studies. Section 4 argues for the need for new research questions and approaches for understanding the region's commons in light of the cases. This is followed by the conclusions.

### **6.1. Research on commons in Central America**

An important part of Central America's forests are located on land under formal or customary common property regimes (See Chapter 2). Despite this fairly significant area under collective management regimes in the region, research from the perspective of the common property school has been limited, probably due in part to the greater emphasis on agrarian lands in development in academic research on Latin America. It is only fairly recently that forests have taken center stage in land reforms (Pacheco et al., 2008, Pacheco and Barry, 2009), such that about 25% of Latin America's forests are now owned by communities and indigenous people and another 7% are designated for their use; this represents a total of some 201 million ha of forest in the hands of these actors in 2008, an increase of 67 million ha since 2002 (RRI and ITTO, 2009).

The vast majority of common property research, referred to here as traditional common property research<sup>128</sup>, is focused on understanding and promoting the emergence of collective

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<sup>128</sup>Agrawal (2003) refers to "most writings on common property". Johnson (2004) refers to a "mainstream" in common property writings, which he calls "collective action scholars," contrasting their approach to those he

institutions (understood as rules) for the improved management of common property resources (Agrawal, 2003; Ostrom, 2009). It is based on methodological individualism whereby individual behavior is based on rational choice (Johnson, 2004; McCay, 2002; Peters 1987) and where individuals and property systems “stand above politics” (Agrawal, 2003: 244). Thus institutions evolve or are designed and property boundaries are given or negotiated (Agrawal, 2005, Finley-Brook and Offen, 2009, Taylor, 2009).

The forest commons of Central America call for more dynamic, historically grounded approaches. These landscapes have often been shaped through local, national and in some cases international struggles that have resulted in the formal recognition of property rights – and they continue to be shaped by ongoing challenges and negotiation processes. The goal of this chapter is to highlight how future research on the commons needs to pay greater attention to history and change over time, conflict and negotiation with multiple actors at multiple scales, and the dynamic production of space and boundaries. Empirical data comes from research conducted in three sites that were part of a study on tenure reforms undertaken from 2006 to 2013 by the Center for International Forestry Research (CIFOR) and the Rights and Resources Initiative (RRI) (See Chapter 2).

In spite of the fairly significant forest area under collective management regimes in Central America – at least 6 million hectares (RRI and ITTO, 2009, ICF, 2011, Procuraduría, 2010; Grupo Promotor 2009) out of the 18 million hectares with forest cover in the region (PROARCA, 2005) – research on these forests has been fairly limited from the perspective of the common property school. Rather, agricultural lands have been the primary interest of academics and practitioners in the region, probably due to the importance of agrarian issues: the limited availability of land for rural peasants, the colonial legacy of the *latifundio-minifundio* structure in Latin American history and the importance of these lands to the region’s revolutionary movements (see de Janvry, 1989; Eckstein, 2001; Enríquez, 1991; Gauster and Isakson, 2007; Gliejeses, 1989). Hence these priorities have overshadowed research on forest commons and government policy (Thiesenhusen, 1989), at least until recently (Pacheco et al., 2008; Pacheco and Barry, 2009).

The Central America literature on forest commons has focused on two central questions: (1) under what conditions do collective institutions, specifically rules for resource management, emerge?; and (2) how do different tenure regimes, types of users or approaches to forest

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refers to as “entitlement scholars.” The term “traditional” is used to distinguish the majority of commons scholarship from a minority who have used or advocated other approaches.

management (such as protected areas) compare regarding outcomes for forests? With respect to the first question, Gibson (2001) compared two sites in Guatemala and found that scarcity and resource dependence led to the emergence of collective resource management rules. Tucker et al. (2007), in a comparative study of nine forests and a variety of institutional arrangements in Guatemala and Honduras, found that biophysical characteristics favoring higher productivity represented an important incentive for developing stronger institutional mechanisms.

With regard to the second question, research comparing private and communal forest management regimes found that neither type of forest owner – private or communal – prioritizes sustainable forest management techniques (Tucker 1999). Other studies have focused specifically on the distinction between indigenous and non-indigenous management, suggesting that recognizing forest land rights for indigenous groups is more effective than enforcement approaches based on command and control (Richards, 1997; Stocks et al., 2007; Hayes, 2007; and 2006). Finally, recent studies on protected areas (Bray et al., 2008 and Radachowsky et al., 2012) suggest that understanding changing contexts and histories of user groups as well as greater perceived legitimacy of decision-making processes (Monterroso and Barry, 2012) are also important elements that influence management outcomes.

While these works have made important contributions to research on the commons, future research should move beyond traditional common property questions and methods to further improve our understanding of forest governance and its challenges in Central America. Several other commons scholars (Peters, 1987; Goldman, 1997; McCay, 1987; McCay and Jentoft, 1998; McCay, 2002; Agrawal, 2002; 2005 and 2007) have put forward similar arguments, contrasting the traditional approach with the need for greater attention to contextual, historical and power issues. This section focuses on four limiting issues, characteristic of commons research, raised by these scholars that are directly relevant to the cases presented here.

First, the nature of the questions asked and the overall goals of traditional commons research may lose site of the bigger picture. Traditional commons scholars are interested in how to improve resource management (Johnson, 2004) and create durable common property regimes (Agrawal, 2002). Following this idea, institutional arrangements, particularly combinations of rules, are needed to ensure effective management and avoid resource depletion and deterioration (Ostrom 1990, 2009, Agrawal, 2002). As noted above in the Central America research, the

principle concern has been with how collective resource management institutions emerge (Tucker et al., 2007; Gibson, 2001, McCay, 2002; Johnson, 2004). If forest conditions are the product of rational choices, a positive perception of outcomes through the evaluation of costs and benefits becomes a clear incentive for cooperation and collective action leading to governance rules (Agrawal, 2002; Ostrom, 1990; 2009).

Ostrom's "design principles" are aimed at identifying key variables required to encourage collective action. Yet Van Laerhoven and Ostrom (2007:11) self-critically write that research on the commons has a limited focus on institutional design rather than institutional change. And when change is studied, it is assumed that all change in behavior occurs through changes in institutions (McCay, 2002). Peters (1987) argues, however, that the central question is to understand competing rights and claims around resources as well as human behavior as embedded in social systems. In other words, rather than focusing on how and when people undertake collective action to design rules for better resource use, the larger issue is understanding the "causes and consequences of particular human-environment situations" (McCay, 2002:367).

This leads to the second issue. The methods used in traditional commons research have two prevailing characteristics: methodological individualism and theory-driven, deductive models of inquiry (Johnson, 2004; McCay, 2002). The former leads to an overemphasis on individual rational choice, which, among other things, fails to recognize the myriad ways in which those choices are shaped by history and culture, how they may not be "rational," or how they may be based on other factors largely unrelated to maintenance of the resource base (Johnson, 2004; McCay 2002). The latter is related to the first problem above, whereby the set of questions – and thus what researchers find – is limited. For example, "well-defined boundaries" is one of the key variables identified for the success of common property resource management (Gibson et al., 2005; Ostrom, 2009). In one of the few studies of the commons in Central America that takes a less traditional approach, Finley-Brook and Offen (2009) point out that "common-property analysis usually addresses locations where land plots have already been bound and thus focuses on resource rights and institutional decision-making within these pre-defined areas." Their study focuses on how diverse claims over indigenous territories in Nicaragua are represented, highlighting the importance of understanding the *process* of "bounding the commons" – specifically, the political and economic relations of inequality that shape the process and outcomes.



Assumptions behind the traditional commons approach lead to an absence of attention to power or politics; this constitutes a third issue limiting commons research. Peters (1987) and McCay (2002) argue that “the problem” assumed by commons scholars is the absence of social ties between the individual and others, when in fact the problem is competing rights and claims. Similarly, Johnson (2004) argues that there is an assumption that the rules that emerge from social ties are good for all – equitable and based on a moral economy rather than power and struggle. Agrawal (2003:244) refers to the conceptual problem of “the idea of a sovereign, self-governing self and systems of property that stand above politics.” The cases discussed below demonstrate the role of politics and competition at all levels.

Finally, and related to the previous issues, is the failure to take external context seriously (Goldman, 1998; McCay, 2002). Agrawal (2007: 124) writes that “variables related to the external environment... [constitute] the context within which the objects of interest for forest commons scholars – the configuration of common property arrangement, common pool resource, and user group – are located.” According to Agrawal, despite these issues receiving more attention recently among scholars of forest commons, “they have often been identified as less important than institutional factors” (2007:124). He argues, however, that markets and other external factors are “extremely important structuring variables” yet commons scholars tend to find that they are not as important as scholars who look more specifically at causes of deforestation (Agrawal 2002 and 2007). He calls this an “intriguing disjuncture” (Agrawal 2007:124). The problem may be related to the use of overly deductive research models, discussed above.

Further, even the idea that communities and institutions are “located” in a particular context is challenged by the case studies presented below. Rather the commons presented here are dynamically produced. The commons scholar’s unit of analysis is, in fact, a social construction in process and in constant flux.

## **6.2. The Case Studies<sup>129</sup>**

The research presented here is based on a global comparative study of forest tenure reforms in 11 countries from 2006 to 2013 (see Larson et al. 2010a and b). The research aimed to understand the nature of forest tenure reforms and the extent to which local rights had increased

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<sup>129</sup> Chapter 2 provides additional data on the case studies presented here both for Guatemala and Nicaragua

or were more secure in practice.<sup>130</sup> This study, therefore, was not undertaken for the purposes of understanding the questions raised in this chapter; rather, the research findings from that project are used here to reflect on those questions. Three research sites were selected in Central America: the North Caribbean Coast Autonomous Region (RACCN) of Nicaragua, the Mayan Biosphere Reserve of northern Petén, Guatemala, and Guatemala's western highlands (Larson et al., 2008). Together, these three regions represent a wide variety of common property regimes and three very different types and contexts of reform<sup>131</sup>.

The research took a highly contextualized and nested approach. At the regional level, extensive literature reviews and key informant interviews were conducted to characterize the spectrum of land and forest tenure regimes, forest and land-use change and competing interests, particularly over forest resources. Based on these findings, communities or groups of communities representing different tenure arrangements were selected for in-depth research (see Table 27). Depending on the nature of the organization managing the communal forest, the research focused at the level of a territory or group of communities, an association or enterprise, or the community.

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<sup>130</sup>The sites selected represent places in which local people had won statutory rights to forests in recent years and opportunities to support those statutory reforms.

<sup>131</sup>These three regions represent three of the five most important regions of common property forests in Central America. The others include the *comarcas* of Panama and the lowland tropical forests of Honduras.

Table 27. Some characteristics of commons in the case study communities

| Community  | Formal land owner   | Land user(s)   | Origin of formal forest rights                                   | Forest user organization  | Forest rule-maker(s)   | Type of forest                      |
|--|---|--|--|---|--|-------------------------------------|
| North Caribbean Coast Autonomous Region, Nicaragua |   |  |  |   |  |                                     |
| <b>Layasiksa</b>                                   | Undefined (indigenous communal rights protected by law, not yet titled) | Indigenous community (divided in two villages), family agricultural areas, common forest and pasture | Indigenous communal rights protected by law and the Constitution | Community – formal enterprise, open to all  | Community, enterprise organization and traditional <i>sindico</i> <sup>132</sup> (subject to state regulation) | Lowland tropical broadleaf and pine |
| <b>Tasba Raya</b>                                  | Individual titles and title for Tasba Raya Wanki Twi territory          | Indigenous communities (six villages), individual areas and common forest                            | Individual titles and collective title                           | Community (from six villages) – no specific forest organization                                   | Community through traditional <i>sindico</i> (subject to state regulation)                                     | Lowland tropical broadleaf          |
| Maya Biosphere Reserve, Petén, Guatemala           |   |  |  |   |  |                                     |
| <b>Carmelita</b>                                   | State- protected area   | Community has lived in forest since 1920, individual agricultural areas, cooperative, common forest  | Concession contract  | Concession organization within community, open to all   | State (Protected Areas Council - CONAP)  | Lowland tropical broadleaf          |
| <b>Árbol Verde</b>                                 | State- protected area   | Concession organization, common forest   | Concession contract  | Concession organization made up of individuals from several communities, shareholders must buy in | State (Protected Areas Council - CONAP)  | Lowland tropical broadleaf          |
| <i>Western Highlands, Guatemala</i>                |   |  |  |   |  |                                     |
| <b>Mogotillos</b>                                  | Municipality ( <i>ejido</i> )   | Community, individual areas, common forest (community protected area)                                | Forest area granted to community by municipal agreement          | Community - no specific forest organization   | Community (based on municipal agreement)   | Highland pine                       |

<sup>132</sup> *sindico* – local customary authority in charge of land and resource allocation.

|                 |   |   |   |                                   |   |               |
|-----------------|---|---|---|-----------------------------------|---|---------------|
| <b>Chichim</b>  | Municipality ( <i>ejido</i> )                   | Indigenous community, individual areas, common forest   | Municipality establishes rules  | Community                         | Community as granted and limited by municipality                                    | Highland pine |
| <b>Estancia</b> | Municipality ( <i>ejido</i> )                   | Community, individual areas, common forest  | Community demanded right to families abandoned land with regenerated forest | Forest organization and community | Community's forest committee and community (subject to state regulation)            | Highland pine |
| <b>Chancol</b>  | Group of 504 associates with board of directors | Community (in 13 villages), all area divided among families except for small common area with lake (community protected area) | Collective title  | Community/ households             | General assembly of community and forest organization (subject to state regulation) | Highland pine |

The research questions most relevant to the issues addressed in this chapter are the following: How did reforms emerge and how were they implemented? How were land and forest tenure rights distributed before and after the reform?<sup>133</sup> How was the community organized to manage the commons and/or to fight for reform? What were the obstacles to reform? At the local level, methods included dozens of semi-structured key informant interviews, focus groups and participant observation. The results have been published elsewhere (Larson and Mendoza-Lewis, 2009; 2012, Monterroso and Barry 2012 and 2010; Larson, 2010; Larson et al., 2010a, 2010b; 2008).

A comparative study of tenure reforms in these three emblematic regions provides an opportunity to examine very different types of forest commons under a single lens (see Table 28). Each case begins with a brief introduction, a discussion of the nature and emergence of the commons and current dynamics and challenges.

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<sup>133</sup>This included, but was not limited to, the bundle of rights defined in Schlager and Ostrom (1992): access (the right to enter the area), use or withdrawal (the right to obtain and remove resources from the forest), management (the right “to regulate internal use patterns,” Agrawal and Ostrom 2001:489), exclusion (the right to decide who can and cannot use the resource) and alienation (the right to sell, transfer or lease the land and all of the previous rights).

Table 28. Nature and security of rights

| Cases              | Formal ownership (title holder)                   | Nature of community rights over forest | Common forest? | Role of the collective in forests (common and individual) | Role of the State in forests                            | Length of time forest rights are granted | Security of legal instrument granting forest rights | Security in practice/ threats                          |
|--------------------|---|--|----------------|---|---|--|---|--|
| <b>Layasiksa</b>   | Not yet titled                                    | All but alienation rights              | Yes            | Makes rules for all forest; forest management enterprise  | Regulator   | In perpetuity                            | Secure, but not yet titled                          | Specific area not yet defined                          |
| <b>Tasba Raya</b>  | Inside larger titled territory; individual titles | All but alienation rights              | Yes            | Makes rules for all forest but mainly common forest       | Regulator; may grant concessions w/community permission | In perpetuity                            | Secure  | Area titled but claims inside borders not yet resolved |
| <b>Carmelita</b>   | State   | Management subject to concession rules | Yes            | Forest management enterprise                              | Owner, rule maker                                       | 25 years                                 | Secure  | Competing claims, pressures to end concession          |
| <b>Árbol Verde</b> | State   | Management subject to concession rules | Yes            | Forest management enterprise                              | Owner, rule maker                                       | 25 years                                 | Secure  | Illegal logging, secure given natural limits           |

|                   |                      |  |                 |   |                   |                                      |          |  |
|-------------------|----------------------|--|-----------------|---|-------------------|--------------------------------------|----------|--|
| <b>Mogotillos</b> | Municipal government | All but alienation rights                        | Yes             | Makes rules over common forest                          | Owner, regulator  | In perpetuity                        | Insecure | Secure if community is belligerent                           |
| <b>Chichim</b>    | Municipal government | Management, exclusion subject to municipal rules | Yes             | Makes some rules over common forest                     | Owner, rule-maker | Decision of the municipal government | NA       | Protected area declaration limits rights                     |
| <b>Estancia</b>   | Municipal government | In negotiation                                   | Only small area | Makes rules for all forest (including individual lands) | Regulator         | NA                                   | NA       | In negotiation   |
| <b>Chancol</b>    | Group of owners      | Full ownership, including alienation             | Only small area | Makes rules for all forest (including individual lands) | Regulator         | In perpetuity                        | Secure   | Secure, potential change to rights if protected area enacted |

### **6.2.1. North Caribbean Coast Autonomous Region (RACCN), Nicaragua**

Peace negotiations with indigenous leaders after nearly a decade of war led to the recognition of indigenous communal land rights in the Nicaraguan national Constitution of 1987 and the establishment of two autonomous regions in the north and south Atlantic coast with the passage of the Autonomy Statute (Law 28)<sup>134</sup> the same year (Hale, 1996; Ortiz, 1987). In 2003, the Communal Lands Law<sup>135</sup> established the institutional framework for demarcation and titling, and in 2007, under a supportive central government, indigenous leaders actively promoted the demarcation of large indigenous territories, several of which are now titled. The community-level research focused on two groups of Miskitu communities, one with individual land titles and some untitled common forest (Tasba Raya), the other with only untitled common land (Layasiksa); neither had territorial title at the time of the study. These cases represent two examples of many kinds of problems faced in the implementation of reforms (see Larson and Soto 2012 for additional cases).

#### **Nature and origin of the commons**

Indigenous leaders argue that their ancestral land rights predate the Nicaraguan State. However few communities have had land titles with which to guarantee their claims before the law, the State and outside intruders. Even after the State recognized indigenous rights to their cultural identity, forms of organization and property in the 1987 Constitution, rights in practice saw little change, as the State continued to grant resource concessions on communal lands. This did not stop until several years later, after the indigenous community of AwasTingni filed a case in 2001 against the Nicaraguan State with the Inter-American Court for Human Rights (*Corte Interamericana de Derechos Humanos* – CIDH). Nicaragua lost the case and was ordered to create an effective mechanism for demarcation and titling for indigenous communities (Anaya and Grossman, 2002). One result, among others, was the Communal Lands Law, which went into effect in 2003. Not until several years later, however, with a change of government administration, was a serious effort at land demarcation and titling made.

In the two communities studied, both had previously existing titles but only to a part of their land. Tasba Raya consists of a group of seven communities that had been voluntarily resettled

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<sup>134</sup>The Autonomy Statute created the institutional framework for the election of regional authorities and granted greater control to indigenous communities and traditional peoples over the autonomous regions and their natural resources.

<sup>135</sup>Law No. 445 of the Communal Property Regime of the Indigenous Peoples and Ethnic Communities of the Autonomous Regions of the Atlantic Coast of Nicaragua and of the Bocay, Coco, Indio and Maiz Rivers is referred to here as the Communal Lands Law.



from lands near the Honduran border in the 1960s. Each settlement, designed by the Nicaraguan Agrarian Institute (IAN), was laid out in a grid as a bloc of agricultural lands that were assigned and titled to individual families, and a separate communal area was designated for housing. Though IAN did not formally assign (with title) other communal lands, residents claim that they were given free use of a forest area adjacent to their titled lands, which they identify by specific landmarks. They have used this area as communal land both for common use, especially for hunting and forest products, and for the assignation of new lands to growing families and new community members. Today this area is managed through an elected *síndico* – the authority normally in charge of land and resource allocation (Larson and Mendoza-Lewis 2009).

Layasiksa is much older than Tasba Raya, with title to only a small portion of its area (2,060 ha) granted in 1917. Layasiksa consists of two communities, the second one founded in 1998 when a small group of residents moved into an area of broadleaf forest to take advantage of these resources as a new source of income. Though there were apparently rules about forest use prior to this time (Soto 2007), the community only began to manage it effectively as common property once it asserted its land claim (resulting in an end to two commercial logging concessions associated with other communities) and developed a plan for land and forest management with the support of the World Wildlife Fund (WWF). This includes a commercial community logging enterprise.

### **Dynamics of the commons: negotiating boundaries**

The indigenous communities of the RACCN have undoubtedly held common forests either as open access or managed resources for as long as there have been indigenous people in the region. It was not until recently, however, that they were granted the formal right to exclude outsiders, including the State, and to obtain land titles to large areas of forest commons. What this has meant in practice is a dynamic reconfiguration of the commons in the context of the formation of indigenous territories for demarcation and titling (Larson 2010). The configuration of territories has direct implications for the management of common forests, because elected territorial authorities play a central role in granting access to forests by outsiders such as logging concessions.

Though the Communal Lands law states that communities should be titled as they propose, individually or as multi-community territories, political leaders from the Miskitu political party Yatama pushed communities to form territories based on the design Yatama had conceived. Among other things, Miskitu leaders were interested in reshaping electoral districts to strengthen

regional autonomy: eliminating the municipal structure imposed by the central government and replacing it with an “indigenous” structure of territories and territorial authorities (See Larson and Mendoza-Lewis, 2009; 2012 for more detail).

Tasba Raya had a different proposal. Leaders argued that their seven communities had a natural affinity based on their common history and forms of land tenure, close proximity and familial ties and the development of common governance systems for access to and use of resources in shared areas. But Yatama political leaders insisted that the Tasba Raya communities join with a much larger area with a total of 23 communities. After extensive pressure and negotiation, Tasba Raya’s leaders accepted and the 23-community territory of Wangki Twi-Tasba Raya was titled in June 2010.

Layasiksa has had a similar experience. Layasiksa did not refer to its two communities as a territory or organize as such until 2008. In 2007, community leaders obtained a grant from the United Kingdom’s Department for International Development (DFID) to carry out the diagnostic studies and demarcation of its claim, calling the territory Prinzu Rau and negotiating borders with their neighbors. Nevertheless, it was unable to gain formal recognition of this territory from regional political leaders and, like Tasba Raya, has been included inside another (not yet titled) territory.

### **6.2.2. The Maya Biosphere Reserve, Northern Petén, Guatemala**

In Petén, Guatemala, the Maya Biosphere Reserve (MBR) was created in 1990 to protect biodiversity along the northern border with Mexico (See Chapter 3 and 4). Encompassing over 2 million ha, the reserve’s master plan created three management zones. Over 40 percent of the reserve, the Multiple Use Zone (MUZ), permits sustainable use, including logging, and a number of concessions were granted to industries and communities living in and around the area. Before the establishment of the protected area, a few communities already lived inside the forest, while others lived in more urban areas.

#### **Nature and origin of the commons**

In 1994, the Guatemalan government, with strong backing by international donors, legalized a formal community concession system within the MUZ (Radachowsky et al., 2012; Monterroso and Barry, 2012; Taylor, 2009). The purpose was to recognize the historic and recent settlement rights of existing communities and at the same time support the forest conservation agenda, while not entirely alienating the industrial timber sector. Community access and settlement rights were recognized, and the rights to manage and sell timber and non-timber forest resources were

conferred on the basis of a heavily regulated scheme of independent, certified production of high-value timber species, transforming the previously conflictive forest landscape. Between 1994 and 2001, a total of 12 community concession contracts (for areas ranging from 7,000 ha to 85,000 ha) were signed with organized resident and non-resident local community groups (for a total of 390,000 ha) (Radachowsky et al. 2012; Monterroso and Barry, 2012). A community concession represents a 25-year contract between an organized and legally recognized group and the Guatemalan government, which grants usufruct rights to the former to manage renewable resources in protected areas. The State retains alienation rights as well as usufruct rights over non-renewable resources.

### **Dynamics of the commons: ongoing threats**

All concession contracts require collective organization and resource extraction based on management plans approved by the governmental National Council of Protected Areas (CONAP). Over the past 10-15 years, the community organizations have been able to build their own local governance systems, based on an expanded set of rights of access, use and decision-making over their natural resources (See Chapters 4 and 5). This includes organizing and financing the constant protection of the concession boundaries as part of their responsibilities (Monterroso and Barry, 2012).

Nevertheless, threats to the concessions are ongoing and varied, requiring continuous vigilance in a number of different arenas. With regard to encroachment and poaching, most of the concession organizations have been able to stabilize these activities, though not without considerable investment. A few concessions, however, particularly those more recently established and closer to the agricultural frontier, are much more vulnerable (Radachowsky et al., 2012; Bray et al., 2008).

Outside farmers and ranchers, however, are not the most significant threat. Current renewed interests in controlling Petén's resources have emerged from a variety of different development entities, particularly in tourism and petroleum. The creation of a second-level organization, the Association of Forest Communities of Petén (ACOFOP) in 1995 has been key to the success of community-based forestry in the region, particularly in light of these threats (See Chapter 5; Taylor, 2009 and Taylor 2012). Initially ACOFOP played a crucial role as political advocate in broadening the bundle of rights over common forests in favor of communities in the MUZ (Paudel et al., 2010). Since then, it has represented the concessions nationally and internationally and become a central interlocutor between the State and the communities.

Threats from development interests have placed the concession organizations at odds with both private interests and actors within the state apparatus who question the benefits of the community concession system with respect to broader development goals. One example is the proposal for the expansion of the Mirador Basin project. The Mirador-Río Azul National Park is located in the MBR and covers about 82 km<sup>2</sup>. In 2002, Presidential Decree 129-2002 expanded the park to 2,124 km<sup>2</sup>, in response to lobbying by private and nongovernmental organizations, which argued that the existing area was not large enough to protect the park's archaeological site (GHF and FARES 2006, see also <http://www.miradorbasin.com>). ACOFOP mobilized about 5,000 community members over two-and-a-half years with a total investment of about US\$130,000 to fight this. Though the decision was revoked in 2005, a new bill (Initiative 4234) appeared in the Guatemalan congress again in 2009. Like the former, the proposal fails to recognize existing rights and affects recently recognized rights in the concessions (Monterroso, 2007; Taylor, 2010).

### **6.2.3. Western highlands, Guatemala**

There are hundreds of communal forests in the Guatemalan highlands, known under a variety of official land tenure types, particularly municipal lands (*ejidos*) and numerous joint ownership arrangements (Grupo Promotor, 2009; Thillet et al., 2003; Elías, 2010). The 2005 Law for the Registry of Cadastral Information (*Registro de Información Catastral* - RIC) recognized communal lands in national law for the first time; it specifically established that they “are lands in property, possession or tenure of indigenous and peasant communities as collective entities, with or without legal standing. In addition, those lands that are registered in the name of the state or municipal governments, but that have been traditionally possessed or held communally, form part of these lands” (Article 23). Research work included four communities, three of which held forests legally under municipal tenure (Mogotillos, Chichim and Estancia), but with substantial variety in what this meant in practice, and one that held a collective title (Chancol).

### **Nature and origins of the commons**

The population of the western highlands is 80 percent indigenous (INE, 2002). The land tenure systems found there today are the result of hundreds of years of history, characterized in the colonial and post-colonial eras predominantly by the usurpation of indigenous lands by more powerful actors (Cambranes, 2004; Elías et al., 2008). The liberal governments of the 19<sup>th</sup> century were expressly interested in suppressing communal land tenure, and many indigenous communities were forced to sell or rent their land to private farmers or to transfer their rights to municipal governments (Elías et al., 2009; Gliejeses, 1989). Between the 1950s and 1996, over three decades of a brutal war drastically weakened community organizations, and the fleeing of

entire villages facilitated the usurpation of land (Lartigue, 1993). Since then, in spite of the peace accords and the State's commitment to reverse this history of land pillage, little has been done to restore or strengthen communal tenure rights (Bastos and Camus 2003; Elías et al., 2008). The result today is a highly varied land structure that includes forests managed by communities under a variety of legal forms.

The four sites studied demonstrate four different ways in which communities have obtained and manage commons in the highlands (see Table 27 for more detail). Chancol encompasses 15,000 ha that was collectively titled in 1955 in the name of 504 of its original owners. In 1991, the community made the decision to distribute the land equally among the founding families in order to return to a more equitable distribution. The title remains collective and is held by a board of directors that is elected every two years, and overarching land and resource management norms and rules are still made collectively (Elías et al., 2008).

Mogotillos and Estancia la Virgen are both located on municipal lands, but these are occupied by individual proprietors with alienation rights to their plots. Mogotillos fought and won the municipal government's formal recognition of its rights over a 50-ha forest that had historically been communal. It now has all tenure rights to that forest, except the right to sell it, but legally the mayor could reverse this decision at any time. Since 1992, Estancia la Virgen had been managing a 56-ha area, abandoned by its owner, as a communal forest. A forest committee was formed to establish community control and rules for the use of the abandoned area. At the time of the study, community leaders were fighting for permanent rights to the area, as a man had recently appeared claiming to be the legal heir (Mendoza, 2007).

Finally, Chichim – the only fully indigenous community in the study – is also located on municipal lands and has a communal forest that is formally municipal. It is subject to the decisions of the municipal government regarding the forest, which has currently granted rights to access, withdrawal, management and exclusion. Chichim does not have alienation rights and explicitly does not have the right to commercial use of any forest resources (Mendoza, 2007).

### **Dynamics of the commons: conservation pressures**

Though indigenous and peasant communities rarely have the required legal documents, Article 65 of the RIC law establishes that “If communal ownership, possession or tenure of lands is determined during the process of cadastral establishment, the RIC shall recognize and make the administrative declaration of communal land and issue the certifications.” Nevertheless,

communities are often not aware of this provision, nor are such legal provisions, in and of themselves, “sufficient to ensure collective rights to communal lands” (Elías 2010).

Communal forests in the highlands are being subjected to a variety of pressures, particularly from external actors. Municipal governments and national and foreign investors are interested in developing mining, hydroelectric and infrastructure projects in the region. The research focused more on conservation actors, both conservation NGOs<sup>136</sup> and CONAP, which have taken a particular interest in the remaining highland forests for the generation of water resources and protection of important endemic species. Because firewood collection and sheep farming are blamed as the primary causes of forest degradation, conservationists have tried to restrict these activities, although the evidence underlying this claim has been questioned (Elías et al., 2008). In 1997, the government restricted the sale and use of *pinabete* (*Abies guatemalensis* Rehder), a highland pine species popular for Christmas trees, other ornamental uses and carpentry. Several protected areas have been declared or are in the process of being decreed; the goal is to create a series of interconnecting corridors by including a number of municipal and communal forests, at least one of which is included in the case studies (Chichim).

Though highland communities have sometimes seen conservation NGOs as allies, there are also conflicts. In fact, restrictions on *pinabete*, firewood use and sheep farming may affect the poorest rural families most, forcing them to bear the costs of protection without offering alternatives or compensation in return (Elías 1997). Projects are developed with ecological motivations that are not concerned with guaranteeing the long-term supply of firewood and timber. In some cases, conservation NGOs have approached the formal municipal owners of forests but not the communities that claim them. In Chichim, the declaration of a protected area led to restrictions on use, divisions in the community and fear that the community would lose control over the land. In response, community members began appropriating forest land illegally. At the time of the study, Mogotillos was considering declaring its communal forest a protected area but was also concerned that this might affect its future rights. Chancol was inside an area declared as protected, but this had not yet been implemented (Elías et al., 2008).

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<sup>136</sup>A consortium of NGOs formed to promote the declaration of protected areas in the Western Highlands. For more information, see Elías et al., 2009, Elías, 2012.

### **6.3. Understanding Central American Forest Commons**

A traditional common property approach to the cases discussed here would not permit scholars to understand the full range of factors affecting the motivations and behavior of local people, including their incentives for collective action and the meaning and use of forests, competing claims to resources or the potential and challenges for the future of the forest and local livelihoods. All of these are deeply socially and historically embedded in the processes of formation of the commons and the ongoing collective – and conflictive – construction of boundaries, rights and rules. The cases demonstrate that resource governance institutions are deeply embedded in social, cultural and political processes that go far beyond rules for resource use (Larson and Lewis-Mendoza, 2012). Though there is wide variation in terms of the origin of land claims, type of claimants, type of forests, and extent to and means by which the State has recognized these claims to forest commons, the cases presented here all have this in common. Three specific arenas of inquiry are proposed.

#### **6.3.1. History and change over time**

Understanding how collectives create and recreate institutions over time – and the variables that influence institutional change and the nature of collective action – is key to understanding resource management and outcomes. Common property research based on the International Forestry Resources and Institutions (IFRI) protocols is designed to allow case study locations to be revisited regularly, but deeper historical analysis is required (Agrawal, 2003; 2005). Peters (1987) provides an excellent example. McCay (2002) proposes a variety of specific methods to move beyond methodological individualism and capture social and historical embeddedness of action.

In this research, while some of the cases analyzed are the result of recent forest tenure reforms, all of them are the product of historical processes of negotiation and conflict. For instance, while the longest community concession contract in Petén is barely over 15 years old, the concession system cannot be explained without analyzing the establishment of the MBR in the 1990s and the broader history of Petén (Monterroso and Barry, 2012). In fact, the creation of the MBR in Petén responds to a series of territorialization strategies promoted by the Guatemalan State to gain authority in this agricultural frontier hinterland starting with the establishment of forest concessions in the 1970s (See Chapter 3).

Additionally, the titling of indigenous territories in Nicaragua's Caribbean Coast cannot be fully understood without analyzing the coast's relationship to the rest of the Nicaraguan territory over the last 150 years at least. Although the titling of territories is a recent phenomenon, with some

titles less than a year old, these processes are the result of long-term negotiation and conflict between the indigenous peoples and the Nicaraguan State. Finally, in the Guatemalan highlands, while conservation actors and municipal authorities are recent stakeholders in communal forests, the history of dispossession of communities' forest resources and land has colonial roots.

### **6.3.2. Multiple actors at multiple scales**

To date, common property research in the region has generally focused on local case studies, thus lacking broader analyses into interlinked processes across multiple geo-political scales. The scale of analysis should not only be linked to the level at which direct resource management activities take place but rather to multiple levels, taking into account the multiple actors – including but not limited to the State – that make demands on resources and decisions affecting resource management.

The cases studied here demonstrate the dynamic interplay of place-based and issue-based communities; multi-community territories; local, regional and national governments; and NGO and private sector interests. There is a widespread coexistence of overlapping claims. For instance, there are overlaps between protected areas and communities in the Petén and in the Guatemalan highlands. There are also overlapping claims between forest users and outside interests such as expansion of tourism in the MBR. And municipal and communal lands overlap in the highlands. These overlapping and often contradictory claims have implications for research, given that different collectivities may have rights over different resources within the same forest area at the same or different times. For communities these constitute significant challenges.

The role of multiple layers of government is particularly important in all of our cases. In the highlands, forest resources and lands historically managed by local groups are often legally owned by municipal governments. Indigenous territorial governments in Nicaragua compete with municipal and regional governments, as well as the central government, for power and resources. Forestry institutes, protected area offices, regional and local governments compete to legitimate their authority before forest claimants. The analysis of forest commons in the region would benefit from political ecology approaches that explicitly take into account such issues of power, politics and scale.

### **6.3.3. Production of space**

In common property research, institutions, including the boundaries of property, evolve, are designed or are negotiated through straightforward, apolitical processes (Agrawal, 2003; 2005, Johnson, 2004; Finley-Brook and Offen, 2009; Taylor, 2009). Boundary definition is important



as it facilitates the production of rules that restrict access and substractibility of products. However, research related to the production and reproduction of space (Lefebvre, 1974; Harvey, 1990) suggests that boundaries are often contested through time, as they are linked to the recognizing of rights and claims. Similarly, Sack (1986) writes that the social construction of territory and exercise of control over a geographic space requires constant effort. This author uses the concept of territorialization strategies to refer to the mechanisms employed by the space by which authority is constructed. The cases discussed here demonstrate that boundaries are produced through historically-grounded struggles and are constantly being contested. This is true not only of the physical boundaries of a territory, but also of political boundaries defining rights, powers and responsibilities.

In Nicaragua, the central issue is the definition of boundaries in the construction, or reconfiguration, of the commons (Larson and Mendoza-Lewis, 2012). Though communities have been managing common property for decades if not centuries, the specific rights granted have changed substantially in the past 25 years. And the precise boundaries of those common areas have recently shifted from the community to territory scale, with multiple, contested configurations.

In Petén, the commons are being shaped by external competition over resources and boundaries. In this case, the precise borders of the concessions are defined by maps and in contracts, under apparently very secure legal mechanisms. Nevertheless, vulnerable concessions bordering the agricultural frontier are being eaten away at the edges (Radachowsky, 2012), and competing interests for tourism and the expansion of the Mirador site threaten to reverse the rights altogether (Paudel et al., 2012).

In the highlands, communal lands have been under threat for more than a century. New “public interest” in conservation – specifically, the expansion of protected areas in the remaining highland forests – threatens to limit community rights and thus reshape community institutions. Attention to the production of space and boundaries would be improved by the adoption of research approaches that are more question-driven and inductive (Johnson, 2004; McCay, 2002), moving beyond the conception of physical boundaries only as a geographic space to be “clarified” and their understanding of contestation in the context of broader actors, interests and power relations.

#### **6.4. Conclusions**

This chapter uses the findings from research on three important regions of communal forests in Central America to argue that traditional common property research has considerable shortcomings that limit the potential to better understand the motivations and behavior of local people as they affect the region's forests. As argued by a number of commons scholars during the last twenty years (Peters, 1987; Goldman, 1998; McCay and Jentoft, 1998; McCay, 2002; Johnson, 2004; Agrawal, 2002; Agrawal, 2003; Agrawal, 2007; Armitage 2008), the majority of common property research is shaped by a limited and overly predetermined set of research questions, methods that fail to address the socially and historically embedded nature of individuals, an apolitical approach to community and the failure to recognize the centrality of "external context."

What is perhaps most interesting is that there has been only marginal change in the approaches to common property scholarship despite the history of critique. Some changes include adding variables on the external context to the design variables (Ostrom, 2009), while Agrawal (2005), among others, has promoted greater attention to history and struggle in the production of institutions. There has been greater attention to the need to shift from a focus on apparently simple management systems to the recognition of commons governance "as a complex systems problem" (Armitage, 2008: 15) and of multiple linkages through networks (Young, 2002; Berkes, 2002; Berkes 2010). Nevertheless, an accounting of articles using the words "complex" or "uncertain" in Van Laerhoven and Ostrom (2007) found only a small number in 2005 and 2006, though they appeared to be increasing. As Johnson (2004: 407) poignantly argues, the problem may lie in the "wider intellectual trend of positivism, methodological individualism and formal modeling that has come to dominate social science in the United States."

As demonstrated by the cases presented here, however, our understanding demands consideration of the political and historical processes that construct and shape forest tenure rights and practices, taking into account history and change over time, conflict and negotiation with multiple actors at multiple scales and the dynamic production of space and boundaries. Research is required that pays greater attention to the dynamic processes that produce and alter institutions and behavior, including not only the analysis of changing property rights but also broader processes of territory construction. These dynamic landscapes present considerable challenges not only for communities but also for practitioners.

## Chapter 7. Conclusions and Future Research

This concluding chapter summarizes the main findings of this dissertation with respect to the research questions posed at the outset. It discusses lessons learned, plus emerging issues. The chapter is organized in three sections. This first section reviews the research questions and discusses key findings from preceding chapters, summarizing the methodological and theoretical contributions. On the basis of the lessons learned, it proposes recommendations to render forest tenure policy reform more effective. The second section reflects on the limitations of this work. Finally, the third section proposes the way forward, discussing new questions and future research to overcome new challenges in forest tenure reform processes.

### **7.1. Responding to research questions**

During the last thirty years, legal reforms promoting changes in rules and regulations that govern the appropriation and use of natural resources have resulted in a shift of responsibilities and the recognition of rights to organized groups such as indigenous people and local communities. This formal redefinition of rights among different rights holders at various levels has been defined as forest tenure reforms (Larson et al., 2010). Forest tenure reforms stem from changes in institutions, often statutory regulations, that (re)define the bundle of rights and responsibilities over who uses, manages and controls forest resources and how. When implemented properly, tenure reform can lead to improved community wellbeing and sustainable forest use. The recognition of local forest rights converts forest resources into community assets that are essential to sustain livelihoods in poorly developed regions that have highly diverse forests (Seymour et al., 2014, Andersson, 2012).

This dissertation has analyzed types of reform in forestlands of Guatemala and Nicaragua and shows that the modes of transfer and types of rights granted vary between countries and between groups within countries. The devolution processes discussed in the previous chapters draw on a variety of institutional arrangements ranging from collective titling of territories and lands to co-management schemes and concession contracts that recognize distinct constellations of rights. However, in practice, changes in formal regulations do not guarantee that local communities will benefit from their newly acquired rights. Implementation processes often face significant constraints such as long, costly and complex legal procedures, and can result in the granting of overlapping rights, or otherwise contested rights that are insecure (Mwangi et al., 2012).

The underlying aim of this dissertation was to understand the extent to which reform processes in Guatemala and Nicaragua have recognized collective rights of forest-dependent communities. It analyzed the outcomes of reform as institutional changes related to tenure rights benefitting

and affecting different sets of social actors at the local level. In the case of Guatemala it analyzed how reforms fulfilled the goals of meeting conservation and development objectives. The research questions guiding this dissertation examined particularly: the process of recognizing community forest rights via concession contracts in the lowlands of Petén, the recognition of indigenous communal lands in the highlands of Guatemala and the collective titling of indigenous territories in the Caribbean Coast in Nicaragua. Three main research questions have guided this work: (1) what factors motivate and shape the emergence of tenure reforms at the regional and local level? (2) How does the institutional change brought about by reforms shift tenure rights and impact local community livelihoods and forest conditions? (3) What conditions surrounding the devolution of rights lead to the continuity of forest tenure reform?

## **7.2. Summary of key findings and lessons learned from case study work**

This section summarizes the theoretical and methodological contributions of this dissertation and provides recommendations to advance and improve reform implementation. From the theoretical point of view this dissertation explored two perspectives to study tenure reforms: the institutional economics school and the political ecology school. These perspectives depart from neoclassical economics perspectives that argue that markets should determine the allocation of land and resource rights; tenure reforms in this perspective should aim at optimizing land use and resource management, prioritizing individual recognition of rights as the institutional arrangement to establish resource entitlements.

I have drawn from institutional economics and the commons school perspectives to understand how reforms shift the bundles of rights around resources and land and promote collective action to sustain outcomes. Results from this analysis are presented in Chapters 4 and 6. These perspectives proved particularly useful for identifying the multiple sets of rights holders intervening in the forest tenure reforms of Guatemala and Nicaragua. Cases presented in this dissertation provide evidence that the definition of rights holder – the different sets of forest users - depends on the characteristics of the reform process. Two characteristics are common to the cases analyzed here. First, rights have been transferred from the State to multiple and collective or communal users. Second, alienation rights are not granted and the State remains in the picture holding the rights to other ecosystem services such as CO<sup>2</sup> sequestration and subsoil extraction.

As argued previously, the results indicate that tenure rights and practices are socially embedded (Larson et al., 2010b; Sikor and Lund, 2009; Cousins, 2007). Which sets of claims over resources are formalized through rights, which sets of forest users will be recognized, what set of state

institutions will become rights granters depends on the social and political context in each case and are not exempt from contestation.

To further understand the politics of reform I have drawn from political ecology and environmental history. Even once claims are recognized as rights and right holders are identified, opposition may continue as other demands and claims to access the resources emerge. Pressure for competing land uses and existing overlapping rights undermine the authority of rights granters and threaten rights holders as potential conflicts undermine their ability to benefit from the formalized rights. This dissertation analyzed the changes in tenure arrangements and the institutional structures used to recognize rights, but also provided insight into who gains and who loses and how changes in tenure differentially affect different set of groups at the local level. This is particularly relevant to understand distributional conflicts around resource control. Institutions and behavior change over time and are continuously shaped by the renegotiation with and among state actors. The results presented in Chapter 3 discuss the political and historical context around reform emergence in Guatemala drawing from political ecology and environmental history perspectives to understand territorialization strategies, evolving interests, positions and power struggles around resource appropriation.

The next sections summarize key findings from the empirical work presented in Chapters 3, 4, 5 and 6 and how these respond to research questions.

### **7.2.1. Reforms in time: Reform emergence and implementation**

Chapter 3 describes how tenure reforms in Guatemala emerged from interests in solving agrarian issues, i.e. colonization and land concentration, in the unrest of post-civil war contexts. In time, reform goals evolved to incorporate other demands around conservation and recognition of indigenous rights. Therefore we are not talking about one reform, but rather a series of continued reforms. Reform goals are constantly modified by changes in regulations, sometimes to respond to social pressure and other times to respond to particular interests (for example of investment capital for mining, petroleum, cattle ranching and large agro-industrial plantations).

There is no single recipe to define the legal arena that will sustain reform, i.e. a legal entry point to develop the legal instruments that sustain the reform process (Almeida, 2015:15; Larson et al., 2015). The primary goal of community forest concessions in Petén has mainly been conservation while in the case of the Caribbean Coast of Nicaragua the underlying claim is indigenous rights recognition. Reforms in these regions have been shaped to incorporate demands around local development, autonomy and self-governance. On one hand, regulations in Nicaragua recognize

autonomous mechanisms around resource governance and ensure respect for indigenous groups' identities; the Guatemalan process has required that claimants follow a series of steps to be eligible to access their rights in practice, including the creation of new organizations. Nonetheless, in the emergence process, the political will to make the change was key to implementation. For instance, while the case of Awas Tingni was key in the drafting and approving of Law 445 in Nicaragua, it was the alliance between the Indigenous party Yatama and the Sandinista National Liberation Front (FSLN) that kicked off the demarcating and titling of indigenous territories in 2009 (Larson and Soto, 2012; Larson and Mendoza, 2012). In the case of Guatemala, while the Peace Accords opened the possibility for recognizing rights around management within protected areas, it was actually pressure from conservation NGOs and mobilization from grassroots organizations that opened up the process to communities within and outside the Multiple Use Zone.

The institutional mechanisms employed by the State to implement the reform can also be understood as territorial mechanisms to organize space and resource entitlements. Central to the analysis is to understand the role of state institutions. In any particular setting, the specific role played by the State is influenced by a number of factors (Larson et al., 2015). Though the State has the mandate to implement reform; it is rarely a neutral facilitator, instead constituting another interest group with many interests. As the case of community forest concessions makes evident, state institutions will deploy different territorialization mechanisms to reorganize the relationships between people, land and resources. State actors can also be many and can be in competition to establish which is the state entity with the authority to grant rights. Conflicts may also arise as state actors may compete with communities over forest resources; even while granting new forest rights, they may try to maintain control. Competition with communities can be seen in the granting of logging rights in indigenous territories in Nicaragua, or in changing regulations around community forest concessions to allow for petroleum extraction or the expansion of national parks in Petén. In the first case, the government of Nicaragua regularly granted logging concessions in indigenous territories, even after indigenous peoples' right to their traditional territories was established in the Constitution, the Autonomy Statute and later the Demarcation Law. In fact, the legal challenge to one such concession was what led to the 2001 landmark decision by the Inter-American Court of Human Rights to require the government to demarcate and title indigenous territories (Anaya and Grossman, 2002).<sup>137</sup>

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<sup>137</sup> Inter-Am. C.H.R., The Case of the Mayangna (Sumo) Awas Tingni Community v. Nicaragua, Judgment of Aug. 31, 2001.

Understanding how claimants and their claims over forests evolve in time is key to understanding the socioeconomic and political factors that shape reforms.

### **7.2.2. Outcomes of reform: Legitimacy and formalization**

Chapter 4 analyzed the nature and evolution of the claims over forest resources in the Multiple Use Zone of the Mayan Biosphere Reserve, where in the last twenty years the Guatemalan State has created a new set of regulations and transferred a set of rights over forest resources to organized community groups. It also discussed how claims became recognized (authorized) and how they were transformed into rights; at the same time how “rights granters” simultaneously became able to establish their authority through recognition by the rights receivers. The findings indicate that this process takes place under constant dispute and negotiation, requiring the development of different strategies to acquire and maintain legitimacy inside and outside the concession model. This is central to the analysis of outcomes of forest tenure reform. Internally, they are related to possibilities to ensure livelihood improvement and to the evolution of institutions to guarantee benefits within concessionaire constituencies (rights receivers). Externally, the underpinnings of legitimacy are closely linked to ensuring the conservation goals of the Guatemalan State (the rights-granter) within the protected area.

Even though reforms imply the formalization of claims into rights, informal arrangements still play an important role; in particular in situations where customary institutions continue organizing resource use and control. The recognition of tenure rights means bringing customary rights into the formal sphere. A number of associated risks and opportunities are associated with the formalization process. Formalization can increase competition and lead to land grabbing (Cronkleton et al., 2009), favor some groups over others or ignore existing customary arrangements (Sikor and Thanh, 2007). It can create opportunities for capture of land, forests or other contested resources by more powerful elite players who obtain the rights to them that were formerly under the community's customary control; this is particularly true when formalization involves titling where there are multiple and overlapping rights (Cousins 2007, Peters 2007). In addition, formalizing land rights can bring communities under the control of the State, subjecting them to regulations and other obligations they had previously been able to avoid. Such is the case of community forest concessions that are subject to a number of forest management regulations. In some cases this may improve management, such as in forest areas previously managed poorly or subject to open access; but it may also cause the breakdown of customary institutions that were more effective at managing resources (Leach and Fairhead, 2001; Pokharel



et al., 2007) and increase hardship through the imposition of rules that are locally inappropriate (Cousins, 2007; Colchester, 2008).

Formalization can also bring important benefits to communities. Perhaps most importantly, it can increase the legitimacy of customary rights in the face of competition. Formal rights can increase the resources legally available to communities, secure their access for the future, provide a clear locus for challenge in the case of infringements. All of these have significant implications. Communities may only have had informal or illegal access previously, increasing risk and lowering potential income. As we have seen in Chapter 4, communities in Petén, Guatemala, had no previous right to use or sell timber resources, but the granting of community forest concessions has led to the creation of several successful enterprises involved in logging as well as the export of some non-timber forest products (Monterroso and Barry 2012, Radachowsky et al. 2012). All of these have significant implications. No matter how formalization is carried out, it is likely to affect in some way, for better or worse, customary practices, the way decisions are made, local rule-making and local culture (Fitzpatrick, 2005).

The results show that understanding the underpinnings of the legitimacy behind forest tenure reforms is central to identifying ways in which these processes are feasible and can work. Nonetheless, they inevitably require constant response to the evolving or changing goals of reform and interests of the actors involved, to enhance both forest and livelihood outcomes.

### **7.2.3. Continuity of reforms: Social mobilization**

Chapter 5 analyzed how reforms that recognize collective tenure rights allow the emergence of new social actors that are crucial to facilitating political mobilization and scaling up reform implementation efforts. Collective action, organization and networking are critical to the communities' ability to exercise and secure their rights and derive value from them. Social mobilization is key to maintaining the political will to continue support implementation processes and ensure defense of the rights gained. Even though rights may be granted by legal statute they are not automatically exercised for various reasons. Rights by law have little to do with what happens on the ground. Implementation practice will depend on the State's role and on social mobilization both for and against reforms. Actors such as NGOs, indigenous and grassroots organizations and development actors (such as financial donors) affect local tenure arrangements as much as the State. Given the failure of many States to fully facilitate access to benefits from forests, these forms of collective action can become key partners for implementation and can be definitive in defending and increasing community rights.

Second-level organizations also assume the role of facilitating, coordinating and promoting the interests of their primary organizations, while the primary-level organizations are directly involved in everyday management of their resources. The cases studied in Chapter 5 illustrate that second-level organizations have also been able to sustain, deepen and institutionalize forest tenure reform policies and practices by challenging political power structures, influencing state policies and actively engaging with market institutions. All these suggest that the second-level organizations have become important actors in shaping forest policy, particularly enhancing tenure security and livelihood benefits for forest communities. Social movements have been essential to supporting reforms achieved on paper as well as in practice. In both countries, implementation of reforms – obtaining rights in practice, including meeting bureaucratic requirements, whether for titling or permits of other kinds – has usually required strong support from grassroots organizations, NGOs and donors.

Recognition of tenure rights are often not enough to deal with external threats. As forest values change, increasing external pressure requires constant mobilization and organization of rights holders. Communities need to develop their own territorial governance and advocacy mechanisms to secure rights and gain socioeconomic benefits. Governance structures should be flexible and built on existing governance systems to avoid elite capture. Also, these collective organizational spaces need to be supported, in particular to increase participation of vulnerable groups such as women. These networks have to transform themselves continuously to confront changing conditions so they can adequately meet the expectations of their constituencies. Another important challenge is that these organizations must find a balance between the economic and production demands of their members on the one hand and political advocacy and negotiation on the other to ensure community rights and autonomy.

#### **7.2.4. Methodological challenges to analyze forest tenure reform**

Chapter 6 uses the findings from research on three important regions of communal forests in Central America to illustrate that reforms in favor of communities are highly varied. Both countries also demonstrate important progress toward respecting forest rights. Some recognize the full bundle of rights, as in the case of indigenous territorial titling in the Caribbean Coast of Nicaragua, while others limit recognition to management rights, as in the case of community forest concession contracts in Guatemala. The reforms presented here often emerge in response to social struggle and opposition, sometimes as a part of broader national reforms. Interestingly, those reforms may be tied to democratic openings, as in the case of community forest concessions and the Peace Accords in Guatemala.

As demonstrated by the cases presented here, however, our understanding demands consideration of the political and historical processes that construct and shape forest tenure rights and practices, taking into account history and change over time, conflict and negotiation with multiple actors at multiple scales and the dynamic production of space and boundaries. Research is required that pays greater attention to the dynamic processes that produce and alter institutions and behavior, including not only the analysis of changing property rights but also broader processes of territory construction. These dynamic landscapes present considerable challenges not only for communities but also for practitioners. This calls for mixed method approaches that use different sets of techniques to uncover patterns within countries and across types of reforms to generate in-depth understandings of implementation processes, interactions and outcomes.

### **7.3. The future of reforms in Central America: New questions and future research**

This dissertation analyzed three cases of forest tenure reforms in Guatemala and Nicaragua. It has argued that three aspects are key to understanding the nature of reforms and their outcomes: the statutory change and its origin, how the implementation of this change plays out in practice, and the way in which reforms enable improvements in livelihoods and forest conditions, including maintenance of ecosystem functioning. Statutory changes do not bring about immediate changes in rights. Resistance, threats and change are the norm and threaten long-term security of local communities. What actually gets implemented is the result of struggle and opportunity as reforms advance.

Three types of challenges are particularly relevant for the continuity of reforms in Central America. These challenges are the basis on which future research of reform should follow. The first one is related to the ongoing opposition and resistance to the recognition of rights to communities; even as the case of Petén is evidence of positive outcomes so far. Different sets of actors compete for rights and resources to take advantage of reforms for their own benefit: loggers, petroleum and mining companies that want resource rights, bureaucrats who are interested in controlling resource access and decision-making, communal leaders interested in controlling benefits from newly acquired rights. Strengthening organized communities, in particular community networks, and collective action will be key to ensure continuity of reform and defend rights against these multiple challenges. Title is not enough to ensure tenure security or improve livelihoods. Tenure security is not guaranteed by certifying, registering or titling; this is just one factor that may increase security. Outcomes of reform should therefore be analyzed in

the light of tenure security issues to better understand how reforms actually strengthen or hinder tenure security and improve forest governance. Issues of participation, transparency and benefit sharing mechanisms should be further explored in the context of understanding tenure security outcomes of reform.

The second emerging challenge appears from the need to shape more appropriate reform models that address both conservation and livelihood needs and that are sustainable over the long term. Integrated approaches should be able to meet the multiple goals of actors involved and be flexible to adjust to the changes in the socioeconomic and political contexts at different levels. In developing these new models, those affected by reform need to be an integral part of that process not only as intended beneficiaries but also as key partners in implementation. Livelihood improvements should be understood in the light of accompanying implementation measures to facilitate the exercise of those rights, such as building community capacity, enabling the regulatory framework and offering productive activities. Market conditions are another aspect that can affect outcomes of reform models. Tenure reforms can facilitate engagement in timber markets and provide sizeable livelihood improvements as measured by change in income or creation of job posts, particularly through the creation of enterprise models as described in Chapter 4. However, these are not enough to measure intangible benefits, such as empowerment, accountability, equitable benefit sharing mechanisms and access to new forest products are also needed.

Finally, the last challenge is to understand the outcomes of reform on marginalized groups. While the focus of recent forest tenure reforms has aimed at ensuring collective rights to resource access, less is known about how reforms have impacted those with less voice within those collective rights at the local level including migrants, people of lower caste or class and women. For instance, while women participate in multiple productive activities in the field and forest – sowing, harvesting and collecting – they have little influence in community-level decision-making that affects those activities. Women may exercise considerable influence in some community spheres but not in forestry, which is still seen as a man's domain. Collective tenure regimes, especially those of indigenous populations, are often embedded within customary rules and practices; changes to these arrangements could conceal intra-household relationships and dynamics that are inequitable and potentially conflictive. As a result, greater attention should focus on the gendered impacts of tenure reforms to understand how the distribution of tenure rights affects different social groups within collectives, potentially driving or reinforcing internal social differentiation.

Finally, it is important to keep in mind that reforms will never be fully implemented. Rights will never be “clarified”; there will always be resistance, change and adjustments to be made. Monitoring progress and implementation should be a constant task and should include continual analysis of potential conflicts, challenges, risks and unintended consequences of reform.

## References

ACOFOP. 2005. Guía básica para los habitantes de las comunidades forestales. Asociación de Comunidades Forestales de Petén: Guatemala.

ACOFOP 2015. El modelo forestal comunitario de Petén: un aporte para el mundo y el clima. III Congreso Mesoamericano de Forestería Comunitaria. November, 2015. San Benito, Petén. URL: <http://congresoalianzamesoamericana.org/wp-content/uploads/2015/10/Nota-de-Concepto-III-Congreso-Forestalfinal.pdf>.

Agrawal, A. 2001. Common property institutions and sustainable governance of resources. *World Development* 29(10): 1649–1672.

Agrawal, A. 2002. Common Resources and Institutional Sustainability. In *The Drama of the Commons*. National Resource Council (Eds), The National Academy Press: Washington DC. Pp. 41-86.

Agrawal, A. 2003. Sustainable governance of common-pool resources: context methods and politics. *Annual Review of Anthropology* 32: 243-262.

Agrawal, A. 2005. *Environmentality: Technologies of government and the making of subjects*. Duke Univ. Press: Durham, NC.

Agrawal, A. 2007. Forest, governance and sustainability: Common property theory and its contributions. *International Journal of the commons*. 1(1): 111-136.

Agrawal, A. and Ostrom. E. 2001. Collective action, property rights, and decentralization in resource use in India and Nepal. *Politics and Society* 29(4): 485–514.

Agrawal, A. and Gupta. K. 2005. Decentralization and participation: the governance of common pool resources in Nepal's Terai. *World Development* 33(7): 1101-1114.

Almeida, F. 2015. Legal options to secure community-based property rights. Paper prepared for presentation at the "2015 World Bank Conference on Land and Poverty." The World Bank: Washington DC.

ANAM. 2009. Informe sobre los Criterios e Indicadores de la OIMT para la Ordenación Sostenible de los Bosques Tropicales. Formatos con respuestas para la actualización del progreso alcanzado por Panamá desde 2004 a 2008 en materia de ordenación forestal. Autoridad Nacional del Ambiente. Panamá. Unpublished manuscript.

Anaya, S. J. and Grossman, C. 2002. The case of *Awas Tingni v. Nicaragua*: a new step in the international law of indigenous peoples. *Arizona Journal of International and Comparative Law* 19 (1), 1-15.

Andersson, K. 2012. CIFOR's research on forest tenure and rights. CIFOR: Bogor, Indonesia.

Arifin-Cabo, P. 2011. Conflictos de tierras municipales: historia realidad y tendencias. GIZ,

IDEAR-CONGCOOP, CUC, CCDA. Magna Terra Editores: Guatemala. Armitage, K. 2008. Governance and the commons in a multi-level world. *International Journal of the Commons* 2(1): 7-32.

Arriola, L. 2005. Agency and the building of territoriality in the Naranjo-Ceibo corridor, Petén, Guatemala. PhD Thesis. University of Florida. Miami.

Baland, J.M. and Platteau, J. 1996. Halting degradation of natural resources: Is there a role for rural communities? FAO and Clarendon Press: Oxford.

Barcenas, A. 2013. Panorama económico y social de América Latina y el Caribe. Comité Plenario, vigésimo séptimo período de sesiones. Nueva York: CEPAL. URL: [http://www.eclac.cl/noticias/paginas/8/33638/130528\\_PRESENTACION\\_COMITE\\_PLENARIO-ABI-PANORAMA\\_ECONOMICO.pdf](http://www.eclac.cl/noticias/paginas/8/33638/130528_PRESENTACION_COMITE_PLENARIO-ABI-PANORAMA_ECONOMICO.pdf) (accessed 22/03/2014).

Barry, D.; Larson, A.; Pierce, C. 2010. Forest Tenure Reform: an orphan with only uncles. In Larson, A. M., Barry, D., Dahal, G. R. and Colfer, C. J. P. (Eds.) 2010. Forests for people: Community rights and forest tenure reform. Earthscan: London.

Barry, D. and Meinzen-Dick, R. 2009. The invisible map. Community tenure rights. In Hecht, S. Morrison, K. and Padoch, C. The Social Life of Forests: Past, present, and future of woodland resurgence. University of Chicago Press: Chicago.

Barry, D. and Monterroso, I. 2008. Institutional change and community forestry in the Mayan Biosphere Reserve Guatemala. Proceedings of the International Association for the Study of the Commons IASC. July 2008. Cheltenham, England.

Bastos, S. and Camus, M. 2003. 10 años de lucha por la Madre Tierra, la vida y la paz. CONIC: Guatemala.

Baumeister, E. and Fernández, E. 2002. Análisis de la tenencia de la tierra en Nicaragua a partir del censo agropecuario 2001. Ministerio de Agricultura Ganadería y Forestal, Instituto Nicaragüense de Estadísticas y Censos, Organización de las Naciones Unidas para la Agricultura y la Alimentación: Managua, Nicaragua.

Bazan, C., Cuellar, N. Gómez, I. Illsley, C. López, A. Monterroso, I. Rocha, J.L. Torres, P.

Bebbington, A. 1996. Organizations and intensifications: Campesino federations, rural livelihoods and agricultural technology in the Andes and Amazonia. *World Development* 24(7): 1161–1178.

Bebbington, A. 1997. Social capital and rural intensification: Local organizations and islands of sustainability in the rural Andes. *The Geographical Journal* 163: 180–197.

Bebbington, A. 2007. (Ed.) Investigación y Cambio Social: Desafíos para las ONG en Centroamérica y México. Editorial de Ciencias Sociales: Guatemala.

Bebbington, A. 2007. 'Producing knowledge, generating alternatives? Challenges to research oriented NGO in Central America and Mexico' In: A. Bebbington, S. Hickley and D. Mitlin (Eds.) 2007. Can NGO make a difference? The challenge of Development Alternatives. Zed: London.

Bebbington, A., and Thiele, G. 1993. Non-Governmental Organizations and the State in Latin America: Rethinking Roles in Sustainable Agricultural Development. Routledge: London.

Benda-Beckmann, F. Von. and K. Von Benda-Beckmann. 1999. A functional analysis of property rights, with special reference to Indonesia. In Van Meijl, T. and Von Benda-Beckmann, F. (Eds.) Property rights and economic development: Land and natural resources in Southeast Asia and Oceania. Kegan Paul Publications: London. Pp. 15-56.

Berger, S. 1997. Environmentalism in Guatemala: When fish have ears. *Latin American Research Review*. 32(2): 99-116.

Berkes, F. 2002. Cross-Scale Institutional Linkages: Perspectives from the Bottom Up. In National Resource Council (Ed.) The Drama of the Commons. National Academy Press: Washington, D.C. Pp. 293-321.

Berkes, F. 2010. Devolution of environment and resources governance: trends and future. *Environmental Conservation* 37(4): 489-500.

Berkes, F., and Folke, C. (Eds.). 1998. Linking Social and Ecological Systems: Management Practices and Social Mechanisms for Building Resilience. Cambridge University Press: New York.

Bhattarai, K., Conway D. and Shrestha. N. 2002. The vacillating evolution of forestry policy in Nepal: Historically manipulated, internally mismanaged. *International Development Planning Review* 24(3): 315–338.

Binimelis, R.; Born, W.; Monterroso, I.; Rodríguez, B. 2006. Socio-economic impacts of biological invasions. In Nentwing, W. (Ed.) Ecological studies: biological invasions. Springer Verlag: Berlin. Pp. 331-347.

Binimelis, R., Monterroso, I. and Rodríguez-Labajos, B., 2007. "A social analysis of the bioinvasions of *Dreissena polymorpha* in Spain and *Hydrilla verticillata* in Guatemala". *Environmental Management*, 40: 555-566.

Binimelis, R., Monterroso, I. and Rodriguez-Labajos, B. 2009a. Social attitudes towards GMOs in Catalonia. In Spangenberg, J., Martinez Alier, J., Rodriguez-Labajos, B., Maxim, L., Binimelis, R., Douguet, J.M., Peterson, K., Kuldna, P., Monterroso, I. 2009 Assessing biodiversity risks with socio-economic methods: ALARM experience. Pensoft Publishers: Sofia. Pp. 181-203.

Binimelis, R., Pengue, W.A., and Monterroso, I. 2009b. "Transgenic treadmill": Responses to the



emergence and spread of the Glyphosate-Resistant Johnsongrass in Argentina. *Geoforum*. 40(4) 623-633.

Binimelis, R., Walter, M., Rodriguez-Labajos, B. and Monterroso, I. 2009c. *Cameraria ohridella* in Paris, France . In Spangenberg, J., Martinez Alier, J., Rodriguez-Labajos, B., Maxim, L., Binimelis, R., Douguet, J.M., Peterson, K., Kuldna, P., Monterroso, I. 2009 Assessing biodiversity risks with socio-economic methods: ALARM experience. Pensoft Publishers: Sofia. Pp. 159-179.

Bovarnick, A., Alpizar, F. and Schnell, C. (Eds). 2010. Importance of Biodiversity and Ecosystems in Economic Growth and Equity in Latin America and the Caribbean: An economic valuation of ecosystems. United Nations Development Programme: New York.

Braconnier, J. L. 1979. La Franja Transversal del Norte los recursos naturales y la región VI de Guatemala. Universidad San Carlos de Guatemala, Escuela de Ciencias Políticas: Guatemala.

Bray, D. B., Duran, E. Ramos, V., Mas, J., Velazquez, F., McNab, R. Barry, D. and Radachowsky, J. 2008. Tropical deforestation, community forests, and protected areas in the Maya Forest. *Ecology and Society* 13(2): 56. URL: <http://www.ecologyandsociety.org/vol13/iss2/art56/>

Brenner, N. and Elden, S. 2009. Henry Lefbvre on State, Space and Territory. *International political sociology* 3(4): 353-377.

Brockett, C. 1998. Land, power and poverty: agrarian transformation and political conflict in Central America. Westview Press: Colorado.

Brockington D., Duffy, R. and Igoe, J. 2008. Nature unbound: Conservation, capitalism, and the future of protected areas. Earthscan: London.

Broegaard, R. 2005. Land tenure insecurity and inequality in Nicaragua. *Development and Change* 36(5): 845-864.

Bromley, D. 1991. Environment and economy: property rights and public policy. Blackwell: Cambridge, Massachussets.

Bromley, D. 2001. Property regimes and institutional change. Paper presented in the Conference "Property rights and Institutional Change". Denmark.

Bromley, D.W. 2004. Reconsidering environmental policy prescriptive: Consequentialism and volitional pragmatism. *Environmental and Resource Economics* 128 (1): 73–99.

Bromley, D. and Cernea M. 1989. The management of common property natural resources: Some conceptual and operational fallacies. World Bank Discussion Papers WDP-57. The World Bank: Washington DC.

Bruce, J. 1998. Review of tenure terminology. Tenure Brief No. 1. Land Tenure Center: Wisconsin. Madison.

CADPI, 2014. Demarcación y titulación de territorios indígenas: La reivindicación de derechos ancestrales. Centro para la Autonomía y Desarrollo de los Pueblos Indígenas: Puerto Cabezas, Nicaragua.

Cancino R. and S. Maas. 2001. Información genérica sobre el manejo del bosque en la Reserva de Biosfera Maya. Database available in SI-CONFOR: Guatemala.

Cambranes, J.C. 2004. *500 años de lucha por la tierra*. Cholsamaj: Guatemala.

Cardona, R. 2015. El modelo forestal comunitario de Petén: un aporte para el mundo y el clima. III Congreso Mesoamericano de Forestería Comunitaria. November, 2015. San Benito, Petén. URL: <http://congresoalianzamesoamericana.org/wp-content/uploads/2015/10/Nota-de-Concepto-III-Congreso-Forestalfinal.pdf>.

Carmack, R. 1993. La conquista de Mesoamérica desde la perspectiva de una teoría mundial. *Revista de Historia*. 28: 9-40.

Carrera, F., Stoian, D., Campos, J.J., Morales, J. & Pinelo, G. 2006. Forest certification in Guatemala. In Cashore, B. Gale, F. Meidinger, E. and Newsom, D. (Eds) 2006. *Confronting sustainability: forest certification in developing and transitioning countries*. Yale School of Forestry and Environmental Studies: New Haven, Connecticut. Pp. 363–406.

Carroll, T.F., Bebbington, A.J. 2000. Peasant federations and rural development policies in the Andes. *Policy Science* 33: 433–457.

Casasola, O. 1968. *Grandezas y Miserias del Petén*. Ediciones Indiana. Guatemala.

Cashore, B. 2002. Legitimacy and the privatization of environmental governance: how non-state market driven (NSMD) governance systems gain rule – making authority. *Governance* 15:503-529.

CCARC, 1998. Diagnóstico general sobre la tenencia de la tierra de las comunidades indígenas de la Costa Atlántica: Estudios de caso, secciones etnográficas analíticas y etno mapas. Central American and Caribbean Research Council: Austin, Texas.

CEMEC, Centro de Monitoreo y Evaluación de CONAP. 2001. Censo población: Base de datos sobre población, tierras y medio ambiente en la Reserva de Biosfera Maya. Available in SI-CONFOR Sistema de Información de Concesiones Forestales: Guatemala.

CEPAL, 2013. Informe Económico: Tres décadas de crecimiento desigual e inestable. Comisión Económica para América Latina: Chile.

Chapin, M., Lamb, Z. Threlkeld, B. 2005. Mapping indigenous lands. *Annual Review of Anthropology* 34:619-638.

Chirif, A. 2012. Derechos Indígenas en la Legislación Peruana: Informe Final. Lima: Campaña Territorios Seguros para las Comunidades del Perú. IBC: Lima.

- Ciriacy-Wantrup, S. and Bishop, R. 1975. 'Common Property' as a concept in natural resources policy. *Natural Resources Journal*. 15:713–727.
- Clark, C. 2000. Land tenure de-legitimization and social mobility in tropical Peten, Guatemala. *Human Organisation* 59: 419-427.
- Cohen, J.L. 1983. Rethinking Social Movements. *Berkeley Journal of Sociology* 28: 97–114.
- Colchester, M. 2004. Conservation policy and Indigenous peoples. *Environmental Science and Policy* 7: 145-153.
- Colchester, M. 2008. Beyond tenure: rights-based approaches to peoples and forests. Some lessons from the Forest People Programme. RRI, Forest People Programmes: London.
- Colchester, M., Apte, T., Laforge, M., Mandondo, A. and Pathak, N. 2003. Bridging the gap: Communities, forests and international networks. Synthesis Report of the Project 'Learning Lessons from International Community Forestry Networks'. Bogor: *CIFOR Occasional Paper* No. 41.
- Colfer, C. J. P. and Capistrano, D. (Eds.). 2005. The Politics of Decentralization: Forests, Power and People. CIFOR and Earthscan: London.
- Commons, J. R. 1968. Legal foundations of capitalism. University of Wisconsin Press: Madison, Wisconsin.
- Commons, J. 1931. Institutional Economics. *The American Economic Review* 21: 648–657.
- CONADETI, 2013 Informe Ejecutivo de la CONADETI y las CIDT. Consejo Nacional de Demarcación y Titulación: Bilwi, Nicaragua.
- CONAP, 2001. Plan Maestro de la Reserva de Biosfera Maya. CONAP: Guatemala.
- CONAP 2004. Política de asentamientos humanos en áreas protegidas. Proyecto de Fortalecimiento a la Institucionalidad y Política Ambiental, FIPA. CEMEC: Guatemala.
- CONAP, 2006a. Coordinación interinstitucional para la ejecución del plan de seguridad ambiental emergente en la ruta San Andrés-Carmelita, Zona de Uso Múltiple de la Reserva Biosfera Maya, Departamento de Petén. CONAP: Guatemala.
- CONAP, 2006b. Coordinación interinstitucional para continuar con la ejecución del plan de seguridad emergente en zonas críticas del departamento de Petén. CONAP; MAGA; PDS; Fundación Defensores de la Naturaleza: Guatemala.
- CONAP, WCS. 2005 Estimación de la Deforestación en la Reserva de Biósfera Maya, período 2004-2005. CEMEC: Guatemala.
- CONAP, WCS. 2006. Estimación de la Deforestación en la Reserva de Biósfera Maya, período 2005-2006. CEMEC: Guatemala.

CONAP, WCS, FIPA/AID. 2003. Estimación de la Deforestación en la Reserva de Biósfera Maya, período 2002-2003. CEMEC: Guatemala.

CONAP, WCS, FIPA/AID. 2004. Estimación de la Deforestación en la Reserva de Biósfera Maya, período 2003-2004. CEMEC: Guatemala.

Cooperativa Carmelita. 2008. Reporte de Autosistematización. Editorial de Ciencias Sociales: Guatemala.

Cousins, B. 2007. More Than Socially Embedded: The Distinctive Character of 'Communal Tenure' Regimes in South Africa and its Implications for Land Policy. *Journal of Agrarian Change* 7(3): 281–315.

Cousins, B., Cousins, T., Hornby, D., Kingwill, R., Royston, L., and Smit, W. 2005. Will formalizing property rights reduce poverty in South Africa's 'second economy'? Questioning the mythologies of Hernando de Soto. Policy Brief No. 18. PLAAS: South Africa.

Cousins, B. and Kepe, T. 2005. Decentralization when land and resource rights are deeply contested: a case study of the Mkabmati Eco-Tourism Project on the Wild Coast of South Africa. In Ribot, J. and A. Larson (Eds.). 2005. Democratic decentralization through a natural resource lens: an introduction. Routledge: New York.

Cronkleton P., Taylor, P.L., Barry, D., Stone-Jovicich, S., and Schmink, M. 2008. Environmental governance and the emergence of forest based social movements. Center for International Forestry Research (CIFOR): Bogor, Indonesia.

Cullather, N. 2006. Secret History: The CIA's Classified Account of Its Operations in Guatemala, 1952-1954. Stanford University Press: Stanford.

Davis, S.H. and Wali, A. 1994. Indigenous land tenure and tropical forest management in Latin America. *Ambio* 23 (8).

De Janvry, A. 1989. The agrarian question and reformism in Latin America. Johns Hopkins: Baltimore.

De Marchi, B.; S. Funtowicz; S. Lo Cascio, G. Munda. 2000. Combining participative and institutional approaches with multicriteria evaluation. An empirical study for water issues in Troina Sicily. *Ecological Economics* 34: 267-282.

De Soto, H. 2000. The mystery of capital: why capitalism triumphs in the west and fails everywhere else. Bentam Press: Great Britain.

Dozier, C.L. 1969. Land development and colonization in Latin America: case studies of Peru, Bolivia, and Mexico. Praeger: New York.

Eden, S. 2009. The work of environmental governance networks: traceability, credibility and certification by the Forest Stewardship Council. *Geoforum* 40:383–394.

Elías, S. 1997. Autogestión comunitaria de recursos naturales. Estudio de caso en Totonicapán.

FLACSO: Guatemala.

Elías, S. (Ed.). 2008. Diagnóstico de la conservación y manejo de recursos naturales en tierras comunales. National Council of Protected Areas. Serviprensa: Guatemala.

Elías, S. 2010. De bosques comunales a áreas protegidas: las implicaciones de los cambios de tenencia en la gestión colectiva de recursos naturales en Guatemala. Mimeo: Guatemala.

Elías, S. 2012. From communal forests to protected areas: The implications of tenure changes in natural resource management in Guatemala. *Conservation and society* 10(2):151-160.

Elías, S. 2013. El Colonato en Guatemala: resabios del trabajo Agrícola en relación de servidumbre. *Revista Tikalía*. 31(2) 7-43. Universidad San Carlos de Guatemala:Guatemala.

Elías, S., Larson, A. M. and Mendoza, J. 2009. Tenencia de la tierra, bosques y medios de vida en el Altiplano Occidental de Guatemala. CIFOR: Guatemala.

Enriquez, L. 1991. Harvesting Change: Labor and Agrarian Reform in Nicaragua, 1979-1990. University of North Carolina Press: Chapel Hill.

Eckstein, S. (Ed.) 2001. Power and Popular protests. Latin American social movements. University of California Press: California.

FAO, 1970. Estudio de preinversión sobre desarrollo forestal - - FO/SF:81/GUA 6. Vol. -VII. Food and Agricultural Organization of the United Nations: Roma.

FAO, 1977. Fortalecimiento al sector forestal, Guatemala. Inventarios y estudios dendrométricos en bosques de coníferas” - FO:DP/GUA/72/006 - Technical Report 2. FAO: Rome.

FAO, 2002. Land tenure and rural development. Land Tenure Studies Series 3. Food and Agriculture Organization of the United Nations: Rome.

FAO, 2011. Reforming forest tenure: Issues, principles and process. FAO Forestry Paper 165. Food and Agriculture Organization of the United Nations: Rome.

FAO, 2012. Voluntary guidelines on the responsible governance of tenure of land, fisheries and forests in the context of national food security. Food and Agriculture Organization of the United Nations: Rome.

FAO, 2013. Pobreza rural y políticas públicas en América Latina y el Caribe. FAO: Santiago de Chile.

FECOFUN. 1999. *Samayik Prakashan*. Kathmandu, Networks of community forestry users, Nepal (FECOFUN), vol (3), Kathmandu. Nepal.

FECOFUN. 2002. *Report of Third National Council Meeting*, FECOFUN, Kathmandu, Nepal.

Finley-Brook, M. and Offen, K. 2009. Bounding the commons: Land demarcation in Northeastern Nicaragua. *Bulletin of Latin American Research* 28(3): 343-363.

- Fitzpatrick, D. 2005. Best practice: options for the legal recognition of customary tenure. *Development and change* 36(3): 449-475.
- Forest Action and SEACOW. 2002. Community forestry in Nepal: Other side of the coin, Video Documentary. ForestAction: Kathmandu, Nepal.
- Foweraker, J. 1981. The struggle for land: a political economy of the pioneer frontier in Brazil from 1930 to the present day. Cambridge University Press: New York.
- FYDEP 1971. Memoria de Labores 1960 - 1970. Empresa Nacional de Fomento y Desarrollo de Petén. FYDEP: Santa Elena, Petén, Guatemala.
- Gallini, S. 2004. Problemas y métodos en la historia ambiental de América Latina. *Anuario IHES* 19:147-171.
- Gallini, S. 2009. Historia, ambiente, política: el camino de la historia ambiental en América Latina. *Nomadas* 30:92-102.
- Gauster, S. and Isakson, R. 2007. Eliminating market distortions, perpetuating rural inequality: an evaluation of market-assisted land reform in Guatemala. *Third World Quarterly* 28 (8): 1519-1536.
- Gibson, C. 2001. Forest resources: Institutions for local governance in Guatemala, in Burger, J., Ostrom, E., Norgaard, R.B., Policansky, D., and Goldstein, B.D. (Eds.) A Framework for resource management in the Americas. Island Press. Washington DC.
- Gibson, C., McKean, M. and Ostrom, E. (Eds.) 2000. People and forests: Communities, institutions and governance. Politics, Science and the Environment Series. MIT Press. Cambridge.
- Gibson, C., Williams, J. T. and Ostrom, E. 2005. Local enforcement and better forests. *World Development* 33(2): 273-284.
- GHF (Global Heritage Fund) and FARES. 2006. Mirador conservation proposal: Establishing a 525,100 acre archeological and wilderness preserve in the heart of the Mayan Biosphere. Guatemala. URL: <http://www.miradorbasin.com/>. Accessed February 2014.
- Gliejeses, P. 1989. The agrarian reform of Jacobo Arvenz. *Journal of Latinamerican Studies* 21(3): 453-480.
- Goldman, M. 1997. Customs in common: the epistemic world of the common scholars. *Theory and Society* 26: 1-37.
- Goldman, M. 1998. Privatizing Nature: political struggles for the global commons. TNI/Pluto Press: London.
- Gómez, I. and Méndez, E. 2005. Análisis de contexto: el caso de la organización de comunidades forestales de Petén (ACOFOP). PRISMA: El Salvador.
- Gonzalez Izas, M. 2015. Territorios, actores armados y formación del Estado. Editorial Cara Parens, Universidad Rafael Landívar: Guatemala.

- Gordon, E. Gurdian, G. and Hale, C. 2003. Rights resources, and the social memory of struggle: reflections on a study of indigenous and black community land rights on Nicaragua's Atlantic Coast. *Human organization* 62(4): 369-381.
- Grandia, L. 2007. "The 'Tragedy of the Enclosures': Rethinking Primitive Accumulation from the Guatemalan Hinterland." Agrarian Studies Colloquium Series, Institution for Social and Policy Studies. Yale University: Yale.
- Grandia, L. 2009. 'Tz'aptz'oop'eb: El Despojo Recurrente al Pueblo Q'eqchi'. AVANCSO Asociación para el Avance de las Ciencias Sociales en Guatemala Siglo XXI Editores: Guatemala.
- Grandia, L. Schwartz, N. Corzo, A. Obando, O. and Ochoa, L. 2001. Salud, Migración y Recursos Naturales en Petén: Resultados del Módulo de la Encuesta de Salud Materno Infantil, 1999. Instituto Nacional de Estadística, USAID y Measure/DHS: Guatemala.
- Grunberg, J. Grandia, L. Milian, B. 2013. Tierra e igualdad: desafíos para la administración de Tierras en Petén, Guatemala. Fondo Fiduciario para el Desarrollo Ambiental y Socialmente Sostenible TFESSD and Banco Mundial: Guatemala.
- Grupo Promotor de Tierras Comunales. 2009. Estrategia nacional para el manejo y conservación de recursos naturales en tierras comunales. CONAP: Guatemala.
- Guardian, G. Hale, C. and Gordon, E. 2014. Derechos, recursos y memoria social de lucha: reflexiones sobre un estudio acerca de los derechos territoriales de las comunidades indígenas y negras de la costa caribe de Nicaragua. *Wani* 6-27.
- Guimarães Pereira, Â., Corral Quintana, S., 2002. From Technocratic to Participatory Decision Support: responding to the new governance initiatives. *International Journal of Geographic Information and Decision Analysis* 6 (2), 95–107.
- Habermas, J. 2004. Legitimation Crisis. Polity Press: London.
- Hale, C. 1996. Resistance and contradiction: Miskitu Indians and the Nicaraguan state, 1984-1987. Stanford University Press: Stanford.
- Hale, C. 1997. Cultural politics of identity in Latin America. *Annual Review of Anthropology*. 26: 567-590.
- Hale, C. 2014. Entre lo colonial y la formación racial: luchas afroindígenas por el territorio y por un nuevo lenguaje contencioso. Cuadernos de Antropología Social No. 40. Universidad de Buenos Aires: Argentina.
- Handy, J. 1994. Revolution in the countryside: rural conflict and agrarian reform in Guatemala, 1944-1954. The University of North Carolina Press: Chapel Hill, North Carolina.
- Hardin, G. 1968. The tragedy of the commons. *Science* 162: 1243–1248.
- Harvey, D. 1990. *The condition of Postmodernity*. Blackwell Publishing Ltd: United Kingdom.
- Harvey, D. 2001. Spaces of capital: Towards a critical geography. Routledge: New York.

- Harvey, D. 2003. *The new imperialism*. Oxford University Press: Oxford.
- Hayes, T.M. 2006. Parks, people, and forest protection: an institutional assessment of the effectiveness of protected areas. *World Development* 34 (12): 2064-2075.
- Hayes, T.M. 2007. Does tenure matter? A comparative analysis of agricultural expansion in the Mosquitia forest corridor. *Human Ecology* 35: 733-747.
- Hecht, S. 1985. Environment, development and politics: capital accumulation and the livestock sector in Eastern Amazonia. *World Development*, 13(6): 663-684.
- HMG/MoLJ. 1993. *Forest Act* (2049). Kathmandu: His Majesty's Government of Nepal, Ministry of Law and Justice: Nepal.
- Hodgon, B., Hughell, D., Ramos, V., Balas, R. 2015. Deforestation trends in the Mayan Biosphere Reserve, Guatemala: 2000-2013. Rainforest Alliance. World Conservation Society and CONAP: Washington.
- Hough, R. 1982. Land and labor in Guatemala: an assessment. Ediciones Papiro: Guatemala.
- Hurtado, L. 2008. Dinámicas agrarias y reproducción campesina en la globalización: El Caso de Alta Verapaz 1970-2007. F&G Editores: Guatemala.
- Hvalkof, S. 2002. Beyond indigenous land titling: democratizing civil society in the Peruvian Amazon. In J. Chase (Ed.) *The spaces of neoliberalism: land, place and family in Latin America*. Kumarian Press: Bloomfield, Connecticut.
- IARNA/URL/IIA (Instituto de Agricultura, Recursos Naturales y Ambiente, Universidad Rafael Landívar and Asociación Instituto de Incidencia Ambiental) 2006. *Perfil Ambiental de Guatemala: tendencias y reflexiones sobre la gestión ambiental*. IARNA/URL/IIA: Guatemala.
- IBC 2014. *La Seguridad Territorial en el Limbo: El estado de las comunidades indígenas en el Perú: Informe 2014*. Instituto del Bien Común: Lima, Perú.
- ICF (Instituto Nacional de Conservación y Desarrollo Forestal) 2011. *Anuario Estadístico Forestal 2011*. Honduras. Gobierno de Honduras.
- INAB 2012. *Mapa de Cobertura Forestal de Guatemala 2010 y Dinámica de cobertura forestal 2006-2010*. Instituto Nacional de Bosques, Consejo Nacional de Areas Protegidas, Universidad del Valle de Guatemala, Universidad Rafael Landívar. Serviprensa: Guatemala.
- INAFOR, 2009. *Results of the national forestry inventory*. Instituto Nacional Forestal: Nicaragua.
- INE. 2002. *XI Censo de Población y VI Habitación*. Guatemala: Instituto Nacional de Estadísticas: Guatemala.
- IUCN, 2010. *Superposición de territorios indígenas y áreas protegidas en América del Sur*. Unión Internacional para la Conservación de la Naturaleza. Documento de trabajo. Oficina



Regional para América del Sur: Ecuador. URL: [http://cmsdata.iucn.org/downloads/informe\\_final.pdf](http://cmsdata.iucn.org/downloads/informe_final.pdf). Accessed 15/04/2014.

IWGIA, 2015. The indigenous world 2015. The International Work Group for Indigenous Affairs: Copenhagen.

Johnson, C. 2004. Uncommon ground: The “poverty of history” in common property discourse. *Development and Change*.35 (3) 407-433.

Jones, J. R. 1990. Colonization and the environment: land settlement projects in Central America. United Nations University Press: Tokyo.

Juergensmeyer, J. and Wadley, J. 1974. The common lands concept: A commons solution to a common environmental problem. *Natural Resources Journal* 14:361-381.

Kaimowitz, D. 1996. Livestock and deforestation Central America in the 1980s and 1990s: A policy perspective. CIFOR: Indonesia.

Komarudin, H., Siagian, Y., and Colfer, C. 2008. Collective action to secure property rights for the poor, *Working Paper* No 90. CAPRI: Washington DC.

Larson, A. M. 2010. Making the ‘rules of the game’: Constituting territory and authority in Nicaragua’s indigenous communities. *Land Use Policy* 27: 1143-52.

Larson, A. M., Barry, D., Dahal, G. R. and Colfer, C. J. P. (eds.) 2010a. Forests for people: Community rights and forest tenure reform. London: Earthscan.

Larson, A.M., Barry, D., Dahal, G.R. 2010b. New rights for forest based communities: Understanding processes of forest tenure reform. *International Forestry Review* 12(1): 78-96.

Larson, A.M., Cronkleton, P., Barry, D., Pacheco, P. 2008. Tenure rights and beyond: community access to forest resources in Latin America. Occasional Paper 50. CIFOR: Bogor, Indonesia.

Larson, A.M. and Mendoza-Lewis, J. 2009. Desafios en la Tenencia Comunitaria de Bosques en la RAAN de Nicaragua. CIFOR/URACCAN/RRI: Managua, Nicaragua.

Larson, A.M. and Mendoza-Lewis, J. 2012. Decentralisation and devolution in Nicaragua’s North Atlantic Autonomous Region: natural resources and indigenous peoples’ rights. *International Journal of the Commons* 6(2): 179-199.

Larson, A.M., Monterroso, I. Mwangi, E. and Banjade, M.R. 2015 Community rights to forests in the tropics: Progress and retreat on tenure reforms. In: M. Graziadei and L. Smith and (eds) Comparative Property Law: Global Perspectives. Edward Elgar Publishing. In Press.

Larson, A. and Soto, F. 2008. Decentralization of the natural resources regimes. *Annual Review of Environment and Resources*. 33: 213-239.

Larson, A. and Soto, F. (Eds.) 2012. Territorialidad y Gobernanza: tejiendo retos en los territorios indígenas de la RAAN. Nitlapan-UCA: Managua, Nicaragua.

Lartigue, F. 1993. *Comunidad y municipalidad. San Andrés Sajcabajá durante los años 80.* In Representación del espacio político en las tierras altas de Guatemala. Cuaderno de Estudios Guatemaltecos. CEMCA: Guatemala.

Latinoconsult. 1968. Estudio de factibilidad para el desarrollo de un programa de ganadería bovina en el departamento del Petén. República de Guatemala, Consejo Nacional de Planificación Económica, Empresa Nacional de Fomento y Desarrollo Económico del Petén: Santa Elena, Guatemala.

Laurence, W., Goosem, M. and Laurence, S. 2009. Impacts of roads and linear clearings on tropical forests. *Trends*: 24(12) 659-669.

Leach, M. and Fairhead, J. 2001. Plural perspectives and institutional dynamics: challenges for local forest management. *International Journal of Agricultural Resources, Governance and Ecology* 1: 223-242.

Lefebvre, H. 1974. *The production of space.* Blackwell Publishing Limited: United Kingdom.

Lefebvre, H. 2009. State, space, world: selected essays. University of Minnesota Press: Minneapolis.

Lemos, M. and Agrawal, A. 2006. Environmental governance. *Annual review of environmental resources*. 31:297-325.

McCay, B. J. 2002. Emergence of Institutions for the Commons: Contexts, Situations, and Events. In *The Drama of the Commons* National Resource Council (Ed), National Academy Press: Washington, D.C. Pp. 361-402.

McCay, B. J. and Acheson, J. M. 1987. *The Question of the Commons. The Culture and Ecology of Communal Resources.* The University of Arizona Press: Tucson, Arizona.

McCay, B. and Jentoft, S. 1998. Market or community failure? Critical perspectives on common property research. *Human organization*. 57(1):21-29.

McPherson, C. B. (Ed.) 1978. Property: Mainstream and critical positions. University of Toronto Press: Toronto, Ontario, Canada.

McSweeney, K., Nielsen, E.A., Taylor, M.J., Wrathall, D.J., Pearson, Z., Wang, O., and S.T. Plumb. 2014. Drug policy as conservation policy: Narco-deforestation. *Science* 343(6170): 489-490.

Meinzen-Dick, R. S., A. Knox, and M. Di Gregorio (Eds.). (2001). Collective action, property rights, and devolution of natural resource management: Exchange of knowledge and implications for policy.: Zentralstelle für Ernährung und Landwirtschaft: Feldafing, Germany.

Mendoza, J. 2007. Field reports. Guatemala Highlands. CIFOR/FAUSAC, Unpublished.

Melville, T. and Melville, M. Guatemala: the politics of land ownership. Free Press: New York.

Merlet M., Pommier, D., Baumeister, E. Molina, M., Montes, L., Williamson, D., Vasquez, I. Rivas, A., Fernández, E. 2000. Estudio sobre la tenencia de la tierra en Nicaragua. Estudios sobre la tenencia de la Tierra. Institut de Recherches et d'Applications des Méthodes de Développement: France.

Milian, B. 2008. Poverty, deforestation and land tenure institutions: the case of communities living in Guatemala's Maya Biosphere Reserve. PhD Thesis. University of Massachusetts: Amherst.

Molnar, J. Marvier, M. Kareiva, P. The sum is greater than the parts. *Conservation Biology* 18(6):1670-1671.

Monterroso, I. 2005. Comparison of two socioeconomic assessment methods for the analysis of the invasion process of *Hydrilla verticillata* in Lake Izabal, Guatemala. Master Dissertation for the Degree of Environmental Science Ecological Economics and Environmental Science. Institut de Ciència i Tecnologia Ambientals: Barcelona.

Monterroso, I. 2006. Comunidades locales y políticas de conservación en la Reserva de Biosfera Maya. In Alimonda (Ed.) 2006. Los tormentos de la materia: ecología política en América Latina. Editorial de Ciencias Sociales: Guatemala. Pp. 239-274.

Monterroso, I. 2007a. Report for the Project CIFOR-ACOFOP: Nuevas Tendencias y Procesos que Influyen en el Manejo Comunitario Forestal en la Zona de Usos Múltiples Reserva de Biosfera Maya en Peten, Guatemala. CIFOR/ACOFOP: Guatemala. Unpublished manuscript.

Monterroso, I. 2007b. Procesos de investigación y transformación social: La experiencia del Área de Población, Medio Ambiente y Desarrollo Rural de FLACSO-Guatemala. In Bebbington A. 2007. Investigación y cambio social: desafíos para las ONG en Centroamérica y México. Editorial de Ciencias Sociales: Guatemala. Pp. 305-360.

Monterroso, I. 2007c. Extracción de xate en la RBM: elementos para su sostenibilidad. FLACSO-Guatemala. Editorial de Ciencias Sociales: Guatemala.

Monterroso, I. 2008. Comunidades locales en áreas protegidas: Reflexiones sobre las políticas de conservación. In CLACSO, 2008. Gestión ambiental y conflicto social en América Latina. Editorial CLACSO: Buenos Aires. Pp. 227-263.

Monterroso, I. 2010: “¿De qué clase de turismo estamos hablando? Una mirada a los conflictos asociados con la expansión turística dentro de la Reserva de la Biosfera Maya en Guatemala”, In Cañada, E. 2010. (Ed.), Turismo y conflictos socio-ambientales en Centroamérica. Editorial Enlace: Managua.

Monterroso I. and Barry D. 2007. Community based forestry and the changes in tenure and access rights in the Mayan Biosphere Reserve. Recoftc Conference Proceedings: Poverty reduction and forests: tenure, market and policy reforms. RECOFTC: Thailand.

Monterroso, I. and Barry, D. 2009. Sistema de concesiones forestales comunitaria: Tenencia de la tierra, bosques y medios de vida en la Reserva de la Biósfera Maya en Guatemala. CIFOR and Editorial de Ciencias Sociales: Guatemala.

- Monterroso, I. and Barry, D. 2012. Legitimation of forests rights: The underpinnings of the forest tenure reform in the Protected areas of Petén, Guatemala *Journal of Conservation and Society*. 10(2): 136-150
- Monterroso, I. and Barry, D. 2013. La legitimidad de los derechos forestales: Los fundamentos de la reforma de tenencia forestal en las áreas protegidas de Petén, Guatemala. In: Larson, A. y Dahal, G. Reformas en la Tenencia Forestal. 2013. CIFOR: Bogor, Indonesia. Pp. 139-168.
- Monterroso, I., Binimelis R. and Rodríguez-Labajos, B. 2009a. Hydrilla verticillata: A socio-economic analysis of the invasion process in Lake Izabal, Guatemala. In Spangenberg, J., Martínez Alier, J., Rodríguez-Labajos, B., Maxim, L., Binimelis, R., Douguet, J.M., Peterson, K., Kuldna, P., Monterroso, I. 2009 Assessing biodiversity risks with socio-economic methods: ALARM experience. Pensoft Publishers: Sofia. Pp 31-67.
- Monterroso, I., Binimelis, R., and Pengue, W. 2009b. Bioinvasions and bioeconomy: The case of johnsongrass invasion in Argentinean agriculture. In Spangenberg, J., Martínez Alier, J., Rodríguez-Labajos, B., Maxim, L., Binimelis, R., Douguet, J.M., Peterson, K., Kuldna, P., Monterroso, I. 2009. Assessing biodiversity risks with socio-economic methods: ALARM experience. Pensoft Publishers: Sofia Pp 235-259.
- Monterroso, I., Binimelis, R., Pengue W. 2010. "The Farmer's terror": Glyphosate resistant johnsongrass in Argentina. In: Settele, Josef, Lyubomir D Penev, Teodor A Georgiev, Ralf Grabaum, Vesna Grobelnik, Volker Hammen, Stefan Klotz, Mladen Kotarac, I. 2010. Atlas of Biodiversity Risk. Pensoft Publisher: Sofia. Pp. 202-203.
- Monterroso, I., Binimelis, R., Rodríguez-Labajos, B. 2011. New Methods for the analysis of invasion processes: Multi-criteria evaluation of the invasion of *Hydrilla verticillata* in Guatemala. *Journal of Environmental Management* 92: 494-507.
- Monterroso, I. and Larson, A. 2013. The dynamic forest commons of Central America: New directions for research. *Journal of Latin American Geography* 12(1): 87-110.
- Munda, G. 2008. Social multicriteria evaluation for a sustainable economy. Springer-Verlag: Berlin.
- Mwangi, E. Markelova, H. and Meinzen-Dick, R. (Eds.) 2012. Collective Action and Property Rights for Poverty Reduction: Insights from Africa and Asia. University of Pennsylvania Press: Philadelphia.
- Myers, N. Mittermeier, R., Mittermeier, C., da Fonseca, G., Kent, J. 2000. Biodiversity hotspots for conservation priorities. *Nature* 403:853-858.
- Nations, J. and D. Komer. 1983. Rainforests and the Hamburger Society. *Environment*. 25(3): 12-20.
- Neidhardt, F. and D. Rucht. 1991. The analysis of social movements: The state of the art and some perspectives for further research. In Rucht, D. (Ed.) 1991. Research on social movements: The state of the art in Western Europe and the USA. Westview Press: Boulder, Colorado. Pp. 421-464.

Nightingale A.J. 2003. Nature, society and development: Cultural, social and ecological change in Nepal. *Geoforum* 34: 525–540.

Nittler, J. and Tschinkel H. 2005. Manejo comunitario del bosque en la RBM de Guatemala: Protección mediante ganancias. Sustainable Agriculture and Natural Resources Management; Collaborative Research Support Program: Georgia.

North, Douglass. 1990. Institutions, Institutional Change and Economic Performance, The University Press: Cambridge.

NPV, Sociedad Civil Árbol Verde. 1999. Plan de Manejo de la Unidad de Manejo las Ventanas. Flores, Petén. Guatemala. Available in SI-CONFOR Sistema de Información de Concesiones Forestales: Guatemala.

Nuggehalli, R. and Stalker, L. 2009. Motivating factors and facilitating conditions explaining women's participation in co-management of Sri-Lankan forests. *Forest Policy and Economics* 11(4): 288-293.

Offe, C. 1985. New social movements: Challenging the boundaries of institutional politics. *Social Research* 52 (4) 817-868.

Oficina de Derechos Humanos, Arzobispado de Guatemala (ODHAG). 1999. Guatemala never again: recovery of historical memory project. Human Rights Office, Archdiocese of Guatemala. Orbis Books: Guatemala.

Ojha, H., D.R. Khanal, N.S. Paudel, H. Sharma and B. Pathak. 2007. Federation of community forest user groups in Nepal: An innovation in democratic forest governance, Proceedings of the International Conference on Poverty Reduction and Forests, Bangkok, September 2007. RECOFTC-RRI: Bangkok, Thailand.

Ojha, H., N. Timsina, R. Chhetri and K. Paudel. 2008. *Communities, forests and governance: Policy and institutional innovations from Nepal*. Adroit Publishers. New Delhi.

OMYC, 2014. Sistema documentado de control de cadena de custodia no exclusiva para la producción de xate certificado de la UMF Uaxactún. Organización Manejo y Conservación. Petén. URL: [http://www.programs.wcs.org/Portals/0/Guatemala/Sistema\\_documentado\\_marzo2014.pdf](http://www.programs.wcs.org/Portals/0/Guatemala/Sistema_documentado_marzo2014.pdf). Accessed 13/09/2015.

Ortiz, R. D. 1987. Indigenous rights and regional autonomy in revolutionary Nicaragua. *Latin American Perspectives* 14(1): 43-66.

Ostrom, E. 1990. Governing the commons: The evolution of institutions for collective action. Cambridge University Press: Cambridge.

Ostrom, E. 1999. *Self-governance and forest resources*. Occasional Paper, Series 20. CIFOR: Bogor, Indonesia.

Ostrom, E. 2009. A general framework for analyzing sustainability of socio-ecological systems. *Science* 325: 419-422.

Ostrom, E., Dietz, T., Dolsak, N. Stern, P.G., Stonich, S., Weber E.U. (Eds.) 2002. The drama of the commons. National Academy Press: Washington DC.

Oyarzun, A. 2002. Los derechos indígenas a la tierra hasta los Acuerdos de Paz. Editorial de Ciencias Sociales: Guatemala.

Paavola, J. 2007. Institutions and environmental governance: A reconceptualization. *Ecological Economics* 63:93-103.

Paavola J and Adger W. N. 2005. Institutional Ecological Economics. *Ecological Economics*. 53:353-368.

Pacheco, P. and Barry, D. 2009. From agrarian to forest tenure reform: The recognition of forest rights in Latin America. XIII World Forestry Congress, Buenos Aires, Argentina. 18-23 October.

Pacheco, P., Barry, D., Cronkleton, P. and Larson, A.M. 2008. The role of informal institutions in the use of forest resources in Latin America. CIFOR: Bogor, Indonesia.

Pacheco, P., Barry, D., Cronkleton, P., Larson, A. M. and Monterroso, I. 2008. From agrarian to forest tenure reforms in Latin America: Assessing the impacts for local people and forests. Paper presented at the conference of the International Association for the Study of the Commons. IASC: Cheltenham.

Paudel, N.S., Monterroso, I. and Cronkleton, P. 2010a. Community networks, collective action and forest management benefits in Anne M. Larson, Deborah Barry, Ganga Ram Dahal and Carol J. Pierce Colfer (eds.) 2010. Community Rights and Forest Tenure Reform. EarthScan: London. Pp: 116–138.

Paudel, N., Monterroso, I. and Cronkleton, P. 2010b. Redes comunitarias, acción colectiva y beneficios derivados del manejo forestal. In: Larson, A., Barry, D., Dahal, Ganga Ram y Pierce Colfer, J. Bosques y Derechos Comunitarios: Las reformas en la tenencia forestal. CIFOR. Bogor Indonesia. Pp. 121-141.

Paudel, N.; Monterroso, I. and Cronkleton, P. 2012. Secondary organizations and the democratization of forest governance: Case studies from Nepal and Guatemala. *Journal for Conservation and Society* 10 (2): 124-135.

Paudel, N., Monterroso, I. and Cronkleton, P. 2013. Organizaciones de segundo nivel y la democratización de la gobernanza forestal: Estudios de caso de Nepal y Guatemala. In: Larson, A. y Dahal, G. 2013. Reformas en la Tenencia Forestal. CIFOR. Bogor, Indonesia. Pp. 111-137.

Pellecer, G. 2010. Petén, Fydep y yo: Historia de Petén. Guatemala: Litoprologia.

Pengue, W., Monterroso, I. and Binimelis, R. 2009. Bioinvasiones y bioeconomía: El caso del sorgo de alepo resistente a glifosato en la agricultura argentina. Editorial FLACSO: Guatemala.

Peters, P. 1987. Embedded systems and rooted models: The grazing lands of Botswana and the commons debate. In McKay B. and Acheson J. (Eds.) *The question of the commons: the culture and ecology of communal resources*. University of Arizona Press: Tucson. Pp 171-194.

Plant, R., and Soren, H. 2001. *Land titling and Indigenous Peoples*. Inter-American Development Bank: Washington, DC.

Pokhrel, B.K; Branney, P., Nurse, M. and Malla, Y.B. 2007. Community forestry: Conserving forests, sustaining livelihoods and strengthening democracy. *Journal of Forest and Livelihood* 6(2): 8–19.

PRISMA, 2014. *Pueblos Indígenas y Comunidades Rurales Defendiendo Derechos Territoriales. Estudios de caso sobre experiencias de prevención y defensa ante el Narcotráfico y Crimen Organizado en Mesoamérica*. Fundación PRISMA: El Salvador.

PROARCA (Programa Ambiental Regional para Centroamérica) and UICN 2005. *Centroamérica en el límite forestal: Desafíos para la implementación de las políticas forestales en el Istmo*. Programa Areas Protegidas y Mercadeo Ambiental: San José, Costa Rica

Procuraduría General De La República. 2010. Vice Intendencia De La Propiedad, Régimen De Propiedad Comunal (Ley 445). Mimeo: Managua, Nicaragua.

Propetén, Cooperativa Carmelita. 1997. *Plan de Manejo de la Carmelita*. Flores, Petén, Guatemala. Available in SI-CONFOR Sistema de Información de Concesiones Forestales: Guatemala.

Radachowsky, J., Ramos, V. H., McNab, R., Baur, E. H., Kazakov, N. 2012. Forest concessions in the Mayan Biosphere Reserve: A decade later. *Forestry Ecology and Management* 268: 18-28.

RAISG. 2012. Amazonía bajo presión. RAISG: URL: [http://raisg.socioambiental.org/system/files/AmazoniaBajoPresion\\_10\\_12\\_12.pdf](http://raisg.socioambiental.org/system/files/AmazoniaBajoPresion_10_12_12.pdf). Accessed 18/03/2014.

Rausch, J. 2010. ¿Continúa teniendo validez el concepto de frontera para estudiar la historia de los Llanos en el siglo XXI? *Fronteras de la historia*. 15(1): 157-179.

Reyna Contreras, A.; Silvel, E.; Cigarroa, C.; Moreno, P. 1999 *Comunidades rurales y áreas protegidas: Análisis de la gestión colectiva en dos sitios de El Petén*. Editorial de Ciencias Sociales: Guatemala.

Ribot, J.C., Agrawal, A. and Larson, A. 2006. Recentralizing while decentralizing: How national governments reappropriate forest resources. *World Development* 34(11): 1864–1886.

Ribot, J., Chhatre, A., and Lankina, T. 2008. Introduction: Institutional choice and recognition in the formation and consolidation of local democracy. *Conservation and Society* 6(1): 1–11.

Ribot, J. and Larson, A. 2005. *Democratic decentralization through a natural resource lens: an introduction*. Routledge. New York.

Ribot J. and Peluso, N. 2003. A theory of access. *Rural sociology* 68: 153-181.

- Richards, M. 1997. Common property resource institutions and forest management in Latin America. *Development and Change* 28: 95-117.
- Robinson, B. Holland, M. and Naughton-Treves, L. 2014. Does secure land tenure save forests? A meta-analysis of the relationship between land tenure and tropical deforestation. *Global and Environmental Change*: 29:281-293.
- Rodas, I. 2009. Desplazamiento rural, ruptura de lo social e identidades discursivas: el rol del sufrimiento en las cooperativas del Usumacinta, Petén, Guatemala (1968-2004). PhD Thesis. Ecole des Hautes Etudes en Science Social: París.
- Rodríguez, G. 1969. Despertar de un Gigante: Petén ante mis ojos 1955-1965. Editorial San Antonio: Guatemala.
- Rodriguez-Labajos, B., Binimelis, R., Monterroso, I., 2009a. Multi-level driving forces of biological invasions. *Ecological Economics*. 69:63–75.
- Rodriguez-Labajos, B., Spangenberg, J.H., Maxim, L., Martinez-Alier, J., Binimelis, R., Gallai, N., Kuldna, P., Peterson, K., Uustal, M., 2009b. Assessing biodiversity risks with socio-economic methods: The ALARM Experience. Pensoft Publications: Sofia.
- Rodríguez-Labajos, B., Binimelis, R. Cardona, C. Dittmer, K. Martínez-Alier, J. Monterroso I. and Munné, A. 2010. Chronicle of a Bioinvasion Foretold: Distribution and Management of the Zebra Mussel (*Dreissena polymorpha*) Invasion in Spain. In Settele, Josef, Lyubomir D Penev, Teodor A Georgiev, Ralf Grabaum, Vesna Grobelnik, Volker Hammen, Stefan Klotz, Mladen Kotarac. Atlas of Biodiversity Risk. Pensoft Publishers: Sofia. Pp. 198-201.
- Roldan, O. 2004. Models for recognizing indigenous land rights in Latin America. *Biodiversity Series Paper 99*. World Bank Environment Department: Washington, D.C.
- RRI 2012. What rights? A comparative analysis of developing countries' national legislation on community and indigenous peoples' forest tenure rights. Rights and Resources Initiative: Washington DC.
- RRI 2014. What future for reform: progress and slowdown in forest tenure reform since 2002. Rights and Resources Initiative: Washington DC.
- RRI and ISA, 2015. Advances and setbacks in territorial rights in Brazil. Rights and Resources Initiative, Instituto Socioambiental: Washington DC.
- RRI and ITTO (Rights and Resources Initiative and International Timber and Trade Organization). 2009. Tropical Forest Tenure Assessment: Trends, Challenges and Opportunities. Prepared for the International Conference on Forest Tenure, Governance and Enterprise: New Opportunities for Central & West Africa May 25 – 29 2009. Yaoundé, Cameroon.
- Sack, R.D. 1986. Human territoriality: its theory and history. Cambridge University Press: London.
- Sack, R. 2010. Human territoriality: a theory. *Annals of the association of American geographers*. 73(1): 55-74.



Safitri, M. 2010. Forest tenure in Indonesia: the socio-legal challenges of securing communities' rights. Doctoral Thesis. Leiden University. URL: <https://openaccess.leidenuniv.nl/handle/1887/16242>. Accessed 20/02/2014.

Salgado, P. Corral Quintana, S. Guimaraes Pereira, A. Del Moral Ituarte, L., Pedregal Mateos, B. 2009 Participative multicriteria analysis for the evaluation of water governance alternatives. A case in the Costa del Sol (Málaga). *Ecological Economics* 68:990-1005.

Schlager, E. and Ostrom, E. 1992. Property rights regimes and natural resources: a conceptual analysis. *Land economics* 68(3): 249-262.

Schoonover, T. 1996. Los intereses europeos y estadounidenses en las relaciones México-Guatemala (1850-1930). *Secuencia* 34:7-30.

Schrimer, J. 1999. The Guatemalan Politico-Military Project: Legacies for a violent peace? *Latin American Perspectives*. 26: 92-107

Schwartz, N. B. 2012 Continuidades en la política guatemalteca para Petén: Uso de la tierra, etnicidad y rango social. In González de la Cruz, U. Domínguez, A. de la Cruz Leyva, M. Aguilar S., y Mendoza E. (Eds.) *Avances y Perspectivas de Investigación Multidisciplinaria Tomo I (960-993)*. Universidad de San Carlos de Guatemala and Universidad Juárez Autónoma de Tabasco: Guatemala.

Schwartz, N. 1990. *Forest society: A social history of Petén*. Pennsylvania Press. Philadelphia.

Scott, J. 1998. *Seeing like a state: How certain schemes to improve the human condition have failed*. Yale University Press: New Haven.

Segeplan, 2013. *Plan de desarrollo integral de Petén. Peten 2032*. Secretaría de Planificación y Programación de la Presidencia: Guatemala.

Seymour, F., La Vina, T., and Hite, K. 2014. Evidence linking community – level tenure and forest condition: An annotated bibliography. Climate and Land Use Alliance. URL: [http://www.climateandlandusealliance.org/uploads/PDFs/Community\\_level\\_tenure\\_and\\_forest\\_condition\\_bibliography.pdf](http://www.climateandlandusealliance.org/uploads/PDFs/Community_level_tenure_and_forest_condition_bibliography.pdf) (accessed 14/09/2014).

Shrestha, N.K. 2001. The backlash: Recent policy changes undermine user control of community forests in Nepal. *Forest, Trees and People Newsletter* (44): 62–65.

Shriar, A. 2006. Regional integration or disintegration? Recent road improvements in Petén, Guatemala: A review of preliminary economic, agricultural, and environmental impacts *Geoforum* 37(1)104-112

Sikor, T. and Lund, C. 2009. Access and property regarding natural resources: A question of power and authority. *Development and change* 40(1):1-22.

Sikor, T. and Thanh, T. 2007. Exclusive versus inclusive devolution in forest management: insights from forest land allocation in Vietnam's Central Highlands'. *Land use policy*. 24(1): 1-22.

SI PETEN 2002. Centro de Monitoreo y Evaluación de CONAP (CEMEC) Región VIII. Base de Datos: Guatemala

Smith, L. Bratini, L. Chambers, D., Vance Jensen, R and Romero, L. 2010. Between idealism and reality: Meeting the challenges of participatory action research. *Action Research* 8(4): 407-425.

Sodhi, N. and P. Ehrlich (Eds.). 2010. Conservation Biology for all. Oxford University Press: New York.

Solano, L. 2005, Petróleo y Minería en las entrañas del poder. Inforpress: Guatemala.

Solano, L. 2010. Petroleras en acción, selva en destrucción: Aplicación del contrato 2-85 a Perenco: Análisis de implicaciones económicas, socioambientales e intereses en juego. *Enfoque*. 6(2) 1-43.

Soto, F. 2007. Dos experiencias en forestería comunitaria en la RAAN de Nicaragua. In: Ruiz García, A. (Ed.), Manejo de bosques, áreas protegidas y comunidades locales en Nicaragua. Nitlapan: Managua, Nicaragua.

Spangenberg, J., Martinez-Alier, J., Omann, I., Monterroso, I., and Binimelis, R. 2009. The DPSIR scheme for analyzing biodiversity loss and developing preservation strategies. *Ecological Economics* 69(1): 9-11.

Spinelli, R. and E. Marchi, 1996. A literature review of the environmental impacts of forest road construction. Proceedings of the Seminar on Environmentally sound forest roads and wood infrastructure. FAO: Rome.

Stavenhagen, R. 1992. Challenging the Nation-State in Latin America. *Journal of International Affairs* 45(2): 421-440.

Stocks, A., McMahan, B. and Taber, P. 2007. Indigenous, colonist, and government impacts on Nicaragua's Bosawas reserve. *Conservation Biology* 21 (6): 1495-1505.

Stoian, D. 2000. Variations and dynamics of extractive economies: the rural - urban nexus of non-timber forest use in the Bolivian Amazon. PhD Thesis University of Freiburg: Germany.

Stoian D. and Rodas A. 2006a. Community Forest Enterprise Development in Guatemala: A Case Study of Cooperativa Carmelita R.L. ITTO, Forest Trends, Rights and Resources Initiative: Washington DC.

Stoian D. y Rodas A. 2006b. Sociedad Civil para el Desarrollo Árbol Verde. Case Study from Petén, Guatemala. ITTO, Forest Trends, Rights and Resources Initiative: Washington DC.

Suchman, M. 1995. Managing legitimacy: strategic and institutional approaches. *The Academy of Management Review*. 20(3): 571-610.

Sundberg, J. 1998. NGO Landscapes in the Mayan Biosphere Reserve, Guatemala. *Geographical review* 88(3): 388-412.

Sundberg, J. 2002. Conservation as a site for democratization in Latin America: Exploring the contradictions in Guatemala. *The Canadian Journal of Latin American and Caribbean Studies* 27(53):

73-103.

Sunderlin, W., J. Hatcher and M. Liddle. 2008. From Exclusion to Ownership? Challenges and Opportunities in Advancing Forest Tenure Reform. Rights and Resource Initiative: Washington DC.

Taylor, P. 2010. Conservation, community, and culture? New organizational challenges of community forest concessions in the Maya Biosphere Reserve of Guatemala. *Journal of Rural Studies* 26 (2): 173–184.

Taylor, P. 2012. Multiple forest activities, multiple purpose organizations: Organizing for complexity in a grassroots movement in Guatemala's Petén. *Forest Ecology and Management* 2012(268): 29-38.

Thillet, B., Elías, S., Reyna, V. Sagastume, C. 2003. *Tierras municipales en Guatemala: un desafío para el desarrollo local sostenible*. Guatemala: FLACSO Editorial.

Thiessenhusen, W.C. 1989. Searching for the agrarian reform in Latin America. Routledge: London.

Tilly, C. 1978. From mobilization to revolution. Addison-Wesley: Massachusetts.

Timsina, N. 2003. Viewing FECOFUN from the perspective of popular participation and representation. *Journal of Forest and Livelihood* 2(2): 67–71.

Touraine, A. 1985. An introduction to the study of social movements. *Social Research* 52 (4) 749-787.

Tucker, C. M. 1999. Private versus common property forests: Forest conditions and tenure in a Honduran community. *Human Ecology* 27(2): 202-230.

Tucker, C. M., Randolph, J. C. and Castellanos, E. J. 2007. Institutions, Biophysical Factors and History: An Integrative Analysis of Private and Common Property Forests in Guatemala and Honduras. *Human Ecology* 35: 259-274.

UNEPET, Agrar-und Hydrotechnik (AHT) y Asesoría y Promoción Económica, S. A. (APESA). 1992. Plan de Desarrollo Integrado de Petén: Diagnóstico General de Petén (UNEPET). Tomo I. SEGEPLAN (Secretaría General de Planificación Nacional): Santa Elena, Petén, Guatemala.

Unidad de Parques Nacionales Naturales de Colombia –UAESPNN- 2004. Estrategia integral y diferencial de gobernabilidad en Areas protegidas del Petén. Guatemala. Departamento del Interior de los Estados Unidos, DOI, Programa de Fortalecimiento Institucional de Políticas Ambientales, FIPA/USAID, Consejo Nacional de Areas Protegidas: Guatemala.

USAID. 1990. Guatemala project paper: Maya Biosphere Project. Guatemala City: USAID Mission to Guatemala, ed. Project # 520-0395. USAID: Guatemala.

van de Sandt, J. 2003. Communal resource tenure and the quest for indigenous autonomy: on state law and ethnic reorganization in two Colombian resguardos, *Journal of legal pluralism* 48:125-162.

- Van Laerhoven, F. and E. Ostrom 2007. Traditions and trends in the study of the commons. *International Journal of the Commons* 1(1): 3-28.
- Vatn, A. 2005. Institutions and the environment. Edgard Elgard Publishing: Cheltenham, UK.
- Vela, M. 2010. Peritaje histórico social caso la Masacre de las dos erres. Expediente MP001-2005-96951. Fiscalía de Derechos Humanos. Ministerio Público: Guatemala.
- Weber, M 1921. Economy and Society. G. Roth, C. Wittich, Bedminster Press: New York
- West, P., J. Igoe and D. Brockington. 2006. Parks and peoples: The social impact of protected areas. *Annual Review of Anthropology* 35:251-277.
- White, A. and A. Martin. 2002. Who Owns the World's Forests? Forest Trends: Washington DC.
- Williamson, Oliver E. 1996. The Mechanisms of Governance. Oxford University Press: New York.
- Willy, L.A. 2011. Customary tenure in the modern world: Rights to resources in crisis. Reviewing the fate of customary tenure in Africa. Brief #1. Rights and Resources Initiative: Washington DC.
- Wollenberg, E., Colchester, M., Mbugua, G., Griffiths. T. 2005. Linking social movements: How international networks can better support community action about forests. *CIFOR Working Paper Series No: 31*. CIFOR: Bogor, Indonesia.
- World Bank, 2014. World Development Indicators. World Bank: Washington DC.
- WRI and RRI. 2014. Securing rights, combating climate change: How strengthening community forest rights mitigates climate change. World Resources Institute, Rights and Resources Initiative: Washington DC.
- Yashar, D. 1999. Indigenous Movements, and the Postliberal Challenge in Latin America. *World Politics*, 52(1): 76-104.
- Yashar, D. 2005. Contesting citizenship in Latin America. Cambridge University Press. New York.
- Ybarra, M. 2012. Taming the jungle, saving the Maya forest: sedimented counterinsurgency practices in contemporary Guatemalan Conservation. *Journal of Peasant Studies* 39(2): 479-502.
- Young, O. R. 2002. Institutional Interplay: The Environmental Consequences of Cross-Scale Interaction. In Ostrom, E., Dietz, T., Dolsak, N. Stern, P.G., Stonich, S., Weber E.U. (Eds.) 2002. The drama of the commons. National Academy Press: Washington DC. Pp. 263-292.
- Zald, M. and McCarthy, J.D. (Eds.). 1987. Social movements in an organizational society. Transaction Books: New Brunswick, New Jersey.

## Annexes

### Annex 1. Guide to collect information at the community level

Formulario para recolectar datos de comunidades

Comunidad \_\_\_\_\_

|  |  |
|--|--|
| Población total estimada   |  |
| Población total oficial  |  |
| Total familias ladinas   |  |
| Total de otras familias  |  |
| Total de casas habitadas   |  |
| Total de casas deshabitadas  |  |
| Cuantos almacenes/bodegas hay en la comunidad  |  |
| Cuantas tiendas grandes, de primera categoría hay?<br>De segunda categoría? De tercera categoría (pequeñas) hay? |  |

|   |  |
|---|--|
| Cuántas pensiones hay en la comunidad             |  |
| Cuántas casas de huéspedes hay en la comunidad    |  |
| Cuántos restaurantes hay en la comunidad          |  |
| Cuántos comedores hay en la comunidad             |  |
| Cuántos talleres artesanales hay en la comunidad? |  |
| Cuántas iglesias católicas hay en la comunidad    |  |
| Cada cuanto se oficia misa                        |  |
| Cuántas capillas evangélicas hay en la comunidad  |  |
| Cada cuanto se oficia servicio                    |  |
| De otras religiones, especifique                  |  |

Disponibilidad de servicios

| Centro o sub-centro de salud   | Hay | No hay | Hay, no funciona |
|--------------------------------|-----|--------|------------------|
| Puesto de salud (unid. Mínima) |     |        |                  |
| Medicina en puesto de salud    |     |        |                  |
| Personal en puesto de salud    |     |        |                  |
| Escuela (1 a 3 grado) alumnos  |     |        |                  |
| Escuela (4 a 6 grado) alumnos  |     |        |                  |
| Escuela ciclo básico           |     |        |                  |
| Escuela diversificado          |     |        |                  |
| Número de maestros             |     |        |                  |
| Agua potable                   |     |        |                  |
| Electricidad pública           |     |        |                  |
| Electricidad domiciliar        |     |        |                  |

|                       |  |  |  |
|-----------------------|--|--|--|
| Mercado               |  |  |  |
| Salón comunal         |  |  |  |
| Farmacia pública      |  |  |  |
| Proyectos agrícolas   |  |  |  |
| Proyectos (otro tipo) |  |  |  |
| Proyectos ONGs        |  |  |  |
| Letrinas              |  |  |  |
| Transporte público    |  |  |  |
| Transporte lacustre   |  |  |  |

|  |        |        |      |          |          |       |
|--|--------|--------|------|----------|----------|-------|
| Si hay transporte público vía carretera, cuántas veces al día hace viajes ida y vuelta |        |        |      |          |          |       |
| A donde va?  |        |        |      |          |          |       |
| La carretera más cercana: Kilómetros   |        |        |      |          |          |       |
| Condición de carretera de acceso   |        |        |      |          |          |       |
| El mercado más cercano en kilómetros   |        |        |      |          |          |       |
| Como se llama el mercado más cercano para vender y comprar en bruto                    |        |        |      |          |          |       |
| Vienen compradores para comprar en bruto   |        |        |      |          |          |       |
| Que productos compran en bruto   |        |        |      | Máiz     | Frijol   | Arroz |
| Pepitoria  | Tomate | Madera | Xate | Chicle   | Pimienta |       |
| Otro   |        |        |      |          |          |       |
| Vehículos en la comunidad: carros particulares   |        |        |      | Camiones | Buses    |       |
| Otros  |        |        |      |          |          |       |

Producción

|   |                               |              |                     |       |
|---|-------------------------------|--------------|---------------------|-------|
| Los productos de mayor importancia que la gente de la comunidad cosecha y vende son:        | 1.                            |              |                     |       |
| 2.  | 3.                            |              |                     |       |
| 4.  | 5.                            |              |                     |       |
| 6.  | 7.                            |              |                     |       |
| Principales fuentes de ingreso para la mayoría de los hombres y las mujeres de la comunidad | Agricultura en terreno propio |              |                     |       |
| Arrendamientos  | Trabajo en agro pagado        |              |                     |       |
| Trabajo en chicle   | Trabajo en xate               |              |                     |       |
| Corte de pimienta gorda   | Corte de madera               |              |                     |       |
| Trabajo asalariado  | Turismo                       |              |                     |       |
| Pesca   | Cacería                       |              |                     |       |
| Otros oficios importantes   | 1.                            |              |                     |       |
| 2.  | 3.                            |              |                     |       |
| 4.  | 5.                            |              |                     |       |
| Cuántas empresas, aserraderos hay en la comunidad   |                               |              |                     |       |
| Nombre  | Que hace                      |              | Número de empleados |       |
|   |                               |              |                     |       |
|   |                               |              |                     |       |
| Organizaciones existentes en la comunidad   |                               |              |                     |       |
| Socios  | Si, activo                    | Si, inactivo | No                  | TOTAL |
| Amas de casas   |                               |              |                     |       |
| Comité de salud   |                               |              |                     |       |
| Padres de familia   |                               |              |                     |       |
| Comité católico   |                               |              |                     |       |



|                         |  |  |  |  |
|-------------------------|--|--|--|--|
| Comité evangélico       |  |  |  |  |
| Comité deportivo        |  |  |  |  |
| Comité pro-mejoramiento |  |  |  |  |
| Otras                   |  |  |  |  |
|                         |  |  |  |  |

## PROYECTOS

|   |            |                                 |      |                     |
|---|------------|---------------------------------|------|---------------------|
| Especifique la clase de proyectos agrícolas que hay en la comunidad                                 |            |                                 |      |                     |
|   |            |                                 |      |                     |
|   |            |                                 |      |                     |
|   |            |                                 |      |                     |
| Hay otros proyectos en la comunidad   |            | Especifique                     |      |                     |
|   |            |                                 |      |                     |
|   |            |                                 |      |                     |
|   |            |                                 |      |                     |
| Tienen concesión o polígono   |            | Si                              | No   | Número de hectáreas |
|   |            |                                 |      |                     |
| En relación con las organizaciones, comités, etc., que hay en la comunidad, escriba sus presidentes |            |                                 |      |                     |
| Organización  | Presidente | Tiempo de vivir en la comunidad | Edad | ocupación           |
|   |            |                                 |      |                     |
|   |            |                                 |      |                     |
| Autoridades locales residentes en la comunidad  |            |                                 |      |                     |

| Nombre del puesto | Nombre | Tiempo de vivir en la comunidad | Edad | Oficio |
|-------------------|--------|---------------------------------|------|--------|
|                   |        |                                 |      |        |
|                   |        |                                 |      |        |

Personas con mayores recursos y/o líderes en la comunidad

| Nombre | Edad | Tiempo de vivir acá | Oficio/actividad |
|--------|------|---------------------|------------------|
|        |      |                     |                  |
|        |      |                     |                  |
|        |      |                     |                  |

Cuando las personas tienen problemas con la tenencia de la tierra o con sus "agarradas" y otros problemas que los afectan, con quien acuden?

|  |  |
|--|--|
|  |  |
|  |  |
|  |  |

Cuando las personas requieren de créditos/préstamos para poder financiar sus actividades productivas, ¿A quiénes acuden?  
Banco/prestamista privado/prestamista individual/adelanto con comprador/con contratista/con subcontratista

Historial de la comunidad

|  |  |
|--|--|
| En qué año se fundó la comunidad, o en qué año llegaron los primeros habitantes? |  |
| Qué problemas han tenido o tienen con la posesión de tierra?                     |  |
|  |  |
|  |  |
|  |  |

|  |  |
|--|--|
| Como piensan resolverlos?  |  |
|  |  |
|  |  |
| Otras observaciones importantes (relaciones con CONAP, ACOFOP, ONGs, Municipalidad, etc)                         |  |
|  |  |
|  |  |
| De acuerdo al sentimiento de la gente, cuáles son los principales problemas o necesidades que quisieran resolver |  |
| Cuáles son las aficiones principales, intereses, etc, de las personas de la comunidad?                           |  |

|   |  |
|---|--|
| Cuales son los más grandes desafíos y oportunidades para la comunidad |  |
| Desafíos  |  |
| Oportunidades   |  |
| Fecha   |  |

## **Annex 2. Interview Guides (Key informants)**

### **Guía a nivel comunitario - Líderes**

#### **Información sobre el encuestado**

- Antecedentes del entrevistado (sexo / edad / ocupación),
- participación y/o el papel de liderazgo que desempeña a nivel de la comunidad así como respecto al bosques
- papel en la implementación de la reforma de tenencia según sea su caso).

#### **Antecedentes sobre la comunidad**

1. Cambios a nivel de la población en la comunidad, ¿Cuáles son los cambios más significativos a nivel de la población actualmente y hace 10 años?
2. Principales actividades económicas de la comunidad, la agricultura, la silvicultura, etc., proporción estimada de las familias que se dedican a cada una.
3. ¿Principales amenazas a nivel interno y externo de la comunidad? ¿Principales amenazas que afectan los derechos de la comunidad a la tierra?
4. Divisiones clave y / o áreas de diferenciación interna en la comunidad --- migrantes vs autóctonos, distribución de la riqueza, principal medio de vida, los niveles de dependencia de los bosques, la educación y la alfabetización, género, etc.,
5. ¿Existen diferencias a nivel de la propiedad de la tierra entre los pobladores, y si existen son éstas pequeñas o grandes? ¿Si existe desigualdad en la tenencia de la tierra a nivel de la comunidad – va esta en aumento? o en disminución? o no cambia?

#### **Usos y usuarios de los recursos forestales en la actualidad y cómo han cambiado con el tiempo**

1. ¿ha habido cambios en el tiempo, a partir de cuándo y por qué?
  - a. ¿Qué desencadenó estos cambios? y ¿A partir de cuándo se han dado los cambios?
2. ¿Cómo pueden las mujeres obtener acceso a la tierra dentro de la comunidad?
  - ¿Tienen sus propias parcelas separadas de las de los hombres?

#### **Los cambios en las organizaciones e instituciones, originados por las reformas**

- ¿Cómo se llevó a cabo la reforma (el proceso de titulación, aplicación) y por quién fue llevado a cabo?

- o ¿Quién otorga los derechos (Ej. agencia de tierras, corte, Instituto Forestal o del ministerio, del gobierno regional, los líderes de la comunidad; después de una larga lucha por parte del pueblo, o por otra organización, después de un conflicto con los vecinos, etc.)? Explique.
- o ¿Estuvieron los miembros de la comunidad locales involucrados (o no) en el proceso de titulación? Si, ¿Cómo? No, ¿Por qué?
- o ¿Se formaron nuevas organizaciones y/o comités dentro de la comunidad después del proceso de titulación? ¿Quiénes son miembros de estos comités y/u organizaciones nuevas? ¿Cuáles son las funciones y responsabilidades de estos comités?

- ¿Defina si estos cambios son causados por actores externos?

-¿cuáles son las reglas para el uso del bosque hoy?

- ¿Quién hace las reglas para la distribución de la tierra/ el bosque?
- ¿Hay reglas especiales que limitan las actividades llevadas a cabo en los bosques?
  - ¿Existen reglas que restringen otras actividades a nivel del bosque? ¿Tales como el procesamiento y la venta de productos forestales? En caso sea afirmativo, por favor explique. ¿Quién hizo las reglas? ¿La comunidad o el gobierno local? ¿Los productos procesados son para el consumo personal o comercial?
- ¿Quién hace las reglas con respecto a quién puede acceder a qué recursos y con qué propósito? (o para convertir los bosques; también las reglas pueden diferenciarse entre lo que se puede acceder para el uso casero o para la venta)

- ¿Ha cambiado la forma en la que se toman las decisiones y se establecen normas a nivel de la comunidad desde el proceso de titulación?

- ¿Hubo algún cambio en torno a quién hace las reglas sobre la distribución de la tierra y el bosque a nivel de la comunidad?
- ¿Cuáles son los principales cambios en las reglas sobre la distribución de la tierra y el bosque a nivel de la comunidad?
- ¿Se cumplieron las reglas? De un ejemplo.

- ¿Cuál cree que fueron las verdaderas razones de estos cambios sobre la base de su conocimiento y experiencia a nivel de su comunidad?

- ¿Qué otras opciones de reformas de tenencia existen a nivel de la comunidad (teniendo en cuenta que en cada sitio, estamos analizando diferentes tipos de reformas)?

a. ¿Cuáles son los principales conflictos relacionados con los bosques entre esta comunidad y personas fuera de comunidad (pueblos vecinos, colonos, inmigrantes, empresas, otros)?

- ¿Cómo han cambiado los conflictos en el tiempo: tipo de conflicto, fuente, el grado y la intensidad?
- ¿Cómo resolvieron el conflicto?
- ¿Relación entre este (o estos) conflicto(s) y el proceso de titulación/ampliación? (El conflicto existía antes o después de la reforma)
- ¿La existencia de estos conflictos afecta los derechos de las personas a los bosques (Por ejemplo. el acceso, el uso y el manejo del bosque/tierra)?
- ¿Han afectado estos conflictos la situación en general de los bosques?

b. ¿Cuáles son los principales conflictos relacionados con los bosques a lo interno de la comunidad?

- ¿Cómo han cambiado los conflictos en el tiempo?: tipo, fuente, y el grado y/o intensidad.
- ¿Estuvo este conflicto relacionado con el proceso de titulación/ampliación (¿Antes o después del proceso de reforma)?
- ¿Cuáles fueron los desafíos que enfrentaron al tratar de resolver el conflicto?
- ¿La existencia de estos conflictos han afectado los derechos de las personas a los bosques, por ejemplo. el acceso, uso, manejo?
- ¿Han afectado estos conflictos la situación en general de los bosques/la tierra a nivel de la comunidad?

## Sobre el Contenido de los derechos

- ¿Quién tiene derecho a tomar decisiones acerca de las prácticas de manejo de los bosques (que plantas se pueden extraer, que cultivos y que áreas se pueden cultivar, la conversión de bosques a otros usos del suelo, si está permitido y quién decide?)
  - ¿Cómo participan las autoridades comunales en la definición de las reglas para la toma de decisión? (Por ejemplo, son las encargadas de definir las reglas; son las que proponen y presentan ante asamblea)
  - a) ¿Cómo participan los demás miembros de la comunidad en la definición de las reglas de toma de decisión (Por ejemplo, A través de asambleas comunales)?
  - b) ¿Cómo participa el Estado en la definición de las reglas de toma de decisión acerca de los bosques de la comunidad (están estas decisiones controladas por la agencia estatal de bosques por ejemplo, defina el nivel de autonomía de la comunidad para definir este tipo de reglas - ¿Cuáles se hacen a nivel local y cuáles son hechas por el Estado?)
- 2. ¿Quién hace cumplir las reglas sobre la extracción y las prácticas de manejo forestal a nivel de la comunidad?
  - a. En caso de que las reglas no se cumplan, ¿existen sanciones? ¿qué tipo de sanciones existen?
  - b. ¿Crees que estas reglas son justas y / o efectivas?
  - b. ¿Quién tiene derecho a establecer sanciones cuando se violan las reglas? ¿Estan los reglamentos de la comunidad escritos (¿existen estatutos?)? ¿Los miembros de la comunidad conocen estos reglamentos?
  - c. ¿Quién controla/monitorea el cumplimiento de la regla sobre extracción / las prácticas de manejo de bosques en la comunidad?
  - d. ¿Pueden los derechos de los bosques (para extraer productos) ser revocados (cancelados)? ¿Qué sucedería en este tipo de situaciones?
  - e. ¿Algún actor externo (por ejemplo, el gobierno., La industria privada) ha impedido la extracción de productos forestales las tierras que formalmente reconocen/reclaman? ¿Quién? ¿Bajo qué circunstancias?
  - f. ¿Alguna de estas normas o sanciones han cambiado con el tiempo?. ¿Qué causó el cambio?
  - g. En los pueblos en que la reforma ha tenido lugar: ¿cómo las reformas han cambiado estas reglas o sanciones?
  - h. Hoy en día, ¿cree que miembros de la comunidad siguen las reglas? (Siempre, con frecuencia, a menudo no, nunca) ¿Cuáles diría usted que son las más comúnmente seguidas y/o violadas? ¿Por qué?
  - i. ¿Se permite arrendar tierras forestales a otro miembro dentro de la comunidad / persona fuera de la misma?
    - a. ¿Está permitido el uso de las tierras forestales como garantía para crédito (cualquier otra manera de decirlo)?
    - b. ¿Se le permite vender las tierras forestales a otro miembro dentro de la comunidad / persona fuera de la misma?
    - c. ¿Cómo los derechos a las tierras forestales transferidos dentro de la familia (herencia de derechos)? ¿Qué pasa con las mujeres (hijas, esposas)?

## Sobre el proceso Concesionario

## Guía a nivel comunitario y Regional

1. Respecto a las condiciones que existían en la región de Petén previo al establecimiento de la RBM ¿Cómo han cambiado las condiciones de acceso/uso/manejo de los recursos dentro de lo que ahora conocemos con ZUM?
2. ¿De qué forma han apoyado/deteriorado estas condiciones de acceso/uso/manejo el establecimiento del sistema concesionario? (diferenciar organizaciones comunitarias vs. industriales)
3. De acuerdo a su experiencia ¿cuáles han sido las condiciones (externas/internas) que permitieron la apertura para que organizaciones comunitarias pudieran acceder a concesiones forestales.
4. ¿Cuales son, según su opinión, los principales alcances y debilidades del proceso concesionario (comunitario)?
5. ¿Cuáles son las principales amenazas (externas) del proceso concesionario (comunitario)?
6. ¿De qué forma los cambios de gobierno influyen en la estabilidad/funcionamiento del proceso concesionario?
7. ¿Cuál es el papel que tienen las organizaciones externas (diferenciar ONG de conservación vs. donantes) en el establecimiento/funcionamiento/alcance del proceso concesionario?
8. ¿Qué opinión le merecen la legislación y los instrumentos de política actual en el funcionamiento/alcance del sistema concesionario?
9. ¿qué estrategias de incidencia política favorecen la gestión política de las organizaciones concesionarias? (diferenciar por actor: organizaciones comunitarias vs. Organización de segundo nivel ACOFOP vs. Concesiones industriales)
10. ¿Cómo ve el papel que ACOFOP ha tenido en la gestión política de las organizaciones comunitarias concesionarias en función de:
  - a. Apoyar el proceso de obtención de concesiones comunitarias
  - b. Establecimiento/consolidación como organización de segundo nivel
  - c. Apoyar la formación de una empresa forestal comunitaria (FORESCOM)
  - d. Apoyar la comercialización de productos no maderables (como el chicle)
  - e. Anular el acuerdo gubernativo 129-2002 que cancelaba los derechos de uso para establecer la zona de protección cultural (ampliación del Parque Mirador)
11. Dentro de los procesos de gestión política conducidos por grupos comunitarios que han favorecido el funcionamiento del sistema concesionario ¿Qué lecciones aprendidas rescataría?
12. ¿Cuáles considera son los principales retos de las comunidades (diferenciar organizaciones comunitarias vs. ACOFOP) para mejorar su capacidad de gestión e incidencia política?

13. ¿De qué forma influyen las dinámicas externas en el proceso concesionario?
14. Según su opinión, ¿Qué oportunidades/amenazas representan los megaproyectos para el sistema concesionario?
  - a. Infraestructura vinculada al PPP (hidroeléctricas, carreteras, pistas de aterrizaje vinculadas a proyectos turísticos)
  - b. Ampliación de la Cuenca Mirador
  - c. Proyecto BID – PDS
  - d. Canje de Deuda
  - e. Otros proyectos que la parezcan relevantes
15. ¿Conoce el proceso de formación de la mesa intersectorial? ¿Es parte de la mesa intersectorial? ¿Conoce cuáles son los objetivos de esta iniciativa?
16. ¿Cuál debería de ser, según su opinión, el papel que los grupos concesionarios (industrial vs. Comunitario) dentro de esta mesa?



### Annex 3. Household Survey Sample

Boleta No. \_\_\_\_\_ Nombre de la Comunidad \_\_\_\_\_

Fecha: \_\_\_\_\_ Nombre del Encuestador \_\_\_\_\_

Nombre del entrevistado \_\_\_\_\_

#### Sección I. Datos sobre el hogar / composición del núcleo

|  |                                     |  |
|--|-------------------------------------|--|
| 1. Edad del padre  | 1.1 cual es su lengua materna       |  |
|  |                                     |  |
| 1.2 Lee y escribe?   | Si <input type="checkbox"/>         | No <input type="checkbox"/>            |
| 1.3 Ultimo Grado   |                                     |  |
| 1.4 Estado civil Soltero <input type="checkbox"/>                                    | Casado <input type="checkbox"/>     | Unido <input type="checkbox"/>         |
|  |                                     | Viudo <input type="checkbox"/>         |
|  | Divorciado <input type="checkbox"/> | Vuelto a Unir <input type="checkbox"/> |
| 2. Edad de la madre  | Etnia                               |  |
| 2.1 Lee y escribe?   | Si <input type="checkbox"/>         | No <input type="checkbox"/>            |
| 2.2 Ultimo Grado   |                                     |  |
| 3. Lugar de nacimiento (padre)   |                                     |  |
| 4. Lugar de nacimiento (madre)   |                                     |  |
| 5. Tiempo de vivir en la comunidad (el entrevistado)                                 |                                     |  |
| 5.1 En que año vino a Petén por primera vez (el entrevistado)                        |                                     |  |
| 5.2 En qué otras partes de Petén ha vivido (el entrevistado)?                        |                                     |  |
| 5.3 ¿Cuál fue el último lugar donde vivió antes de llegar a Petén? (el entrevistado) |                                     |  |
| 6. ¿Por qué se trasladó aquí? (el entrevistado)                                      |                                     |  |
| 6.1 ¿Cuándo vino a Petén, vino sólo o con su familia? (el entrevistado)              |                                     |  |
| 7. Hijos: Hombres  | Edades                              |  |



|                                   |                                     |
|-----------------------------------|-------------------------------------|
| 11. Religión                      |                                     |
| Católico <input type="checkbox"/> | Evangelico <input type="checkbox"/> |
| Otro <input type="checkbox"/>     | Especifique.                        |

### Sección II. Sistema de producción

1. ¿En qué trabaja usted? ¿Cuáles son las 3 actividades principales que hace para ganar dinero? Mencione actividades en orden de importancia

| Condición de actividad  | Rama de actividad   | Durante que meses realiza esta actividad |
|---|---|--|
| 1. Ocupado<br>2. Busca trabajo<br>3. Trabaja en casa (quehaceres domésticos)<br>4. Sólo estudia<br>5. Pensionado<br>6. Otro (especifique) | 1. Actividades extractivas (chicle, xate, corte de pimienta otra) | Extracción                               |
|   | 2. Agricultura en tierra propia                                   | Agricultura                              |
|   | 3. Trabaja en agricultura para otra persona                       |  |
|   | 4. Ganadería en tierra propia                                     | Ganadería                                |
|   | 5. Trabaja en ganadería para otra persona                         |  |
|   | 6. Comercio (ventas, producción de artesanías)                    | Comercio                                 |
|   | 7. Industria  |  |
|   | 8. Servicios (turismo)  | Industria                                |
|   | 9. Madera (aprovechamiento)                                       |  |
|   | 10. Otros (especifique)   | Otros                                    |

|  |  |
|--|--|
| 2. ¿Cuál de todas estas actividades le genera más ingresos?            |  |
| 3. Realiza algún tipo de actividades remuneradas fuera de la comunidad |  |

4. ¿Cuántas personas que viven en el hogar ganaron sueldos fijos en el último mes?

| Período         | Ingreso padre | Ingreso madre | Ingreso hijo 1 | Ingreso hijo 2 | Ingreso hijo 3 | Ingreso hijo 4 | Ingreso hijo 5 | Ingreso total ( ) |
|-----------------|---------------|---------------|----------------|----------------|----------------|----------------|----------------|-------------------|
| Último mes      |               |               |                |                |                |                |                |                   |
| Buena temporada |               |               |                |                |                |                |                |                   |

|                       |  |  |  |  |  |  |  |  |
|-----------------------|--|--|--|--|--|--|--|--|
|                       |  |  |  |  |  |  |  |  |
| <b>Mala temporada</b> |  |  |  |  |  |  |  |  |

|  |   |                                   |   |
|--|---|-----------------------------------|---|
| 5. Qué productos obtiene regularmente del bosque para su casa (NO PARA LA VENTA)                                   | Guano <input type="checkbox"/><br>Madera <input type="checkbox"/><br>Carne de caza <input type="checkbox"/><br>Leña <input type="checkbox"/><br>plantas medicinales <input type="checkbox"/><br>Otro <input type="checkbox"/> Especifique |                                   |   |
| 6. Que otros productos obtiene del bosque?   |   |                                   |   |
| 7. Tiene agua entubada   | Si <input type="checkbox"/> (pasa a pregunta 8)   | No <input type="checkbox"/>       | Por cuanto tiempo?                          |
| 7.1. Usualmente ¿quién acarrea el agua para el uso del hogar?  |   |                                   |   |
| 7.2. ¿De donde obtiene el agua que acarrearán para el uso del hogar?   |   |                                   |   |
| 8. ¿Con qué cocina?  | Con gas <input type="checkbox"/> (pasa a pregunta 10)   | Con leña <input type="checkbox"/> | Otro <input type="checkbox"/> (especifique) |
| 9.1. Usualmente, ¿quién acarrea la leña para el consumo del hogar?   |   |                                   |   |
| 10. Si tuviera un mayor ingreso de dinero por su trabajo, ¿en que principalmente preferiría utilizarlo/invertirlo? |   |                                   |   |

11. ¿Hay algún miembro del hogar que trabaje en agricultura en tierra propia o alquilada?  Si  No (ir a pregunta 15)

12. Ingresos y costos por agricultura

#### Ingresos Agricultura

| Producto | Área | Producción Área |               | Precio generado (Q/qq) |
|----------|------|-----------------|---------------|------------------------|
|          |      | Primera (qq)    | Postrera (qq) |                        |
| Maíz     |      |                 |               |                        |

|           |  |  |  |  |
|-----------|--|--|--|--|
| Frijol    |  |  |  |  |
| Pepitoria |  |  |  |  |
| Arroz     |  |  |  |  |
| Otro      |  |  |  |  |

|                      |  |  |  |  |  |
|----------------------|--|--|--|--|--|
| Desgranado o aporreo |  |  |  |  |  |
| Transporte           |  |  |  |  |  |
|                      |  |  |  |  |  |
|                      |  |  |  |  |  |
| <b>Total</b>         |  |  |  |  |  |

|   |                             |                             |
|---|-----------------------------|-----------------------------|
| 14. Lo que produce es suficiente para mantener a su familia | Si <input type="checkbox"/> | No <input type="checkbox"/> |
| 15. El año pasado le tocó comprar maíz                      | Si <input type="checkbox"/> | No <input type="checkbox"/> |

16. ¿Hay algún miembro del hogar que trabaje en ganadería?  Sí  No (ir a pregunta 18)

17. Ingresos y costos por ganadería

| Ingresos Ganadería |      |                |                 |
|--------------------|------|----------------|-----------------|
| Producto           | Área | Producción/año | Precio generado |
| Beceros o novillos |      |                |                 |
| Leche              |      |                |                 |
| Queso              |      |                |                 |
| Crema              |      |                |                 |
| Vacas, toros       |      |                |                 |
|                    |      |                |                 |
|                    |      |                |                 |

|                                      |                             |                             |           |
|--------------------------------------|-----------------------------|-----------------------------|-----------|
| 18. Tiene gallinas, patos, chompipes | Si <input type="checkbox"/> | No <input type="checkbox"/> | ¿Cuántas? |
|--------------------------------------|-----------------------------|-----------------------------|-----------|

|                                    |                             |                             |           |
|------------------------------------|-----------------------------|-----------------------------|-----------|
| 19. Tiene coches                   | Si <input type="checkbox"/> | No <input type="checkbox"/> | ¿Cuántas? |
| 20. Tiene bestias (caballos/mulas) | Si <input type="checkbox"/> | No <input type="checkbox"/> | ¿Cuántos? |
| 21. Tiene cabras u ovejas          |                             |                             |           |

22. Ingresos y costos por actividad maderera

| Ingresos Madera y Leña |          |                 |
|------------------------|----------|-----------------|
| Producto               | Cantidad | Precio de venta |
| Madera                 |          |                 |
| Leña                   |          |                 |

| Costos Madera y Leña |              |        |
|----------------------|--------------|--------|
| Producto             | Mano de Obra | Precio |
| Madera               |              |        |
| Leña                 |              |        |

23.. ¿Quiénes participan en la actividad?

|                         |  |                |
|-------------------------|--|----------------|
| Agricultura             | Quienes participan<br>Padre <input type="checkbox"/><br>Madre <input type="checkbox"/><br>Hijos <input type="checkbox"/><br>Otros <input type="checkbox"/> | ¿Haciendo que? |
| Actividades extractivas |  |                |
| Chide                   | Quienes participan<br>Padre <input type="checkbox"/><br>Madre <input type="checkbox"/><br>Hijos <input type="checkbox"/><br>Otros <input type="checkbox"/> | ¿Haciendo que? |
| Xate                    | Quienes participan<br>Padre <input type="checkbox"/><br>Madre <input type="checkbox"/><br>Hijos <input type="checkbox"/><br>Otros <input type="checkbox"/> | ¿Haciendo que? |

|   |  |                             |                    |  |
|---|--|-----------------------------|--------------------|--|
| Pimienta  | Quienes participan<br>Padre <input type="checkbox"/><br>Madre <input type="checkbox"/><br>Hijos <input type="checkbox"/><br>Otros <input type="checkbox"/> | ¿Haciendo que?              |                    |  |
| Otras actividades extractivas (Bayal, mimbre)<br>Quienes participan         | Quienes participan<br>Padre <input type="checkbox"/><br>Madre <input type="checkbox"/><br>Hijos <input type="checkbox"/><br>Otros <input type="checkbox"/> | ¿Haciendo que?              |                    |  |
| Prestación de servicios (Ej. Mirador, Turismo)                              | Quienes participan<br>Padre <input type="checkbox"/><br>Madre <input type="checkbox"/><br>Hijos <input type="checkbox"/><br>Otros <input type="checkbox"/> | ¿Haciendo que?              |                    |  |
| Ganadería   | Quienes participan<br>Padre <input type="checkbox"/><br>Madre <input type="checkbox"/><br>Hijos <input type="checkbox"/><br>Otros <input type="checkbox"/> | ¿Haciendo que?              |                    |  |
| Otras (Ej. Pavos)<br>Especifique  | Quienes participan<br>Padre <input type="checkbox"/><br>Madre <input type="checkbox"/><br>Hijos <input type="checkbox"/><br>Otros <input type="checkbox"/> | ¿Haciendo que?              |                    |  |
| 24. Para poder realizar estas actividades, se tiene que ausentar de su casa | Si <input type="checkbox"/>  | No <input type="checkbox"/> | Por cuanto tiempo? |  |

**Ingresos y costos por uso de la tierra**

25. ¿Cuál es el área de su terreno dedicada a: (especificar unidad de medida, Ej. cuerdas, manzanas)

|  | Área |
|--|------|
| Cubierta con bosque                        |      |
| Con cultivos                               |      |
| Dedicada a ganadería                       |      |
| Dedicada a otras actividades (especifique) |      |

|   |  |                                       |   |                                   |                               |
|---|--|---------------------------------------|---|-----------------------------------|-------------------------------|
| 26. ¿Que extensión tiene su agarrada?<br>(especificar unidad de medida, ej cuerdas, tareas, hectáreas, caballerías etc) |  |                                       |   |                                   |                               |
| 27. Desde hace cuanto tiene su parcela (trabajadero)  |  |                                       |   |                                   |                               |
| 28. Es esta parcela propia?   | <input type="checkbox"/> Sí  | <input type="checkbox"/> No           | Es arrendada <input type="checkbox"/> (pasar a pregunta 31) |                                   |                               |
| 29. *¿Tiene usted título de propiedad beneficiario del terreno, etc.)   | <input type="checkbox"/> Sí (pasar a pregunta 32)  | No (Explicar, arrienda,               |   |                                   |                               |
| 30. ¿De quién es esta parcela?  | _____  |                                       |   |                                   |                               |
| 31. ¿Usted paga por ella?   | <input type="checkbox"/> Sí  | <input type="checkbox"/> No           | ¿Cuánto paga?   | _____                             |                               |
| 32. ¿Donde reside usualmente?   | <input type="checkbox"/> en la finca<br><input type="checkbox"/> en ciudad cercana (especifique) _____<br><input type="checkbox"/> en otro lugar (especifique) _____ |                                       |   |                                   |                               |
| 33. Normalmente ¿cuanto tiempo le toma llegar a su parcela (trabajadero)?   |  |                                       |   |                                   |                               |
| 34. ¿Como se traslada a su parcela (trabajadero)?   | A pie <input type="checkbox"/>   | En bicicleta <input type="checkbox"/> | Caballo, mula o burro <input type="checkbox"/>              | Vehículo <input type="checkbox"/> | Otro <input type="checkbox"/> |
| 35. En qué lugar compra sus víveres?  |  |                                       |   |                                   |                               |



|  |   |   |   |
|--|---|---|---|
| 36. Las tierras donde vivía antes eran:  | Mejores <input type="checkbox"/>        | Peores <input type="checkbox"/>                 | Iguals <input type="checkbox"/>             |
| 37. Está avencidado en San Andrés (tiene cédula)   | Sí <input type="checkbox"/>             |   | No <input type="checkbox"/>                 |
| 38. Si tuviera oportunidades se quedaría en el lugar o se cambiaría?   |   |   |   |
| 38.1 Por qué?  |   |   |   |
| 39. ¿para poder realizar sus actividades productivas de este año necesitó de algún tipo de adelanto/crédito? | Sí <input type="checkbox"/>             | No <input type="checkbox"/>                     |   |
| 39.1 ¿De quién obtuvo ese adelanto/crédito?  | Banco <input type="checkbox"/>          | Prestamista privado <input type="checkbox"/>    |   |
| Contratista <input type="checkbox"/>   | Subcontratista <input type="checkbox"/> | Prestamista individual <input type="checkbox"/> | Adelanto comprador <input type="checkbox"/> |
| 40. Anteriormente ha intentado obtener algún tipo de préstamo/crédito  | Sí <input type="checkbox"/>             | No <input type="checkbox"/>                     |   |
| 40.1 ¿Cuándo fue la última vez que solicitó un crédito/préstamo?   |   |   |   |
| 40.2 ¿Para qué solicitó este préstamo/crédito?   |   |   |   |
|  |   |   |   |

### Sección III. Vinculación institucional

|  |    |    |
|--|----|----|
| 1. ¿Sabe usted que se encuentra en un área protegida                                     | Sí | No |
| 2. ¿Con qué instituciones han tenido comunicación desde que se encuentran en este lugar? |    |    |
| 3. ¿Por qué cree que la gente se ha trasladado a este lugar?                             |    |    |
| 4. ¿Qué piensa usted de la Reserva de la Biósfera Maya?                                  |    |    |
| 5. ¿Piensa usted que están creciendo las fincas ganaderas en la región?                  |    |    |

|  |        |                  |  |
|--|--------|------------------|--|
|  |        |                  |  |
| 6. el trabajo del CONAP es:  | Bueno  | Regular          | Malo   |
| ¿Por qué?  |        |                  |  |
| 7. Conoce usted el trabajo de ACOFOP                                     | Sí     |                  | No   |
| 8. El trabajo de ACOFOP es   | Bueno  | Regular          | Malo   |
| ¿Por qué?  |        |                  |  |
| 7. ¿Ha recibido ayuda de alguna institución o grupo organizado?          | Sí     |                  | No   |
| ¿De cual?  |        |                  |  |
| 8. A quién acude cuando tiene problemas sobre                            | Tierra | Siembras/culivos | Asuntos de la comunidad (Ej. Agua, escuelas) |
| 9. ¿Cuáles cree usted que son los principales problemas de la comunidad? |        |                  |  |
|  |        |                  |  |