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Lessons for REDD+ from the study of
land-use change and benefit sharing in
Madre de Dios, Ucayali and San Martin

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Abbreviations

ACCA	<i>Asociación para la Conservación de la Cuenca Amazónica</i> (Association for the Conservation of the Amazon Basin)
ACOPAGRO	<i>Cooperativa Agraria Cacotera</i> (Cocoa Agrarian Cooperative)
ACOMAT	<i>Asociación de Concesionarios Forestales Maderables y no Maderables de las Provincias Manu y Tambopata</i> (Association of Forest and NTFP Concessions in the Provinces of Manu and Tambopata)
AIDER	<i>Asociación para la Investigación y el Desarrollo Integral</i> (Association for Research and Integral Development)
AIDSESP	<i>Asociación Interétnica de Desarrollo de la Selva Peruana</i> (Interethnic Association for the Development of the Peruvian Amazon)
AMPF	Alto Mayo Protected Forest
ANP	Natural protected area.
ARA	<i>Autoridad Regional Ambiental</i> (Regional Environmental Authority)
BAM	Bosques Amazónicos, S.A.C. (a Peruvian company dedicated to the conservation, protection, restoration and sustainable management of tropical forests)
BPP	<i>Bosques de producción permanente</i> (permanent protection forests)
BSA	Benefit-sharing agreement
CAM	<i>Comisión Ambiental Municipal</i> (Municipal Environmental Commission)
CAR	<i>Comisión Ambiental Regional</i> (Regional Environmental Commission)
CCB	Climate, Community and Biodiversity Standards
CCBA	Climate, Community and Biodiversity Alliance
CI	Conservation International
CIAM	<i>Consejo Interregional Amazónico</i> (Amazon Interregional Council)
CIMA	<i>Centro de Conservación, Investigación y Manejo de Áreas Naturales</i> (Center for Conservation, Research and Management of Natural Areas)
COFOPRI	<i>Organismo de Formalización de la Propiedad Informal</i> (Commission for the Formalization of Informal Property)
CSO	Civil society organization
DAR	<i>Derecho, Ambiente y Recursos Naturales</i> (Rights, Environment and Natural Resources – a Peruvian NGO)
DEFFS	<i>Dirección Regional Forestal y de Fauna Silvestre</i> (Regional Forest and Wildlife Directorate)
DEVIDA	<i>Comisión Nacional para el Desarrollo y Vida sin Drogas</i> (National Commission for Development and Life without Drugs)
DGAAA	<i>Dirección General de Asuntos Ambientales Agrarios</i> (General Directorate of Agrarian Environmental Affairs)
DGEVFPN	<i>Dirección General de Evaluación, Valoración y Financiamiento del Patrimonio Natural</i> (General Directorate of Assessment, Valuation and Financing of the Natural Patrimony)
DGFFS	<i>Dirección General Forestal y de Fauna Silvestre</i> (General Directorate of Forestry and Wildlife)
DRA	<i>Dirección Regional de Agricultura</i> (Regional Directorate of Agriculture)

DRASM	<i>Dirección Regional de Agricultura de San Martín</i> (Regional Directorate of Agriculture of San Martín)
DREHM	<i>Dirección Regional de Energía, Hidrocarburos y Minería</i> (Regional Directorate of Energy, Hydrocarbons and Mining)
DRFFS	<i>Dirección Regional Forestal y de Fauna Silvestre</i> (Regional Forest and Wildlife Directorate)
DRSAU	<i>Dirección Regional Sectorial de Agricultura de Ucayali</i> (Ucayali Regional Directorate for the Agriculture Sector)
GCS	Global Comparative Study
EIA	Environmental impact assessment
EPS	<i>Entidad Prestadora de Servicios de Saneamiento de Moyobamba</i> (Moyobamba Sanitation Service Provision Entity)
FEPROCAMD	<i>Federación Departamental de Productores de Castaña de Madre de Dios</i> (Regional Federation of Brazil-nut Producers of Madre de Dios)
FERIAAM	<i>Federación Regional Indígena Awajún del Alto Mayo</i> (Alto Mayo Regional Awajun Indigenous Federation)
FPIC	Free, prior and informed consent
GOREMAD	<i>Gobierno Regional de Madre de Dios</i> (Regional Government of Madre de Dios)
GOREU	<i>Gobierno Regional de Ucayali</i> (Regional Government of Ucayali)
GORESAM	<i>Gobierno Regional de San Martín</i> (Regional Government of San Martín)
GRRNYMA	<i>Gerencia Regional de Recursos Naturales y Gestión del Medio Ambiente</i> (Regional Office of Natural Resources and Environmental Management)
INEI	<i>Instituto Nacional de Estadística e Información</i> (National Institute of Statistics and Information)
ITTO	International Tropical Timber Organization
LED	Low-emissions development
MEF	<i>Ministerio de Economía y Finanzas</i> (Ministry of Economy and Finances)
MEM	<i>Ministerio de Energía y Minas</i> (Ministry of Energy and Mines)
MINAGRI	<i>Ministerio de Agricultura y Aguas</i> (Ministry of Agriculture and Water)
MINAM	<i>Ministerio del Medioambiente</i> (Ministry of the Environment)
MRV	Monitoring, reporting and verification
NGO	Nongovernmental organization
NTFP	Non-timber forest products
OEFA	<i>Organismo de Evaluación y Fiscalización Ambiental</i> (Environmental Evaluation and Control Office)
ORAU	<i>Organización Regional AIDSESEP Ucayali</i> (Ucayali AIDSESEP Regional Organization)
OSINFOR	<i>Organismo de Supervisión de los Recursos Forestales y de Fauna Silvestre</i> (Monitoring Agency for Forest Resources and Wildlife)
OT	<i>Ordenamiento territorial</i> (territorial planning/land-use planning)
PCM	<i>Presidencia del Consejo de Ministros</i> (Presidency of the Council of Ministers)
PDD	Project design document
PEAM	<i>Proyecto Especial del Alto Mayo</i> (Alto Mayo Special Project)
PEN	Peruvian Sol (the Peruvian currency)
PNCAZ	<i>Parque Nacional Cordillera Azul</i> (Cordillera Azul National Park)
PNCB	<i>Programa Nacional de Conservación de Bosques para la Mitigación del Cambio Climático</i> (National Forest Conservation Program for the Mitigation of Climate Change)

POT	<i>Plan de ordenamiento territorial</i> (land-use plan)
REDD+	Reducing emissions from deforestation and forest degradation and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries
SENACE	<i>Servicio Nacional de Certificación Ambiental</i> (National Environmental Certification Service)
SERFOR	<i>Servicio Nacional Forestal y de Fauna Silvestre</i> (National Forestry and Wildlife Service)
SERNANP	<i>Servicio Nacional de Áreas Naturales Protegidas</i> (National Protected Natural Areas Service)
SPDA	<i>Sociedad Peruana de Derecho Ambiental</i> (Peruvian Environmental Law Society)
SPDE	<i>Sociedad Peruana de Ecodesarrollo</i> (Peruvian Eco-Development Society)
UNFCCC	United Nations Framework Convention on Climate Change
UN-REDD	United Nations REDD Programme
USAID	United States Agency for International Development
VCS	Verified Carbon Standard
ZEE	<i>Zonificación Ecológica Económica</i> (Ecological and Economic Zoning)
ZOCRE	<i>Zona de Conservación y Recuperación Ecosistémica</i> (Regional Conservation and Ecosystem Recuperation Zone)

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Executive summary

This study aims to explore multilevel governance institutions and shed light on how they affect decision making around land use and interact with low-emissions development (LED) initiatives like REDD+. We analyze multilevel governance issues including how power is distributed, how information flows, the extent to which decision processes are participatory, whether processes and outcomes are legitimate, and why and how land-use change occurs. We ask how actors from multiple levels and sectors interact in a decentralized regime to make land use and land-use change decisions; who is driving deforestation and forest degradation; and who is driving low-emissions development options. REDD+ policies are given particular attention due to their importance for low-emissions development discussions in Peru. In this respect, we examine to what extent the experiences with REDD+ and similar initiatives help identify obstacles and opportunities for efficient and equitable pathways towards more sustainable futures.

Reducing emissions from deforestation and forest degradation and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries (REDD+) was created as a market-based global governance mechanism for reducing carbon emissions (Humphreys 2008). The aim was to establish a compensation mechanism, or performance-based payments, to provide incentives for countries and forest users to reduce carbon emissions and increase carbon stocks (Angelsen 2008). The emergence of REDD+ at the international and national levels and the implementation of pilot projects since 2008 have raised questions regarding how different institutions operating at multiple levels interact with the existing national policy frameworks for land use. REDD+ can be considered one way in which to contribute to low emissions development strategies, “green development” or overall sustainability.

This report presents an analysis based on interviews with actors across multiple levels¹ and sectors, including government (mostly regional and local), nongovernmental organizations (NGOs), indigenous organizations, private companies, project developers and implementers, and local communities located in the three departments² (referred to in this report as “regions”) of Madre de Dios, Ucayali and San Martin. Site selection within regions was based on interviews with key informants, particularly from regional government and nongovernmental actors, to identify important sites of land-use change and conservation initiatives in each region. The sites include initiatives aimed at conserving forests, promoting sustainable forest management and reducing emissions from deforestation and degradation, as well as others associated with deforestation. The analysis of the 14 selected case study sites and the regional and local context was based on 295 interviews. By grounding the analysis in these specific cases of land-use change, we were able to analyze how national-, regional- and local-level actors and policies ultimately shaped land-use decisions on the ground.

In Section 4, we discuss the distribution of powers and responsibilities involved in land use and analyze issues related to the authority and influence of different government sectors and levels over land use. The agriculture and mining sectors remain the most influential in these decisions as several key powers, such as titling and assigning a vocation to land, are in their hands. The environment sector, on the other hand, is much less powerful in land-use decisions, which challenges the potential of its programs aimed at conservation and the sustainable use of natural resources in forests.

The experience of decentralization varies greatly by region. While regional governments have been given important powers over land, they are sometimes blamed for problems they did not create but rather inherited and that they cannot solve alone, such as overlapping land-tenure regimes in Madre de Dios.

1 The levels include local (project), regional and national, the latter two of which refer to political jurisdictions.

2 The “department” is the largest subnational political unit in Peru.

Many respondents from diverse government offices and civil society bemoan “poor coordination” between government sectoral offices – such as mining, forestry, agriculture and the environment – and see better land-use planning as a solution. Nevertheless, differences in powers and empowerment across sectors reflect the decisions of leaders and the coalitions that support them. Regional governments demonstrate some progress in coordination compared to the past through the creation of Regional Environmental Authorities, but progress is still marginal, especially in Madre de Dios and Ucayali.

Section 5 presents the different actors and policies that influence land use through “business-as-usual” development activities that tend to promote deforestation and forest degradation and through low-emissions projects such as REDD+. In a few cases, such as two oil palm sites in San Martin and Ucayali, the private sector was shown to have substantial leverage with government: these sites demonstrated both deforestation and conflict with local communities. While smallholders, local people and private companies were widely presented as direct drivers of deforestation across regions, respondents also recognized the influence of national policies that have historically incentivized the conversion of forests to agricultural uses and of regional governments, which were also linked to deforestation and forest degradation, particularly in Ucayali and Madre de Dios. Initiatives to address deforestation were considered insufficient and corruption was identified as influential in decision making around land use in Madre de Dios and Ucayali, whereas San Martin is recognized for its attention to conservation and its approach to integrated land-use planning that encourages cross-sector coordination. These differences across regions matter. The emphasis of regional offices on more conservation and integrated land-use planning demonstrates the influence of history and leadership in the region. While San Martin’s leadership and political willingness to move forward with conservation initiatives comes out of a particular history and context of land-use change, it would not be shifting trajectories without this leadership.

There are very few spaces for dialogue around environmental issues in the regions apart from the REDD+ roundtables, which have encouraged dialogue among project proponents (primarily NGOs), regional government and civil society organizations at the regional and national levels. In the case of Peru, REDD+ funding and efforts are handled by the environment sector and are currently only directed at smallholders, while the private sector and government actors – particularly the agriculture sector – retain significant decision-making power over forests yet are not involved in low-emissions development or discussions around it. Although REDD+ provides both new opportunities for coordination across different levels of government and economic opportunities, the existing fragmentation across sectors may inhibit progress on effectively addressing drivers of deforestation and degradation.

Section 6 uses the concept of legitimacy to examine the success to date of initiatives supporting REDD+ or REDD+-related goals. The low-emissions development projects discussed in this report represent an alternative approach to conservation and development by using compensation mechanisms that are expected to incentivize conservation and sustainable natural resource management through monetary and nonmonetary benefits. This section also offers an analysis of the benefits and burdens found in the REDD+ sites as well as the legitimacy of the REDD+ project development process, particularly through the benefit-sharing arrangement. Benefits from REDD+ projects in Peru are primarily nonmonetary, such as the provision of capacity building and technical and legal assistance. The REDD+ projects examined were conservation-oriented, and, in some cases, alternative livelihood options did not necessarily outweigh the burdens placed on local communities by conservation activities. Project proponents also face serious burdens in the form of the high transaction costs involved in REDD+ project development that have led to the termination of two projects since the main fieldwork for this project in 2013.

The perceived legitimacy of sites was varied, characterized by different levels of local participation and inclusion as well as of local satisfaction with the benefit-sharing arrangement. In most sites, low levels of legitimacy reflected the tendency for project proponents (primarily NGOs) to design the benefit-sharing arrangement with minimal involvement from local participants in the negotiation of

terms. Project proponents also withheld information on REDD+ from local communities so as to avoid creating false expectations and confusion around a complex topic, which can threaten legitimacy by weakening local trust and participation in projects.

Finally, we offer a synthesis and conclusions in Section 7. Across sites, we found the process of land-use changes and benefit-sharing arrangements to be largely shaped by the power dynamics among the entities involved in each site, which affected how different actors were engaged in decision-making processes and how they benefited from the actual project and land-use change. This research calls for greater attention to strengthening coalitions of different actors in efforts to foster development strategies – such as low-emissions development projects – that provide an alternative to business-as-usual land-use activities.

Many past conservation efforts have fallen short of their expected aims of slowing deforestation in the tropics in part because they failed to address the major drivers of deforestation and focused solely on the forest sector without involving other relevant sectors in discussions and initiatives (Angelsen 2008). The current dialogue around REDD+ continues on this track without adequately incorporating lessons learned into its development. As REDD+ is a political process being developed at the global, national and local levels, there is a need to take into consideration the agendas and interests of relevant actors in multiple sectors.

The potential for change faces substantial institutional obstacles, including problems with cross-sector and cross-level coordination and the ability of more powerful people to take advantage of technicalities, grey areas in the law or multilevel relationships. Proponents of REDD+ and other low-emissions initiatives have their own interests and objectives, with varying degrees of transparency and free, prior, and informed consent. Thus, REDD+ or other low-emissions development strategies face similar challenges to their legitimacy among local populations as any external initiative from the private sector, government or NGOs. While this study did not intend to question the extent to which current benefits represent effective livelihood options to change land-use practices, evidence points to the need to more strategically incorporate incentives, such as those envisioned under low-emissions development, in order to deter other – less sustainable – land-use practices. This research also indicates that some projects are more legitimate than others because of greater local inclusion in the initiative's development and just compensation for local conservation efforts. These findings suggest that if change in land-use practices is to occur in practice, initiatives will have to garner support from local communities.

Some of the greatest obstacles to alternatives to deforestation in Peru are related to the economics of land-use change, as seen in the State's investment in oil palm and actions taken around mining, as well as the power of the dominant development paradigm and the actors behind it. Hence, though many people in the regions see land-use planning, which is currently non-binding and under the environment sector, as a panacea for solving land-use problems, its current legal weaknesses reflect prevailing power dynamics and the hegemony of a development paradigm that assigns concerns over the environment, forests or carbon emissions a much weaker role. Nevertheless, as the case of San Martín demonstrates, leadership that seeks new directions can make a difference.

1 Introduction

Land-use decisions involve a complex web of actors, which raises questions regarding how divergent, often conflicting, interests and levels of power affect land-use change. We use a multilevel governance perspective to unravel relationships among actors and to understand how different actors influence land use and land-use change, as well as related decision-making processes. This perspective focuses on the “processes and structures of public policy, decision-making and management that engage people constructively across the boundaries of public agencies, levels of government, and/or the public, private and civic spheres in order to carry out a public purpose” (Emerson et al. 2012). This approach to multilevel governance includes an analysis of both government and nongovernment actors (see Marks 1993). Both Emerson et al. and Marks describe multilevel governance as a process characterized by ever-changing dynamics among actors to influence governance processes.

This work borrows from literature on multilevel governance and decentralization that recognizes the inherently interconnected relationship among different actors and across different levels of governance in understanding decision-making processes. Decentralization – which has been underway since 2002 in Peru – creates the political context for the different powers held by multiple layers of government actors that ultimately shape governance processes and outcomes. Our conceptualization of multilevel governance includes cross-sectoral coordination, thus referring to coordination and conflict among different actors not only vertically across levels of governance but also horizontally. In this report, we examine how different actors are involved in land-use decision processes through a comparative, nested case study analysis.

This study is based primarily on research conducted between July and November 2013 in Madre de Dios, Ucayali and San Martín, Peru, as part of CIFOR’s Global Comparative Study (GCS) on REDD+, as well as direct engagement in Madre de Dios and San Martín through 2015. It is part of a multilevel governance study that includes Indonesia, Vietnam, Tanzania and Mexico. This particular study is positioned between two other CIFOR research components within the GCS: one focusing on actors, policies, and institutions relevant to REDD+ at the national level, and another on the livelihoods- and household-level impacts of REDD+ pilot projects. The goal of the present study is to explore the multilevel governance arrangements between these levels in order to understand how decisions are made by different actors across levels and sectors regarding land use and benefit sharing at the landscape scale. This includes how power is distributed, how information flows, the extent to which decision processes are participatory and whether processes and outcomes are legitimate.

The term ‘multilevel governance’ is often used normatively with the assumption that is good in and of itself. Our analysis does not assume that governance is good if it is multilevel, but it does assume that land-use governance is inherently multilevel. For example, even when a decision about a land-use change is made by a centralized authority, the implementation of that decision will likely involve a series of actors at multiple levels taking actions with direct impact on the ground. Our analysis of multilevel governance does not propose an ideal model for the distribution of power, but we do accept certain governance principles, such as inclusion, representation, transparency and accountability, all of which are considered important to evaluate relationships between levels. We use this exploratory work to examine how power and politics shape land-use decisions in systems that involve relationships among many different types of actors.

These issues are explored here through the comparative study of 14 case study sites involving land-use change (particularly deforestation) or initiatives to stop or slow deforestation (e.g. REDD+ sites, conservation initiatives), as they are nested in the particular context of each of the three regions. The three study regions are characterized by distinct land-use patterns and different experiences with

REDD+. They also feature distinct governance dynamics that affect land use in general. While San Martin has high but declining deforestation rates and is dominated by agricultural practices, Madre de Dios and Ucayali are faced with increasing deforestation rates and more diverse land uses that make for more complex and often conflicting land-use practices on the ground. Problems of institutional instability, weak cross-sectoral coordination and corruption have fueled tensions around different land uses in Madre de Dios and Ucayali, while San Martin's institutional stability and innovative regional coalitions and projects have led to a process of strengthening cross-sectoral coordination through the development of integrated regional land-use planning policies. San Martin and Madre de Dios are the regions with the most REDD+ pilot projects, though all three have a regional REDD+ roundtable with the potential to facilitate multistakeholder dialogue around REDD+. Comparing the three regions across these different regional characteristics allows us to consider how certain context variables may influence processes and outcomes.

This study is particularly interested in understanding the obstacles to and opportunities for moving toward low-carbon emissions or sustainable futures, in ways that are both effective and equitable. We elucidate perspectives and actions taken on REDD+ and other low carbon-emission land-use options by looking at different features of multilevel governance arrangements (institutions and policies) considered relevant to decision making about land use, and how they influence the effective and equitable adoption of low carbon emissions land-use options.

Multilevel governance in Peru has changed significantly in recent history, principally through the decentralization process in which specific powers once held by the central government were transferred to its 25 regional governments. The decentralization process redistributed powers in the forestry, environment and agriculture sectors, thus expanding the powers of regional governments in decision making over land use in forested areas. Although the policies and laws dictating such reforms were applied uniformly, they have been applied differently and had different effects, given the regions' distinct governance and land-use histories and contexts.

Over the past few decades, many countries have implemented forest decentralization reforms, which have the potential to improve forest management (Larson and Soto 2008). REDD+ strategies are likely to be more equitable and locally legitimate if they represent local needs and aspirations in their design, implementation and benefit sharing (Angelsen 2008). The decentralization of meaningful decisions to locally accountable and responsive (representative) local authorities would promote local engagement in REDD+ decision making.

Although the focus of this research is on these three regions of the Peruvian Amazon, some sections of the report include the national context, such as Peru's decentralization process. While it is difficult to generalize many of the findings to the country as a whole, the site selection approach is used to inform REDD+ options and future land-use decisions within Peru and globally.

Additionally, readers should be aware that since we conducted this research primarily in 2013, new laws have been passed and realities on the ground have evolved. For example, the new Forest Law No. 29736 was passed in 2014 and the National Strategy for Climate Change is currently going through the approval process. With respect to events that were reported during field interviews, we generally refer to those that happened in the past and to processes that have already concluded using the past tense, while employing the present tense when respondents described processes or reported events that were ongoing and likely to extend up to or beyond the publication of the report.

This report is organized with Section 2 providing a summary of the methods and study site selection, while Section 3 introduces the primary drivers of land-use change across study regions. In Section 4, we analyze the distribution of power and influence over forests in both law and practice across sectors based on a review of law and policy (Fernandini and Sousa 2015) and regional key informant interviews. Section 5 examines the different actors and policies that influence land use through business-as-usual development activities that tend to promote deforestation and forest degradation

and through low-emissions projects such as REDD+. Section 6 offers an analysis of the benefits and burdens found in the REDD+ sites, as well as the legitimacy of the REDD+ project development process. It then uses the concept of legitimacy to examine local perceptions around the development of REDD+ initiatives and benefit-sharing arrangements. We also consider REDD+'s potential to change land-use practices through alternative land uses. We use the 14 low-emissions development study sites to analyze multilevel processes and outcomes for communities, including benefits and burdens and the legitimacy of processes and outcomes. The final section offers a short synthesis and conclusions, while the Appendix provides a summary of each of the study sites.

2 Methods

This research employed a comparative case study approach in order to capture a diversity of multilevel governance arrangements as part of the GCS project. Several regions were selected per country, with approximately five case study sites per region. Globally, the research included 54 case study sites in 11 regions of 5 countries.

We use the terminology of ‘increasing’ and ‘decreasing’ carbon emissions sites to group case study site selection. Our goal, however, in the study of multilevel governance was to include a broad spectrum of sites both with significant land-use change, such as deforestation, and with initiatives aimed at slowing or stopping such changes. Measured emissions were not relevant to this component of the research. Hence these terms should be considered only as shorthand for site selection and not indicative of actual emissions or of the goal of associated actors.

The three study regions of Madre de Dios, San Martin and Ucayali, all located in the Peruvian Amazon, were selected as the regions with the most REDD+ projects in Peru, according to the most reliable accounts available. They also represented contrasts in terms of deforestation dynamics, the overall reputation of the regional governments (transparency versus corruption) and conservation-development priorities.

Case study site selection was based on areas identified by regional key informants as having experienced significant land-use change in the last 30 years and areas in which projects were attempting to address deforestation and degradation. We aimed for approximately three ‘decreasing’ and two ‘increasing’ carbon emissions sites with at least one REDD+ project per region. The research team conducted semi-structured key informant interviews at the regional level to understand key aspects and issues surrounding regional and multilevel governance, identify major actors and drivers of deforestation and degradation, and also identify important initiatives aimed at reducing deforestation threats. Table 1 shows a summary of the 14 sites selected by category.

Table 1. Summary of sites by selected criteria.

Criteria	Madre de Dios	Ucayali	San Martin
Aimed at lower emissions activities (not REDD+)	1	1	2
Aimed at lower emissions activities (REDD+)	2	1	2
Associated with deforestation and forest degradation drivers (‘increasing emissions sites’)	2	1	2

The research team, consisting of one researcher in each region, used four types of field instruments to collect data in Madre de Dios and San Martin between July and November 2013 and in Ucayali between July and August 2013. A few additional interviews were conducted during 2014, and participant observation by the research coordinators continued nationally and in San Martin particularly, through 2015. We used interview instruments that were developed for use across the study countries (CIFOR 2015), including key informant, land-use history and benefit-sharing interviews. The researchers combined and adapted the interview guides as appropriate in order to conduct open-ended, semi-structured interviews with multiple actors. Overall, the interviews were aimed at understanding the actors involved in land-use decision making, the relationships among actors, the processes leading up to land-use changes, agreements to distribute benefits (particularly but not only from REDD+ projects) and the results of land-use decisions.

In the sites aimed at reducing deforestation, such as REDD+ and other low-emissions development projects, we conducted 125 semi-structured interviews with individuals considered most knowledgeable

on each initiative. To study the legitimacy of the project development process, we asked informants about their perceptions of the development of the benefit-sharing arrangement, or the actual mechanism used to distribute benefits from the initiatives themselves. The research included projects with established benefit-sharing arrangements and others that were in the early development stages, while some sites were in between.

In sites associated with increasing deforestation and forest degradation drivers or those resulting in increasing emissions, researchers conducted open-ended interviews with key informants to understand the history of land-use change over the last 30 years, with a particular focus on the key actors involved in the decision-making process or in the land-use change itself. In sites aimed at lower emissions activities, the researcher conducted semi-structured interviews with key informants on the decision-making process around land-use change. The research instruments developed allowed an understanding to be achieved of the actors involved in land-use decision-making, the relationships among actors, the processes leading up to land-use changes, agreements to distribute benefits and the results of land-use change decisions.

The research team also interviewed key informants from district-level governments corresponding to sites associated with both increasing and decreasing emissions to capture their involvement in decision-making on land use, coordination with other levels of government and knowledge of REDD+ and other such initiatives. Table 2 shows a summary of the number of interviews by type of instrument in each region. Some individuals were interviewed for more than one purpose. Additional data was gathered through the researchers' attendance at various meetings and presentations in the regions and in the capital.

Table 2. Number of respondents by type of interview.

Type of interview	Madre de Dios	Ucayali	San Martin
Regional	26	37	25
District	8	6	8
Increasing emissions site	28	15	34
Decreasing emissions site	37	19	50
Total	99	77	117

We then used the NVivo qualitative data analysis software to enter interview notes and some full interview transcripts into a single database, where they were subsequently coded using a heuristic node tree based on an initial literature review. The coding process was highly iterative, as updates were exchanged among coders so that the coding tree changes could be data-driven, especially in the early days of coding. Coding was specified in a coding guide and spot verified by a single coder, who coordinated the global study. Queries were then conducted in order to assist in finding patterns for data analysis (see Ravikumar et al. 2015).

Regional reports written by three researchers were used as the primary data sources for analysis, along with the NVivo data. The NVivo database was used to make a range of queries to examine issues related to authorities, conflicts and legitimacy issues within certain types of benefit-sharing arrangements and land-use changes. The data collection and analysis methods are available in this study's methods guide (Ravikumar et al. 2015). Secondary data came from project documents for benefit-sharing arrangements like REDD+ and other relevant documents on land-use changes by site and region (e.g. from REDD+ projects). Secondary data on decentralization was also pulled from a legal review (Fernandini and Sousa 2015).

The analysis presented in this report is primarily based on interview data from the 14 study sites. All of the cases are summarized in the Appendix and Table 3. The cases will be referred to throughout this document.

Table 3. Characteristics of case study sites.

Site name	Madre de Dios			Ucayali			San Martin							
	Brazil-nut management with FEPROCAMD (Regional Federation of Brazil-Nut Producers of Madre de Dios)	Tambopata National Reserve and Bahuja-Sonene National Park	ACOMAT (Association for the Forest and NTFP Concessions in the Provinces of Manu and Tambopata)	Area Pacahuara	La Pampa	Environmental Services for Native Communities	Reforestation with Native Species on Degraded Lands for Timber and Carbon Purposes	Plantaciones Ucayali SAC & Plantaciones Pucallpa SAC (Grupo Palmas)	Cordillera Azul National Park (PNCAZ)	AMCI (Alto Mayo Project) in the AMPF (Alto Mayo Protected Forest)	ACOPAGRO reforestation project	Payments for Ecosystem Services in Mishiquiyacu, Rumiycacu, Almendra	Grupo Palmas -Barranquita	Land rentals in the Awajun territory
Case name	BAM-MDD	AIDER-Tambopata	ACCA-ACOMAT	Arca Pacahuara	La Pampa	AIDER-Ucayali	BAM-Ucayali	Oil palm-Ucayali	CIMA-PNCAZ	CI-AMPF	ACOPAGRO	Mishiquiyacu-Rumiycacu	Oil palm-San Martin	Awajun territory
Site type (assumed C emission trend)	Decreasing	Decreasing	Decreasing	Increasing	Increasing	Decreasing	Decreasing	Increasing	Decreasing	Decreasing	Decreasing	Decreasing	Increasing	Increasing
Initiative type	REDD+	REDD+	potential REDD+	Agricultural expansion	Illegal mining	REDD+	Reforestation project	Oil palm	REDD+	REDD+	Reforestation project	PES	Oil palm	Agricultural expansion
Main proponent	BAM (Bosques Amazonicos SAC), private company	AIDER (Association for Research and Integrated Development), NGO	ACCA, (Association for Conservation of the Amazon Basin), NGO	N/A	N/A	AIDER, NGO	BAM, private company	N/A	CIMA (Center for Conservation, Research and Management of Natural Areas)	CI (Conservation International)	Pur Project, private company	EPS (Sanitation Service Provision Entity of Moyobamba) and PEAM (Alto Mayo Special Project)	N/A	N/A
Project participants/ stakeholders	400 brazil-nut holders and members of FEPROCAMD living within and/or neighboring the protected area	2 indigenous communities and 2 peasant communities	11 concessions affiliated with ACOMAT	Families in Arca Pacahuara community (2500 inhabitants)	Immigrant miners in La Pampa	7 indigenous communities (~1,000 households)	2 of the 3 directly neighboring communities (of a total of 7) that ranch and produce oil palm, plantain, cassava, etc.	2 companies operating around several communities including Zanja Seca and Tibecocha	50 communities (of a total of 250 with a population of 170,000) in the protected area's buffer zone that have access to the park for hunting and fishing	>700 households (coffee farmers) within the protected area and in the buffer zone	2,000 cacao farmers and members of ACOMAGRO	60 families from communities in the Mishiquiyacu-Rumiycacu-Almendra sub-basin	Community of Barranquita located nearby to plantation, Palmas del Oriente	14 Awajun communities
Duration of intervention	31 years (2009–2040)	20-year coadministration contract (2008–2028)	Undetermined	Since 1992	Since about 2005	2 years, under development	10-year crediting period (VCS) that is renewable up to 2 times; BAM aims at a total of 20 years	Since 2012	20 years (2008–2028)	20 years (2008–2028)	40 years (2008–2048)	Two phases: PEAM (2008–2012) and EPS (2012–2014); next phase depends on future funding	Since 2006	Since 1996
Total project area (ha)	291,566 ha	573,299 ha	316,282 ha	6,000 ha	No official estimate exists	100,000 ha	16,493 ha	10,729 ha	2,301,117.24 ha (including park's buffer zone)	182,000 ha	2 million trees by 2015	2,486 ha	3,000 ha	137,811 ha
Land tenure situation	Brazil-nut concessionaires own private title to land	No communities hold titles in the protected area	Timber and conservation concessions	Individual agriculture titles	Miners without mining authorization	Communities hold collective titles	Project area is comprised of lands privately-owned by BAM; surrounding communities hold private ownership of land bordering the project area	Companies made direct purchase from the Regional Government of Ucayali	No communities hold titles in the protected area; indigenous communities in the buffer zone do hold titles in the buffer zone	No communities hold titles in the protected area; no land titles (certificates of possession) in the buffer zone	~500 of the 2000 ACOMAGRO members hold land titles (certificates of possession)	No communities hold titles in this regional conservation area	Direct sale from MINAGRI to Grupo Palmas	Indigenous territory comprised of 14 communities

3 Land use and land-use change in the study regions

Deforestation and degradation in Peru result from a number of direct and indirect causes. According to official sources, the major direct drivers are roads and infrastructure, smallholder agriculture,³ agro-industrial expansion, mining and logging (MINAM 2010a). Indirect drivers, such as policies, institutional issues and property rights regimes are also important. Public policy, market prices for agricultural products and the opening of roads or access into the Amazon region have facilitated migration, land clearing and land trafficking (MINAM 2010a). In this section, we outline the most important ongoing land-use changes in the Amazon region by sector.

According to figures updated through 2014 from the Ministry of the Environment (MINAM), Peru has a total forest area of 69 million ha (MINAM 2016), for a little over half of the total land area (ITTO 2013). An estimated 92% of these forests are in the Amazon Basin, but nationally there are a variety of different types of forests, including lowland, highland, Andean and dry coastal forests. Forests are under a variety of land classifications as well, including individual and communal titles, production forests (in different concession types as well as without current concessions) and protected areas. Based on an analysis of deforestation in the Amazon from 2001-2014, deforestation amounted to 1.65 million ha or a 2% loss of total tropical forests (MINAM 2016). Most land deforested before 2001 is currently covered by secondary forest (73% or 5,236,491 ha), 3,168,727 ha of which combine secondary forest with agricultural activities (Piu and Menton 2013). Only 27% of deforested land has no forest cover and is either being used for agriculture (690,515 ha), is now grasslands (1,179,981 ha) or has no vegetation (64,566 ha) (ibid).⁴ An estimated 44% of the total deforested area from 2001 to 2014 is on uncategorized lands (without assigned rights), although this area only accounts for a total of 22% of forests; individual parcels account for less than 1% of forests but 10% of the deforested area. This data suggests a high concentration of deforestation in these land categories (see Table 4).

San Martín and Ucayali are two Peruvian regions with substantial deforestation. From 1995 to 2010, the annual rate of deforestation in San Martín was 250,000 ha (MINAM 2014). Table 5 shows the forest area and loss of forest cover between 2001 and 2014 by region studied. Figure 1 shows how the regions varied in terms of forest loss over this same period of time, with the more recent decline in San Martín and increase in Ucayali (as well as Madre de Dios but at lower levels). San Martín experienced the greatest total area of forest lost. Generally speaking, an increase in deforestation is expected throughout much of the Peruvian Amazon as greater investment is made in road infrastructure and migration to the region continues (Piu and Menton 2013). It is important to note that, unlike Madre de Dios and Ucayali, San Martín is not completely comprised of lowland tropical or Amazonian forests, with these forests accounting for about 3.5 million ha (approximately 70%) of its total forest area.

San Martín is a unique case among our study regions, as it experienced an earlier wave of migration and agricultural expansion in the 1980s and 1990s that made it the most deforested region by 2005. In 2007, the regional government administration was elected under the slogan “The Green Region,” representing a vision of recuperating deforested and degraded lands. San Martín therefore has little

3 Reports by the Ministry of the Environment (MINAM) between 2011 and 2013 flag the importance of what they call ‘migratory agriculture.’ The notion that ‘migratory agriculture’ is responsible for the vast majority of deforestation in the Amazon has also been stated in numerous official communications. Nevertheless, the term combines various drivers, including those associated with migration, as in the action of migrants, and those associated with production practices, which may include shifting cultivation or other sustainable and unsustainable practices (see Putzel et al. 2013).

4 See Piu and Menton (2013) for a breakdown of the different types of land-use classifications in Peru.

Table 4. Distribution of forests in Peru by legal category (area and % of total; share of total deforestation 2001-2014).

Category		Area (ha)	% of total	% of deforestation (2001-2014)
Individual parcels		605,922	0.9	10.4
Communal lands (titled)	Peasant communities	733,596	1.1	1.2
	Native communities	11,525,391	16.7	16.5
	<i>Subtotal</i>	12,258,987	17.7	17.7
Indigenous reserves		1,689,683	2.4	0.1
Production forests	Logging concessions			
	• logging	7,554,661	10.9	8.6
	• reforestation	124,308	0.2	0.4
	Non timber concessions			
	• other forest products (brazil nuts, shiringa)	847,956	1.2	0.6
	• conservation	798,557	1.2	0.8
	• eco-tourism	96,457	0.1	0.2
	• wildlife management	1,697	0.0	0.0
<i>Subtotal</i>	9,423,636	13.6	10.7	
Production forests in reserve	Reserved for future concessions or local forests (no current concessions)	8,488,344	12.3	12.3
Protected areas	Natural protected areas	16,191,744	23.4	3.1
	Regional conservation areas	2,043,814	3.0	0.4
	Private conservation areas	19,792	0.0	0.0
	<i>Subtotal</i>	18,255,350	26.4	3.5
Special zones	Wetlands	3,197,803	4.6	0.9
Uncategorized forest lands		15,259,650	22.1	44.4
Total*		69,179,377	100.0	100.0

* Numbers do not add perfectly due to rounding

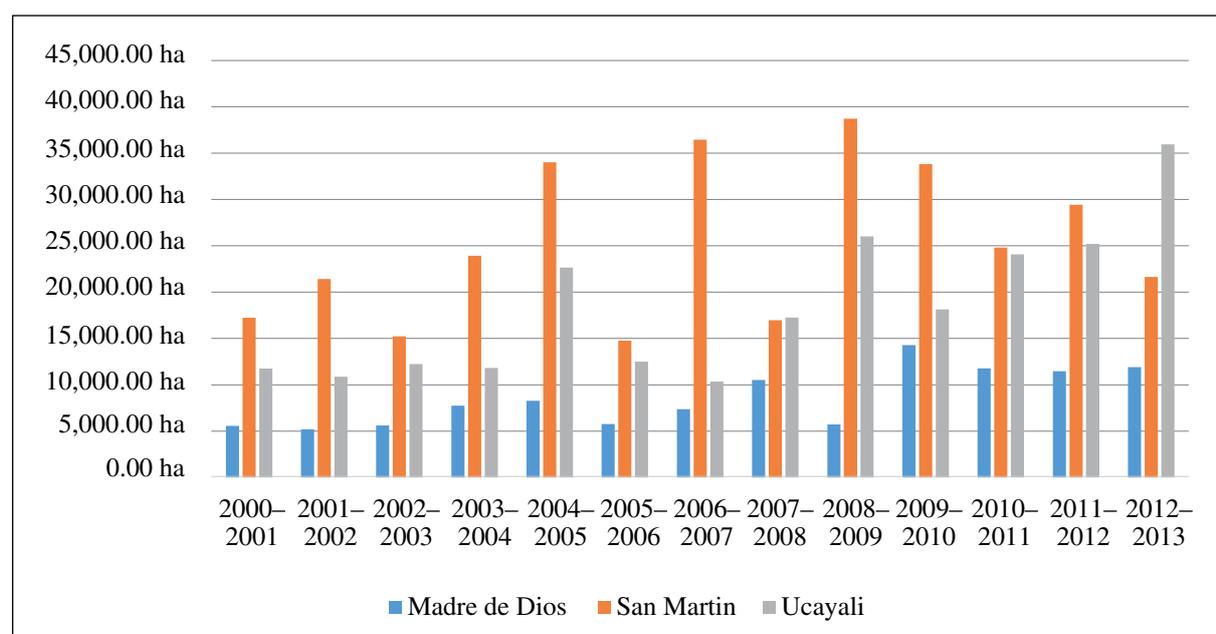
Source: Programa Nacional de Conservacion de Bosques, MINAM 2016 (see <http://geobosques.minam.gob.pe:81/geobosque/view/descargas.html#>)

land left for further agricultural expansion, as opposed to Ucayali and Madre de Dios, which find themselves with increasing opportunities for resource exploitation accompanied by ever-increasing rates of immigration. According to the coordinators of San Martin's regional REDD+ Roundtable, the region reduced its deforestation rate by approximately 27% between 2010 and 2013. San Martin quickly became recognized as an example of regional conservation efforts to address deforestation with a model institutional framework to institutionalize environmental governance policies at the regional level. This is discussed in greater detail in Sections 5 and 6.

Table 5. Tropical forest and forest loss in the regions, 2001-2014.

	Total tropical forest area (ha) in 2014	Share of total tropical forest (%)	Total deforestation 2001-2014 (ha)	Share of total lost (%)
Madre de Dios	8,002,550	11.6	127,718	7.7
San Martin	3,423,672	5.0	359,957	21.8
Ucayali	9,468,614	13.7	269,193	16.3

Source: MINAM (PROGRAMA BOSQUES) – MINAGRI (SERFOR) 2014, cited in MINAM 2016.

**Figure 1. Area deforested from 2000 to 2013.**

Source: Elaborated by Ravikumar based on official data: MINAM (PROGRAMA BOSQUES) – MINAGRI (SERFOR) 2014.

Based on average annual population growth between 1993 and 1997, the regions of Madre de Dios, Ucayali, San Martin and Loreto⁵ have experienced the highest growth rates in Peru (Piu and Menton 2013). While the Amazon region maintains the lowest population density in the country, it remains a hotspot for migration (Dourojeanni et al. 2010). San Martin experienced the highest rates of migration from Andean farmers between 1995 and 2005 due to the economic prospects of projects to eradicate the illicit production of coca that supported alternative agricultural crops such as coffee and cacao. Since 2008, with skyrocketing gold prices and the expansion of the Interoceanic Highway, migration to Madre de Dios has risen substantially and is expected to increase further. Oil palm cultivation in the Amazon region is still limited, but has increased from 5000 ha in 1995 to 20,000 ha in 2010, with 98% being grown in the regions of San Martin and Ucayali (Gutierrez-Velez et al. 2011). This trend is related to the national government's declared interest in oil palm in Supreme Decree No. 015-2000-AG.

3.1 Roads and Infrastructure

In San Martin and Ucayali, the expansion of roads in the late 1960s and early 1970s opened the Amazon region to significant migration from Andean populations in search of land for agriculture. In 1999–2005 approximately 75% of deforestation and degradation in the Amazon was located within 20

⁵ Loreto is the northernmost region in the Peruvian Amazon, covering the largest area, with its 36,885,195 ha accounting for 28% of Peru's total area (see Dourojeanni 2013).

km of a road (Oliveira et al. 2007), a pattern that continues today with the further expansion of roads. Madre de Dios, for example, has experienced more recent migration with the expansion and paving of the Interoceanic Highway in 2005. An increase in deforestation is expected as more investment is made in roads and migration to the Amazon continues (MINAM 2014).

3.2 Agriculture

In Ucayali and San Martin, agriculture is the most widespread economic activity. While the agricultural frontier expanded intensively in San Martin from 1995 to 2005 before slowing down, it continues to expand at an increasing rate in Ucayali. Madre de Dios is marked by relatively less agricultural expansion, although some areas dedicated to specific crops, such as corn in Arca Pacahuara (see the Appendix for study site summary) and papaya cultivation, are expected to expand.

Reinforced by various waves of migration, the primary direct driver of deforestation in San Martin is by far land-use change for agricultural expansion, especially for coffee, cacao, rice and corn production. Government support for these products is expected to increase. Coffee production in particular has increased by 75% between 1995 and 2010, and it is estimated that by 2015 San Martin will become the largest producer of coffee in Peru (Info Region 2013).

In Ucayali, agricultural expansion is taking place on state-owned forest lands by large firms and smallholders that have received use and property rights. While migrant farmers are dedicated to the cultivation of crops like rice, cassava, beans, cowpeas, banana, maize, pineapple and citrus, among others, large-scale operations are dedicated to the production of oil palm for biofuel. Although the Peruvian government claims that so-called migratory agriculture practiced by smallholders is the main driver of deforestation, various authors contest this claim (see Ravikumar et al. forthcoming). These authors point out that not all smallholder agricultural production involves unsustainable practices. Rather, many smallholder farmers practice agriculture on rotating fallows with shifting cultivation or in agroforestry systems. Such agricultural systems, which at any given time have open areas that appear to have been recently deforested, may appear to generate additional deforestation when assessed through remote sensing. Over time, though, the extent to which these practices actually drive additional deforestation varies considerably, as shown in evidence from Ucayali (see Padoch et al. 2008). Furthermore, Ravikumar et al. (forthcoming) contend that the view that smallholder agriculture is problematic and the primary driver of deforestation implies that smallholders make poor decisions and use resources inefficiently and unproductively. These authors argue that an alternate view could see them as “innovative survivors reacting to major constraints to adapt and provide for livelihoods under harsh conditions and as contributors to the generation of socioeconomic benefits at regional and national levels” (Pinedo-Vasquez et al. 2002).

At the same time, regional government programs promote agricultural production, such as the cultivation of products like cocoa and oil palm, purportedly on deforested and degraded areas. Nevertheless, forests are also cleared for these crops. Government officials in Ucayali explained that the problem of what they call “migratory farming” (along with rural poverty) is being addressed by policies that provide incentives for farmers to settle permanently in one place and organize into producer associations. These regional government programs in Ucayali provide smallholders with land titles,⁶ access to credit and technical assistance mainly for the production of oil palm and the other “flagship” crops – camu camu, cacao and coffee – which were declared as such due to their economic potential and profitability.

6 One interviewee in Ucayali mentioned that farmers holding only use rights also benefited.

3.3 Agro-industrial expansion

Seventy-two percent of the new industrial plantations in the Peruvian Amazon between 2000 and 2010 were developed in forested areas (Gutiérrez-Velez et al. 2011, 6). The expansion of large-scale oil palm plantations by private companies has recently become one of the leading causes of deforestation in Ucayali. This region is also becoming more attractive for private and foreign investment for the large-scale production of oil palm since the Regional Government of Ucayali (GOREU) declared it a crop of regional interest (following the national government's declaration, mentioned above). Since 2006, Ucayali has become the second biggest producer of oil palm in Peru. Through the use of at least 12 different legal devices issued at the national and regional levels,⁷ producer associations and private companies are acquiring large areas of state-owned lands to develop their agro-industrial projects on both primary and secondary forests. As of 2012, there was a total of 17,794 ha of oil palm in production. Approximately, 2252 farmers grouped into 60 associations produced palm on 14,793 ha, while nine private companies produced it on 2,910 ha (GOREU 2012). Between 2010 and 2013, private companies bought an estimated 15,735 ha⁸ of primary and secondary forests in the districts of Nuevo Requena and Curimana (Lower Aguaytia) without previous environmental impact assessments (GOREU 2012).

In San Martín, oil palm is cultivated by private companies located in the province of Tocache, with around 12,000 ha of oil palm, and in the province of Lamas (Shanusi and Barranquita), with a current total of 7400 ha and an expected total cultivated area of 13,000 ha in the next 10 years (Marco, C., personal communication, November 23, 2013). It is important to note that deforestation from oil palm in San Martín is very low compared to the rest of the agricultural sector: an estimated 0.5% of the regional territory has been cleared for oil palm production compared to 56% for other agricultural crops, such as coffee, cacao, rice and corn (Info Region 2013). Oil palm is not an important product in Madre de Dios.

3.4 Mining

In Madre de Dios, illegal mining is considered a growing deforestation driver, particularly since 2005. In Ucayali, on the other hand, it is considered a relatively new driver of land cover change, and it does not appear to be a concern in San Martín. In Madre de Dios, illegal gold mining has become highly problematic and conflictive, especially in certain areas such as “La Pampa,”⁹ where informal and illegal mining took off with the completion of the Interoceanic Highway in 2005. Key informants from Madre de Dios explained that the area is dominated by migrants from Puno, Cuzco and Arequipa that practice illegal mining. In 2008, the world economic recession resulted in a rapid increase in gold prices (Shafiee and Topal 2010) and the further proliferation of gold mining activities in the region. Informants from the regional government estimated that 18 tons of gold are extracted annually in Madre de Dios, an activity that is responsible for contaminating nearby soil, air and water sources due to the use of mercury in its processing and for significant deforestation, degradation, fragmented ecosystems and the contamination of rivers with trash. A 2013 Carnegie Institute study, using field surveys, airborne mapping and high-resolution satellite imaging to assess road- and river-based gold mining in Madre de Dios, found that the geographic extent of gold mining increased 400% from 1999 to 2012 (Asner et al. 2013).

7 These legal devices include laws and supreme, legislative and emergency decrees that are presented in the subsection on decentralization.

8 This extension (15,735 ha) is the sum of the land sold by the Regional Government in the Zanja Seca area to Plantaciones Ucayali SAC (4759 ha), Biodiesel SAC (3006 ha) and an unknown private company (2000 ha); and the land purchased by Plantaciones Pucallpa SAC from a farmer association in Tibecocha (5970 ha).

9 La Pampa is an informal name for an area greatly affected by illegal and informal mining activities and located in the buffer zone of the Tambopata Reserve within the districts of Laberinto and Inambari in Tambopata Province (see section 1.2 of the Appendix for a more detailed description of the area).

Illegal operations range from small-scale to large-scale enterprises. Regional government officials interviewed estimated that there are 30,000–50,000 illegal miners in the region. Currently, 831,182 ha are set aside for legal mining operations in Madre de Dios, but only 1,981 operations on 452,677 ha have legal mining titles; and of these only 82 are formal concessions that actually comply with regulations (Ipenza Peralta 2013).¹⁰

According to abovementioned study (Asner et al. 2013), which used the Carnegie Landsat Analysis System (CLASlite)¹¹ methodology, the annual mining area growth rate in Madre de Dios tripled from 2166 ha/year before the 2008 global economic recession to 6145 ha/year from 2008 to 2012. This study found that as of 2012, small mining operations constituted 51% of the total mining activity throughout the region. Furthermore, all mining areas – regardless of size – increased in overall extent in the 2008–2012 period (Asner et al. 2013). Illegal miners often obtain land through the invasion of different concession types (i.e. reforestation areas, forest concessions and conservation areas), sometimes by force and sometimes through bribes to the legal concessionaires (see also Gordillo R. 2014).

In Ucayali, illegal alluvial gold mining is considered a new driver of deforestation, as there are increasing reports of operations by small groups of illegal miners. According to two regional informants from the Regional Environmental Authority, there is a lack of official information about the magnitude of the impact on Ucayali's forest cover, but gold mining operations have reportedly flourished in the estuaries of the Abujao River (Aguaytia), Aguaytia River (Curimana and Nueva Requena) and the right bank of the Ucayali River. There are also accounts of illegal activities in the Panguana Conservation Area and the buffer area of the El Sira Communal Reserve. The only information available outside of our interviews was from press releases informing about interventions by the Navy and the confiscation of gold dredges. The Regional Government of Ucayali and NGOs are concerned that illegal mining could grow and cause impacts similar to those in Madre de Dios. Others contend that mining activities are not likely to increase greatly as most of the gold has already been extracted. There is consensus among the respondents that illegal mining and its effects should be investigated more closely.

3.5 Logging

According to the Forestry Law of 2000,¹² legal timber extraction should take place in forest concessions and on private lands and in indigenous communities holding permits, technically known as 'enabling titles.' Ucayali is the department with the largest area in timber concessions, covering approximately 30% of the region's territory (3,069,402 ha).¹³ Respondents point to a reduction in the number of active enabling titles while timber production has increased rather than decreased. The National System for Environmental Information¹⁴ reports that roundwood production increased from 267,996 m³ in 2000 to 459,137 m³ in 2012. Despite varying perspectives on the issue, regional government respondents from Ucayali consider this increase in timber production as evidence that illegal logging fills the production gap left by inactive concessions and those concessions and communities that are undergoing sanctions by the Monitoring Agency for Forest Resources and Wildlife (OSINFOR).

10 This demonstrates the need to improve the formalization process for mining operations and that there is still room for this activity to grow legally. However, the total area under illegal operation is unknown.

11 CLASlite is a software package designed for the highly-automated identification of deforestation and forest degradation from remotely-sensed satellite imagery, developed by Greg Asner and his team at the Carnegie Institute for Science. It is used by nonprofit institutions and governments that require technologies for forest monitoring and environmental planning (see <http://claslite.carnegiescience.edu/en/about/>).

12 Forestry Law 27308, enacted in 2000.

13 As stated on the DGFFS website.

14 <http://sinia.minam.gob.pe/index.php?accion=verIndicador&idElementoInformacion=963&idformula=38>.

According to a 2005 study, 90% of timber originating in the Peruvian Amazon is illegally extracted or traded (Hidalgo and Chirinos 2005; Sears and Pinedo-Vasquez 2011). There are many reasons for the high incidence of illegal logging in Peru, and the conditions under which it occurs are complex. Logging engages many groups of actors (Sears and Pinedo-Vasquez 2011), including loggers, concession holders, indigenous communities and forest service officials, among others, and takes place in different areas. Some authors point to the relationship between illegal logging and governance failures that have promoted norms inconsistent with good management. Some find that these are related to inconsistent forestry laws, perceived discrimination against the timber sector and ineffective law enforcement, among other factors (Smith et al. 2006). These authors discuss the significance of other governance failures, such as the insecurity of property rights and corruption, which they contend allows illegal logging to occur and lets it go unpunished. They argue that governance failures have essentially enabled the violation of timber laws, which became an accepted code of behavior (Smith et al. 2006). Reflecting on forest governance in Peru, including legislation such as the Forest Law, these authors conclude that as a result of decades of such governance failures, loggers developed a short-term perspective on timber extraction and felt entitled to violate the government's laws.

In Ucayali, logging is considered one of the most widespread land-use activities and represents a major driver of forest degradation today. The real volume of timber production in the region is unknown as a result of what most informants attribute to the informality of the sector and the fact that the economic contribution of logging is not reflected in the statistics. As such, informants suggest that information for logging is often conflated with other activities, projecting the wrong idea that timber extraction is not significant for the regional economy. According to regional informants, this affects the budget distributed by the Ministry of Finance (MEF) for the forestry sector. Another example is logging in brazil-nut concessions in Madre de Dios, which was shown by some authors to increase after legislation passed enabling the multiple use of forests,¹⁵ with these areas experiencing greater logging than in neighboring timber concessions (Duchelle et al. 2012). These authors point to timber companies that usually access the brazil-nut concessions through negotiations with brazil-nut harvesters because it is actually easier to do so than deal with the costly bureaucratic procedures required to access timber through logging concessions. Thus, perverse incentives associated with excessive bureaucracy can compromise planning in the timber sector and exacerbate forest degradation.

Recent public and political attention has been placed on addressing illegal logging in the Amazon region. During the Conference of Parties (COP) in December 2014 in Lima, Peru, the new National Forestry and Wildlife Service (SERFOR), which is part of the Ministry of Agriculture and Irrigation (MINAGRI), signed a "National Pact for Legal Timber" until 2021 along with the Ministry of Development and Social Inclusion and the Ministry of Housing, with the objective of ensuring that all timber produced in Peru is legally harvested. This followed the death of four indigenous leaders and activists against illegal logging, which became the subject of international attention and concern.¹⁶ Regional informants suggest that the approval of the Forestry Law No. 29763 (which entered into force on 30 September 2015 with the publication of the corresponding regulations) is necessary to effectively support these efforts. They also suggest that SERFOR's campaign should include long-term financing, incentives including financial benefits and technological advances for the producers. In efforts to address illegal logging in Ucayali, the Ministry of the Environment inaugurated the New Satellite Monitoring Deforestation and Illegal Logging Unit in Ucayali region, with technical and

15 A decree passed in 2004 allowed up to 5m/ha of timber to be harvested from brazil-nut concessions. However, by 2007 the volume allowance was abolished based on the argument that "there were no credible and accurate scientific indicators to justify an impact of timber extraction on nut harvests" (Duchelle et al. 2012). New technical norms associated with forest regulations in 2016 permit the harvest of up to two timber trees per hectare in Brazil nut concessions in the Madre de Dios region, based on research from 2012-2015 studying the impact of selective logging on Brazil nut production as a way to optimize multiple forest uses (Rockwell et al. 2015).

16 See http://www.nytimes.com/2014/09/11/world/americas/peru-investigates-the-killing-of-an-environmental-advocate.html?_r=0.

financial support from the United States Agency for International Development (USAID), SERFOR, the Special Prosecutor for Environmental Matters and the National Forest Conservation Program (PNCB). This technology platform will allow monitoring of deforestation and support modern fiscal management in efforts to address environmental crimes and reduce the rate of deforestation and illegal logging in Peru.

4 Power and influence over land use and forests in law and in practice

We now present the context of decentralization reforms in Peru and explain multilevel governance and cross-sectoral challenges facing land-use planning within this context. Decentralization policies began with the passage of the Decentralization Law in 2002 that started a process in which regional governments were progressively transferred powers once held by the national government. Questions around what actors are involved in land-use changes in Peru, how decisions are made and how land-use change occurs are central to our study. This section analyzes actor roles in land-use decision-making in Peru, as well as central factors shaping the context of power and influence across levels and sectors. Decentralization policies have not included the transfer of meaningful powers to district or provincial governments, hence our focus on regional governments.

We first look briefly at Peru's decentralization process, then we describe the key powers and responsibilities held by national and regional governments over relevant land-use sectors based on the legal study commissioned for this report (Fernandini and Sousa 2015). The third section presents an analysis of the major governance challenges found across the study regions. The discussion highlights the role of the Regional Environmental Authorities (ARAs)¹⁷ and other decentralized regional governance offices in the three regions. Of the three regions studied, San Martin was the first to establish its ARA in 2010, followed by Ucayali in 2013 and Madre de Dios in 2014.¹⁸ Across regions, the ARA centralizes the majority, if not all, of the regional powers encompassing the environment, the forest sector and land-use planning in forested areas, whereas agriculture and land-use planning powers related to the agriculture sector are the responsibility of different regional agencies.

Although many people view the land-use planning process and ecological and economic zoning as essential for better land-use policy and management practices, they are housed under the weaker environmental offices of the government, both nationally and regionally. Central government policies promoting investment in Peru in the wake of an economic boom period and falling mineral prices undermine environmental concerns and clearly maintain the hegemony of 'business as usual' in agricultural and subsoil investments. The multilevel and cross-sectoral division of powers, plus the complexity and lack of transparency over certain key land-use decisions, facilitates the overriding of concerns related to forests, sustainability, and smallholders and indigenous peoples. Ideally, cross-sectoral coordination would involve information sharing and discussions on topics of mutual concern. The case of San Martin demonstrates that regional efforts can clearly make a difference, under the right conditions.

4.1 Decentralization of forest and land-use powers to regional governments

Current political decentralization in Peru emerged in the 1990s in reaction to perceived excesses of traditional centralized governance under the country's prior administrations (Ahmad and Garcia-

17 The Amazon Interregional Council (CIAM) is comprised of the regional governments of Loreto, Madre de Dios, San Martin, Ucayali and Amazonas. With the support of USAID and the United States Forest Department, the CIAM adopted the "Grey Towers Act" in 2011, which among other things agreed on the creation of regional environmental authorities in each region. See <http://www.ciam.gob.pe/admin/RepositorioAPS/articulos/11/file/Declaracion%20de%20Grey%20Towers.pdf>.

18 In the words of one official of the Regional Government of Madre de Dios, the ARA took a longer time to organize there than in the other regions "because Madre de Dios is a more complicated region with almost all of its concession and land uses already divided up," implying the need for a more complex environmental governance architecture.

Escritano 2008). The precedent for regional governance was already present. Regional governors and provincial and district¹⁹ mayors had been elected prior to Fujimori's military takeover of his own government in the self-coup of 1992.²⁰ These subnational governments were controlled by national parties in the 1980s, with Alan Garcia's American Popular Revolutionary Alliance (APRA) party winning the majority of elections throughout the decade (Sabatini 2003). Attention to regional governments at that time was used to strengthen central power and diffuse blame for the economic crises of the 1980s away from the central government (Kim 1992). Fujimori's government replaced regional governors with political appointees and withdrew key powers and budgets from the regions (Sabatini 2003).

The most recent wave of decentralization reforms was initiated by Alejandro Toledo's government in the early 2000s, as a way to ensure the country's stability by responding to political demands from the regions (Barr 2003). As a result of these political reforms, the political sphere has changed. The decentralization process, beginning with the 2002 Decentralization Law (No. 27783), has been gradually implemented through the subsequent governments of Alan Garcia's second administration and Ollanta Humala. While national parties – particularly APRA – dominated subnational governments in the 1980s, regional parties are now key players holding many regional, provincial and district offices. The implications of these new politics of decentralization remain poorly understood, especially regarding land use (see Wieland and Sousa 2015).

As will be shown in the following sections, regional governments appear to have a significant amount of power – 90.3% of the functions that will ultimately be devolved to subnational governments had already been transferred as of 2011 (Alvites et al. 2011). Since 2009, some regional governments have created ARAs through which they have received powers in the forest and environment sectors. However, in practice, regional governments face a variety of challenges that limit their ability to fulfill their responsibilities and perform effectively. One of the weakest elements in the decentralization process has been the failure to transfer the financial resources to carry out the transferred duties (Defensoría del Pueblo 2009). Challenges have played out differently across regions due to the diversity of institutional arrangements, political will, professional expertise and capacity, external support, natural resources and land-use activities. Several other factors mediate the impacts of these challenges, as discussed below. At the same time, new spaces for dialogue and coordination have emerged that show some promise in confronting these challenges.

In 2008, the national Ministry of Agriculture (MINAGRI) transferred authority to many regional governments, as indicated in Article 51 of Law of Regional Governments No. 27867,²¹ including the authority for the regional agriculture directorates to grant land titles and use rights. In addition, the Ministry of the Environment (MINAM) transferred land-use planning powers to the regional governments, including the development and approval of the Ecological and Economic Zoning (ZEE) process.²² Specifically, across the study regions, the regional governments were transferred the following powers: (1) authorization to grant rights over forest land and different types of concessions (forest, conservation, etc.);²³ (2) authorization of land-use change; (3) authorization and approval of forest management plans; and (4) promotion and control of compliance with national forest policy.

19 Provincial and district governments in Peru are collectively known as “local governments,” and are referred to as such in this paper. The term “subnational governments” is used to refer to local and regional governments in general.

20 The Shining Path (*Sendero Luminoso*) armed movement aimed to destroy existing Peruvian political institutions and replace them with a communist peasant revolutionary regime. The Fujimori administration staged a coup against itself, which led to the dissolving of Congress and the country's legal system, enabling the military police to carry out large numbers of murders and kidnappings of those suspected of being enemies of the state. Fujimori is currently in prison.

21 Ley Orgánica de Gobiernos Regionales.

22 A technical instrument used to categorize lands according to physical, biological and socioeconomic characteristics. Rather than classifying land based on particular uses, it proposes alternatives to manage the impact of land uses (MINAM 2012; see Box 1).

23 Concession rights are granted through public auctions or tenders for a renewable period of 40 years (Forestry Laws No. 27308 and 29763).

Some of these require collaboration with or approval of national entities, under both the previous (No. 27308) and new (No. 29763) forestry law (see below).²⁴ The decentralization of specific land use-related powers, however, varies across sectors and regions, a topic that goes beyond this report.²⁵

There was wide agreement among key regional informants that decentralization in land-based sectors largely stops at the regional level. Based on 22 interviews with provincial-level informants, provincial and district governments have very little influence over land-use decisions, which was considered problematic by actors from local governments themselves and other respondents. Given the lack of decentralization below the regional level, we focus here on the decentralization of powers from the national to regional government level (see Table 6 for a summary).

4.2 Distribution of powers by sector

4.2.1 The environment

The Ministry of the Environment (MINAM) is the national authority in charge of the conservation and sustainable use of renewable natural resources and currently has a number of powers and responsibilities for land-use planning and forest conservation. At the subnational level, the environment sector consisted of the Regional Directorate of Natural Resources and Environment (GRRNYMA). In some regions the Regional Directorate of Forests and Wildlife (DRFFS) depended functionally on the GRRNYMA, while in others it depended on the Regional Directorate of Economic Development. As the decentralization process has progressed, the GRRNYMA and the DRFFS were merged to become part of the more recently created regional environmental authorities (ARAs).

Generally speaking, MINAM and the ARAs make public policies for natural resources management and conservation at the national and regional level respectively. Also, MINAM houses the National Program for Forest Conservation (PNCB) and the General Directorate of Climate Change, Desertification and Hydrological Resources, the entities responsible for the coordination of Peru's national REDD+ agenda. In Peru, REDD+ is very much linked to national protected areas in some sites, hence there is close coordination with the National Natural Protected Areas Service (SERNANP), the entity in charge of the establishment, authorization, administration and monitoring of the state-owned natural protected areas (ANPs), under the National System of Natural Protected Areas. Nevertheless, with the passage of an economic stimulus package that began with Law No. 30230 in July 2014, MINAM no longer retains authority over the identification of new reserve areas (a temporary category assigned to an area before it is classified as an ANP), as this power was transferred to the Presidency of the Council of Ministers (PCM). This stimulus package is aimed at improving Peru's investment climate and has been followed by a series of laws that have raised serious concerns regarding environmental regulation, as well as indigenous and community rights (see Gonzales Tovar et al. 2014).

In addition, the land-use planning (OT) process and the Ecological and Economic Zoning (ZEE), which is part of the OT, are the responsibility of the environment sector, both nationally and subnationally. MINAM regulates the general policies on territorial planning, while the regional and local environmental authorities develop, approve and implement the different ZEE and land-use plans (POTs) in their jurisdictions.²⁶ Based on regional key informant interviews and information collected on the topic from MINAM, we found that until such time as the Land-Use Planning Law is passed, the

24 The new law went into effect in September 2015.

25 A CIFOR-commissioned study by the Peruvian legal firm Ehecopar specifically outlines the decentralization of powers across sectors and levels (see Wieland and Sousa 2015, <http://www.cifor.org/library/5649/the-distribution-of-powers-and-responsibilities-affecting-forests-land-use-and-redd-across-levels-and-sectors-in-peru-a-legal-study/>).

26 POTs can exist at the macro, meso or micro scale, with the regional government controlling the former two and the local governments the latter. However, the lack of detailed information at the local level has made it very difficult for local governments to develop POTs.

Table 6. Key powers and responsibilities by sector and level of government.

		SECTOR		
		ENVIRONMENTAL	MINING	MULTIACTOR COALITIONS
LEVEL	AGRICULTURAL / FORESTRY	<p>Ministry of Agriculture (MINAGRI) - General Directorate of Agrarian Environmental Affairs (DGAAA)</p> <ul style="list-style-type: none"> • Determining and changing the best-use classification for soils • Identifying and authorizing the change of current soil use • Approving EIAs for agriculture projects 	<p>Ministry of Energy and Mining (MEM)</p> <ul style="list-style-type: none"> • Approving EIAs for mining and hydrocarbon projects • Issuing mining and oil concessions 	<p>National REDD+ Roundtables</p> <ul style="list-style-type: none"> • Promoting dialogue on REDD+ among diverse actors
	NATIONAL	<p>ENVIRONMENTAL</p> <p>Ministry of the Environment (MINAM)</p> <ul style="list-style-type: none"> • Overseeing and supporting EIAs • Approving EIAs (through SENACE), only if the relevant sector (e.g. agriculture) determines that the project is environmentally significant • Regulation and final approval of (non-binding) territorial plans • Environmental monitoring and oversight of the mining and energy sectors (through the OEFA) • Leading forest conservation projects: national REDD+ policies and the Forest Conservation Program • Establishment, administration and monitoring of national protected areas • Providing binding opinions in sites where national protected areas overlap with land being titled or given under concession • Estimating the value of natural resources and damages to the ecosystem, and developing policies and guiding tools (through DGEVFPN) <p>MINAGRI - National Forestry and Wildlife Service (SERFOR)</p> <ul style="list-style-type: none"> • Regulating and promoting the sustainable use and conservation of forest resources • Formulating norms for the authorization of forestry concessions • Approving the granting of rights over other natural resources by ARAs <p>Monitoring Agency for Forest Resources and Wildlife (OSINFOR), under the PCM (to be absorbed by SERFOR)</p> <ul style="list-style-type: none"> • Monitoring and controlling legal concessions (compliance with forest management plans and concession contracts) • Sanctioning poor management 	<p>MINING</p> <p>Ministry of Energy and Mining (MEM)</p> <ul style="list-style-type: none"> • Approving EIAs for mining and hydrocarbon projects • Issuing mining and oil concessions 	<p>National REDD+ Roundtables</p> <ul style="list-style-type: none"> • Promoting dialogue on REDD+ among diverse actors

continued on next page

Table 6. Continued

SECTOR			
AGRICULTURAL / FORESTRY	ENVIRONMENTAL	MINING	MULTIACTOR COALITIONS
<p>Regional Directorates of Agriculture (DRAs)</p> <ul style="list-style-type: none"> • Authorizing land titles and possession certificates • Titling native communities and state-owned urban and barren terrain • Granting user rights for land with forest vocation to native communities <p>Regional Directorates of Forestry and Wildlife (DFFS) / Regional Environmental Authorities (ARAs)</p> <ul style="list-style-type: none"> • Approving forestry concessions, permits and authorizations • Monitoring and control of forests • Creating and administering regional conservation areas and conservation concessions • Granting rights over other natural resources after approval by SERFOR 	<p>Regional Directorates of Natural Resources and Environment (GRRNYMAs) / Regional Environmental Authorities (ARAs)</p> <ul style="list-style-type: none"> • Monitoring for compliance with environmental laws • Making economic-environmental valuations of ecosystem services and proposing economic compensation • Developing, approving and implementing (non-binding) territorial planning (ZEEs and POTs) at the regional level 	<p>Regional Directorates of Energy, Hydrocarbons and Mining (DREHMs)</p> <ul style="list-style-type: none"> • Approving concessions, EIAs and authorizations for small-scale, artisanal and non-metallic mining • Promoting, monitoring and controlling small-scale and artisanal mining • Formulating plans for hydrocarbon extraction according to national-level policies 	<p>Regional REDD+ Roundtables</p> <ul style="list-style-type: none"> • Producing key documents related to REDD+ (forestry investment plan document, readiness preparation proposal) <p>Regional Environmental Commissions (CARs)</p> <ul style="list-style-type: none"> • Coordinating environmental policy
REGIONAL			
LEVEL			
	<p>Municipalities</p> <ul style="list-style-type: none"> • Implementing (non-binding) territorial planning at the local level • Conducting the development of 'green cities,' solid waste management and the reduction of noise, atmospheric and water contamination in urban areas 	<p>Municipalities</p> <ul style="list-style-type: none"> • Approving mining concessions in areas of planned urban expansion 	<p>Municipal Environmental Commissions (CAMs)</p> <ul style="list-style-type: none"> • Coordinating environmental policy
LOCAL			

Source: Adapted from Ravikumar et al. (forthcoming) and Wieland Fernandini and Sousa 2015.

ZEE has very little legal weight (see Box 1).²⁷ As such, at least for now, territorial planning decisions are not binding. Furthermore, although MINAM previously had the authority to approve the pending Land-Use Planning Law, the stimulus package also transferred this power to the PCM.²⁸

Box 1. The limitations of ZEE and OT.

The territorial planning (OT) process in Peru is completed by subnational governments under MINAM's supervision. Territorial planning is defined as a "technical, administrative and political" tool that serves to orient decisions around land use to determine the most suitable use of land (Ministerial Resolution 026-2010-MINAM) and is developed at the regional (meso) and municipal (micro) levels using a participatory approach. This process sets out to evaluate the potential and limitations of the territory in question, considering environmental, social, economic and cultural aspects. Land-use plans must be subsequently approved by the regional governments and MINAM.

One key technical tool used to aid the territorial planning process is Ecological and Economic Zoning (ZEE), which aims to inform the final land-use plans. Approved by Supreme Decree No. 087-2004-PCM, the ZEE is a dynamic and flexible process for the identification of sustainable land-use alternatives based on the evaluation of the land's potential and limitations. Once it has been passed, the ZEE becomes a technical instrument for guiding land use and natural resource management. The development of the criteria and requirements for the ZEE involves the active participation of civil society actors and public institutions.

Peru, however, does not have a national territorial planning law, without which the ZEE is of limited value. Also, the economic stimulus package emphasizes that neither the ZEE nor OT "assigns uses nor exclusions of use," assuring that they are not binding. In other words, the ZEE is to be used only as a guiding tool in land-use planning. In legal terms, for example, although a land-use plan indicates that a particular area should not be used for mining, the entities that approve the plan (MINAM's Office of Land-Use Planning and the corresponding regional land-use planning offices) would have no legal power to stop either the granting of concessions by, say, the Ministry of Energy and Mines (MEM), or the area's privatization to a company or individual that could choose to mine on that land. In this way, MINAGRI has had great influence in the suite of activities considered permissible on lands across the country, including whether or not these lands are eligible for private ownership (see Wieland Fernandini and Sousa 2015).

MINAM also houses the Environmental Evaluation and Control Office (OEFA), the main body in charge of supervision, control and oversight of the environmental impact of productive sectors such as mining and energy. Law No. 30230, however, has diminished OEFA's power, reducing its budget and relaxing national environmental sanctions. This law also reduced MINAM's power to define environmental standards and limits that need to be measured (Gonzales Tovar et al. 2014). The relaxation of environmental sanctions and standards ultimately affects the powers over environmental control and sanction that the regional governments are beginning to assume with the creation of the ARAs.

The environment sector also has limited control over Peru's National Environmental Impact Assessment System.²⁹ The environmental impact assessments (EIAs) of all projects are developed by consultants hired by the companies or entities implementing those projects. Furthermore, the EIAs are subsequently approved by the sectoral ministries, depending on the type of project and according

²⁷ According to several regional informants from one NGO in San Martin who are actively involved in promoting these land-use planning instruments at the regional level, there is no certainty regarding when this law could be passed, as the central government has not yet made this a priority.

²⁸ In the PCM, each sector has one vote.

²⁹ *Sistema Nacional de Evaluación de Impacto Ambiental*.

to their own criteria and rules (e.g. the Ministry of Energy and Mines, rather than MINAM, reviews and approves the EIAs of mining projects). Despite the recent creation of the National Environmental Certification Service (SENACE),³⁰ housed within MINAM, which should participate in some phases of the EIA process, this is only required for large projects or if the relevant sectoral ministry has determined that a project could cause significant environmental impact. Even though a new legal decree established that SENACE will have the power to review and approve the EIAs, the sectoral authorities (e.g. the Ministry of Energy and Mining) will still be responsible for deciding which projects need an EIA and which do not.

Through its General Directorate of Assessment, Valuation and Financing of the Natural Patrimony (DGEVFPN), MINAM is also responsible for estimating the value of natural resources and damages to the ecosystem, as well as developing policies and guiding tools for that purpose. With decentralization, the ARAs have the power to make economic-environmental valuations of ecosystem services and also propose economic compensations.

Finally, with regard to the environment sector at the provincial and district levels, local environmental authorities are in charge of solid waste management, the development of 'green cities,' and the reduction of noise, atmospheric and water contamination in urban areas. Table 7 presents a summary of the powers transferred to regional governments in the three study regions, including the variation in institutional arrangements.

Table 7. Powers transferred to regional governments in Madre de Dios, San Martin and Ucayali.

Type of powers	National office (the maximum authority)	Decentralization – Phase 1 (2002-2010)	Decentralization – Phase 2 (2010 to date)
		Regional office that received certain powers	Regional office that received certain powers
Mining and energy projects (concessions, authorizations and EIAs):	MEM (Energy and Mining sector)	DREMH / GRDE (Energy and Mining / Development sector)	-
Agricultural projects (authorizations and EIAs), soil classification and rural titling	DGAAA/MINAGRI (Agricultural sector)	DRA / GRDE (Agricultural / Development sector)	-
Forestry concessions and authorizations	DGFFS (now SERFOR)/ MINAGRI (Agricultural sector)	DRFFS	ARA (Environment sector)
Monitoring and control of forests	OSINFOR/PCM	<ul style="list-style-type: none"> • Ucayali: DRFFS / GRED (Forestry / Development sector) • San Martin/ Madre de Dios: DRFFS / GRRNYMA (Environment sector) 	
General environmental matters	MINAM (Environment sector)	GRRNYMA (Environment sector)	
Territorial planning	MINAM (Environment sector)	DROT / GRPPAT (Planning and budgeting sector)	

30 *Servicio Nacional de Certificación Ambiental.*

4.2.2 Forestry and agriculture

The Ministry of Agriculture and Irrigation (MINAGRI) holds key powers and responsibilities related to forests and land use. MINAGRI houses the National Forestry and Wildlife Service (SERFOR), which was created in November 2014 to take over the responsibilities of the General Directorate of Flora and Wildlife (DGFFS). SERFOR assumed authority over the new National Forestry and Wildlife Management System and is now the lead agency for forestry and wildlife issues. It is responsible for regulating and promoting the sustainable use and conservation of forest resources and formulating the norms for the authorization of forestry concessions, which are granted by regional governments through their regional forest and wildlife directorates. These concessions are granted for the use of forest resources in permanent production forests (BPPs) – a category created in 2000 – which are areas with primary natural forests, owned by the state and made available to individuals preferably for the use of timber and other forest products. Forests cannot be privately owned, as will be explained below.

Some of the responsibilities being progressively transferred from the agricultural sector to the regional environmental authorities (ARAs), where they exist, include the power to grant permits and authorizations for forest lands, in addition to the forest concessions mentioned above (timber and non-timber forest products), and the power to promote and control compliance with national forest policy. In addition, the ARAs now have the power to create and administer regional conservation areas and conservation concessions, as indicated in the Forestry Law. It is important to note that provincial and district authorities do not have powers regarding forest resources or to grant rights over forest concessions.

Of course, not all powers in the forest and agriculture sector have been decentralized to the regions. The previous Forestry Law (No. 28308) established that in order to grant rights over other natural resources, the authorities in charge – the ARAs – must request the prior opinion of SERFOR when the land involved may affect forest resources. The purpose of this is to ensure there are no forest resources involved when rights are granted over natural resources other than forests. For example, the regional forest agencies must obtain approval from MINAGRI for land-use change involving forest clearing and the exportation of particular timber species from the region. With the passage of the new Forestry Law (No. 29763), SERFOR is also in charge of the supervision and control of compliance with forest management plans and concession contracts, effectively taking over responsibilities previously held by the Monitoring Agency for Forest Resources and Wildlife (OSINFOR). OSINFOR is only responsible for monitoring legal concession owners and sanctioning those under poor management. Illegal activities are reported to the region's fiscal police, which is responsible for imposing sanctions.

Issuing land titles is one of the most critical powers previously held by MINAGRI that has now been devolved to regional governments through the regional agriculture directorates, which are generally responsible for formulating, approving and executing policies in agrarian matters corresponding to the regions. Through their office of physical and legal formalization of property (*saneamiento físico y legal*), the regional agriculture directorates grant property titles as well as possession certificates (temporary tenure rights).³¹ Possession certificates are granted to farmers who prove their sustained occupancy and peaceful and productive use of the land for over a year. These certificates should be updated annually and constitute a key preliminary step for smallholders to obtain a land title.³² The regional directorates are also responsible for titling native communities and state-owned urban and barren terrain within their jurisdiction, with the exception of assets that fall within the scope of the national government, such as protected areas, projects of national interest and municipal lands. Decree

31 These certificates authorize the temporary possession of land for agricultural purposes.

32 Legislative Decree 1089, approved in 2008, blocks the titling of lands where occupation cannot be demonstrated from before 31 December 2004.

No. 22175 indicates that native lands with forest vocation will not be granted to native communities as a property right, but rather in usufruct (right to use).

In addition, regional governments can claim available state land in the name of the regional government through a process called *inmatriculación*. While all regions have the power to do this, San Martín is the only one in our study that has taken advantage of it for the creation of Regional Conservation and Ecosystem Recuperation Zones (ZOCREs),³³ which was enabled by the completion of its ZEE in 2006.³⁴ The ZEE established that 65% of the region required environmental protection to address the high rate of deforestation. According to the director of the ARA's conservation system, as of December 2013 San Martín created a total of 18 ZOCREs representing 8.3% (or 428,800 ha) of the total land area. In addition, San Martín created 'conservation concessions' covering a total of 467,450 ha, with many more awaiting approval (283,000 ha), which together would constitute 14.6% of the region's total area.

MINAGRI is the main institution with the authority to establish and change the classification of lands according to their vocation (*capacidad de uso mayor*),³⁵ based on soil studies. It is also responsible for managing the information system that catalogues the current use of soil (*uso actual*). While lands with soils classified as having a forest vocation cannot be titled and the activities permitted on them are restricted, lands with forest cover that are classified for another vocation can be legally titled and cleared. The new Forestry Law (No. 29763) allows MINAGRI (and now regional agriculture directorates) to change the current land use for other sustainable uses, with the exception of lands that have a forest vocation. For example, it has the authority to grant public land ("free state land") to a private company to produce agricultural products such as oil palm if the vocation of the soil is classified as agriculture (see Box 2). Also, Law 29151 (General Law of the National System of Public Property) and its specific regulation (DS 0087-2008-Vivienda) allow the government to sell public land to private companies through an expedited direct sale process – rather than the usual, more complicated, titling procedures – in "exceptional sites". These exceptional sites include projects officially considered of "national, regional or local interest" by the Peruvian State.

Land classification is both highly controversial and politically sensitive, but it is currently required by law before titles (or use permits) can be issued. Few people appear to be familiar with the methodology and criteria MINAGRI uses to interpret and manage the classification of lands. In particular, the lack of clarity around the classification system makes it appear subjective and open to manipulation. In addition, the classification of the vocation of land and granting conversion rights do not require the participation of the people affected, the private sector or NGOs, as evidenced in the cases of Grupo Palmas-Barranquita (Box 2) and Plantaciones Ucayali (Box 3). Finally, these examples demonstrate the environment sector's limited authority over land-use decisions, as it does not play a role in titling and does not have the final authority in assigning a vocation to lands. The agriculture sector therefore remains the most influential actor in land-use decisions with its statutory power over land-use classification and land-use titling and permitting.

4.2.3 Mining and energy

Authority over medium- and large-scale formal mining and energy projects lies with the Ministry of Energy and Mines (MEM). This ministry is responsible for granting and administering mining concessions and for the approval of EIAs and the technical dossier, after which the start of activities can be authorized. As mentioned previously, oversight falls to the OEFA, which is part of MINAM.

33 The new Forestry Law does not support such areas and thus San Martín has to rethink this land classification.

34 The ZEE was approved by Regional Ordinance No. 012-2006/GRSM-CR and Ministerial Resolution No. 656-2006-EF-10.

35 According to law, the vocation of the soil of a given geographic area is defined as "its natural ability to produce consistently, under continuous treatment and for specific uses." Land classification according to its vocation is "a technical-interpretive system with the purpose of assigning each unit of land a potential determinate use, value and proper management" (Supreme Decree No. 017-2009-AG).

Box 2. Enabling land-use change from the top: The case of Grupo Palmas-Barranquita in San Martin.

In 2006, MINAGRI authorized Grupo Romero's purchase of 3000 ha of primary forests for palm oil cultivation. Originally classified as a permanent production forest (BPP), this land was previously deemed inappropriate for agricultural use or sale. MINAGRI accepted the company's request to change the land use from forest to agriculture by resizing the BPP and allowing the company to clear 2100 ha over a two-year period. It therefore limited the area cleared to 70% of the total, leaving 30% for conservation. As stipulated in the Forestry Law, any large-scale agro-industrial project must submit its EIA and have it approved prior to changing land use. In 2007, the company began clearing the land before the completion and approval of its EIA and cleared the entire area in less than a year.

Upon learning about these activities, the municipal government of Barranquita initiated a provincial court case against the company for clearing the land without the approval of the EIA and without considering the regional ZEE completed by the regional government in 2006. They argued that once MINAGRI resized the BPP, the company quickly deforested, prior to the government's approval of the change in land use. The company argued otherwise, and after a series of public hearings between 2011 and 2013, Grupo Romero was found innocent of these charges.

There are several issues at the heart of this case. For example, the regional government lacked decision-making power when this land-use change occurred. At the time, only the national government could resize BPPs and grant authorizations for land-use change. The committee formed to defend the interests of the people of Barranquita against the company's actions questioned the mechanisms the national government used to enable the company's land-use conversion. Key informants flagged as problematic the regional government's legal limitations in terms of involving itself in this case and its lack of voice in the decision-making process.

Many respondents interviewed around this case blamed the company and national government for generating and proliferating social disputes in Barranquita. According to one informant, it was a top-down decision that revealed a series of loopholes: "The company took advantage of these loopholes to obtain authorization from the government to deforest the land.... The State legalizes illegality, which generates incentives for illegality." One community activist from Barranquita places the responsibility for the decisions made in the hands of the government: "The company doesn't hold the power, as rich as it is – the power lies with the national government and its employees, who ultimately sign off on decisions. If there has been a public outcry, it is because of the government's actions." This informant also points to the way in which the government enabled land-use change in this area, given that it did not apply sanctions for clearing forest before the approval of the EIA: "Rigorous enforcement of the law isn't up to the company – it's up to public servants. The country does not belong to Grupo Romero, it belongs to the Peruvian people; and we, the Peruvian people, have the right to hold the government to account."

Decentralization and other laws have transferred some powers over small-scale, artisanal and non-metallic mining³⁶ to the regional governments. Through their Regional Departments of Energy, Hydrocarbons and Mining (DREHMs, see Table 7), regional governments are responsible for supervising, controlling and promoting these mining activities. However, the concessions must first be processed in Lima by MEM. In addition, the DREHMs are responsible for the approval of the Environmental Adjustment and Management Program,³⁷ which are the environmental plans required for every mining concessionaire. Nevertheless, given the high incidence of informal and

³⁶ Artisanal mining is considered a subsistence activity on up to 1000 ha of concession area, while small-scale mining refers to concessions of up to 2000 ha. In both cases, these actors have limited production and/or processing capacity (articles 2 and 10 of Law No. 27651).

³⁷ *Programa de Adecuación y Manejo Ambiental*.

Box 3. The DRSAU and Plantaciones Ucayali SAC.

In Ucayali, the Regional Directorate of Agriculture (DRSAU) has supported the expansion of oil palm by selling lands to oil palm companies like Plantaciones Ucayali SAC. In 2012, the DRSAU sold 4760 ha to Plantaciones Ucayali for an oil palm project in an area that had been consistently requested by a local producer association from the community of Zanja Seca. After denying titles to most of the local producers, arguing that such land was forest and that the producers had not been working the land for a long time, the DRSAU granted authorization for land-use change (from forest to agriculture) without previously conducting the EIA or soil studies, and then sold the area to the company. The sale was regularized after obtaining the 'technical report' that stated that the land involved was not 'forest' anymore, but rather degraded land and thus saleable. By 2012, the forest had been replaced by palm. According to many key informants, this area was mainly primary forest. In the neighboring community of Bajo Rayal, the company illegally expanded onto nearly 826 ha of farmland between 2013 and 2014, affecting 60 farmers who lost their user and property rights as a result. These farmers have also lost their user rights as a result of land grabbing that many speculate is encouraged by the company.

The regional government is the focus of public criticism for favoring private investment in large-scale agro-industrial projects. Local people, particularly the association that requested title to this land, are angry with the DRSAU because it was not transparent and it favored a company over them. According to informants from the community of Bajo Rayal, the DRSAU always delayed the titling process despite its promises to issue titles. During this time period, the DRSAU took advantage of certain laws to delay or deny titles and land-use permits to smallholders who claimed to meet the criteria for such certificates. In this way, a regional government office was able to promote oil palm expansion despite local smallholder farmers' requests both on environmental grounds and based on competing claims. There are, moreover, no checks on the DRSAU from the environment sector, as both MINAM and the regional environmental authority have little in the way of meaningful legal power over land use.

According to key informants from this site and the DRSAU, after pursuing the issue through legal channels for over two years, the company was finally sanctioned by a local judge for illegal deforestation (see also Box 6). However, no land rights had been restored for any local people.

illegal mining,³⁸ the law enables the OEFA to help enforce environmental regulations in these mining operations.³⁹ Furthermore, provincial governments have the power to issue binding opinions on mining concessions in areas they have designated as zones of urban expansion (Wieland Fernandini and Sousa 2015).

MEM is also responsible for authorizing hydrocarbon concessions, although such contracts are initially negotiated by PERUPETRO S.A., a state-owned company created by the Hydrocarbons Law (Law No. 26221) and in charge of promoting, negotiating, executing and supervising agreements for the exploration and production of hydrocarbons in Peru. Through the DREHMs, regional governments are responsible for formulating plans for hydrocarbon extraction in compliance with national-level policies, while PERUPETRO and MEM maintain the critical powers over granting and administering concessions.

38 Illegal mining refers to mining activities in areas not designated as mining concessions, whereas informal mining refers to mining activities that take place in areas that are suitable for mining but do not meet the necessary legal conditions.

39 See Article 17, Law No. 30011 (*Ley que modifica la Ley 29325, Ley del Sistema Nacional de Evaluación y Fiscalización Ambiental*).

4.3 The challenges of fragmented regional governance

Although many powers and responsibilities from different land and natural resource sectors have been decentralized to regional governments, several challenges stand in the way of their effective implementation. We focus on the challenges of cross-sectoral governance, as findings point to the fragmented nature of sectoral governance at the regional level, which greatly influences decision making around land use. We also discuss a series of other challenges, such as insufficient funds, which limits the ability of regional governments to fulfill their newly decentralized responsibilities; lack of central government support; and corruption, among others.

4.3.1 Cross-sectoral coordination

One of the major governance challenges seen across the regions is the fragmentation of functions across sectors at the regional level. Institutional changes have resulted in confusion and conflict, primarily due to a lack of clarity regarding the roles and functions of government entities and poor coordination among different regional agencies with respect to decision making over land use in the same areas. These challenges are demonstrated by the duplication of job functions and conflict over power and land-use claims on the ground. Rather than a result of decentralization, however, these challenges existed before it and still persist, as the process itself transferred these problems from the central government to regional governments. As one representative from a regional indigenous organization put it, "...the national government is not able to control the situation [and thus,] the local and regional authorities have adopted the problem..."

For example, poor coordination among agencies has resulted in overlapping concessions. In both Ucayali and Madre de Dios, these overlaps, and the failure to address them, have generated and sustained social conflicts on the ground. Key informants and authors suggest that incomplete territorial and forest planning and the absence of a land registry contribute to this conflict (Capella and Sandoval 2010), particularly when different types of rights are granted for the same natural resource or when rights are granted to different natural resources located on the same land (Piu and Menton 2013). Different government offices use different regional maps for concession mapping, for example, which is partially explained by the absence of the ZEE in Ucayali and Madre de Dios. There are currently three different cadasters that are used in land-use planning by different institutions at multiple levels (DREHM, DRA, DOT, MINAM) that do not coordinate with each other in the process. Multiple offices are often implementing projects with distinct objectives in the same areas. These issues raise the need to reach consensus on both a single updated cadaster and a single, consolidated policy vision with coordination among different actors involved in land-use planning.

Again, these problems did not originate in the regions. Rather, the different maps and databases were handed down to the regional offices by the corresponding national offices. Some of the problems arise from maps done prior to the use of GPS, while landmarks associated with rivers move over time. Moreover, we argue that political conflicts among competing interests would not disappear even with the use of a single updated cadaster. For example, a single cadaster could conceivably reflect the interests of the most politically powerful sector, such as mining or agriculture, at the expense of environmental or indigenous interests. Nevertheless, the persistence of inconsistent and overlapping land-use plans, classifications and even concession allocations confuse and impede effective land-use governance.

Several informants across regions attributed the lack of coordination among government offices to each sector's desire to maintain its power and not share or transfer it to others. One key informant from the Madre de Dios Consortium⁴⁰ pointed out that MINAGRI/DRA and the DREHM work in the same areas but do not coordinate: MINAGRI/DRA deals with land used for agriculture while the DREHM

40 A project involving universities and government and nongovernmental organizations that promotes research, capacity building and commitments to develop public policies that foster the conservation and sustainable management of natural resources. The consortium is part of USAID's Initiative for Conservation in the Andean Amazon (ICAA). For more information, see: <http://www.amazonia-andina.org/en/our-partners/consortia/madre-dios>.

deals with the subsoil. From the point of view of one official from the Regional Government of Madre de Dios (GOREMAD):

“[O]verlaps create conflicts among different activities and actors. The overlapping of concession rights where government owns the subsoil [is a problem]. Native communities, farmers, brazil-nut collectors, loggers and miners all have land conflicts with one another due to the overlapping of concession rights.... We all need to agree on the strategies used to distribute resources and how to overcome overlapping concessions.”

Similar problems are seen in Ucayali. Most of our key informants argued that there is a lack of coordination and also clear contradictions between the Regional Directorate of Forestry and Wildlife (DEFFS) and the Regional Directorate of Agriculture (DRSAU). DEFFS's mandate is to guarantee the rational use of forest resources, while DRSAU aims to promote agricultural production. Apart from their contrasting missions, they use different spatial information on property and concessions. DEFFS staff members and other key informants complain that DRSAU grants possession titles over BPPs and concessions, which they claim generates overlapping land rights and land conflicts among rights holders and compromises DEFFS's ability to fulfill its mandate. Again, these cross-sectoral coordination challenges seen at the regional level reflect similar dynamics at the national level.

According to regional government informants, over 1 million ha out of a total of 8.5 million ha in Madre de Dios have overlapping concessions. There are approximately 381,000 ha of oil concessions overlapping with a protected area (SPDA 2011) and agricultural properties allocated in areas overlapping with forest concessions (Chavez et al. 2012; Piu and Menton 2013). Brazil-nut collectors also often have overlapping lands, and the regional concession maps do not accurately represent the area each traditional user actually manages. Similarly, in Ucayali multiple offices have distinct and contrasting objectives: the DRSAU is responsible for authorizing and overseeing agricultural parcels, while the DEFFS handles forests, non-timber forests products, conservation and ecotourism concessions, and the DREHM is in charge of mining concessions. Though these offices are located only meters apart, they coordinate very little.

Informants from the regional government and others believe that the completion of the land-use planning process, of which the implementation of the ZEE forms a part, represents one promising solution to the land conflicts in the region. They believe a common land-use plan would at least improve the regional government's ability to determine the assignment of land uses to particular areas. The problems surrounding the mining sector – both the formalization of mining and the eradication of illegal mining – are instructive as examples of multilevel and cross-sectoral coordination issues and a series of other matters (see Box 4).

San Martin has also faced problems with overlapping land claims, largely resulting from the use of different databases by different national and regional agencies, despite the completion of its ZEE in 2006. For example, several informants from the ARA explained that two ZOCRES overlapped with indigenous communities not engaged in the establishment of these areas that had no knowledge of them, though this was later resolved. Key informants from the ARA report that these conflicts were generated by the different databases used by the ARA and the National Superintendency of Public Records. At the same time, the Regional Directorate of Agriculture of San Martin (DRASM) issued titles in ZOCRES and in protected area buffer zones where titles cannot be issued. The ARA and DRASM were using different databases until 2011 and have only recently begun to coordinate their actions to avoid future conflicts. The ARA also increasingly coordinates with the education and health sectors, which previously authorized schools and health centers in the buffer zones of protected areas and other zones designated for conservation without involving the ARA in such decisions.

Key informants from the ARA suggest that although the ZEE was completed in 2006, the different sectors have only recently begun to use it to inform decision making. Coordination problems still persist, primarily between the ARA and the infrastructure and energy sectors, which do not yet use the ZEE. Several informants mentioned the need for clearer policies and implementation plans with regard

Box 4. Overlapping concessions and titles.

The farming community of Arca Pacahuara was established in the Madre de Dios region between 1992 and 1995 by 12 families of “*Israelitas*” that migrated from Cuzco and Puno to produce corn. The community has since grown to 2500 inhabitants and has become the largest corn producer in Madre de Dios. Arca Pacahuara currently has a total of 6000 ha and is awaiting the approval of a 26,000 ha extension from the Regional Directorate of Agriculture (DRA) to increase its production area. However, this process has been replete with overlapping land disputes with two neighboring forest concessions.

Both forest concessions have filed formal complaints with the Regional Government of Madre de Dios, claiming the community is using part of their forest concession for agricultural purposes. Arca Pacahuara and the forestry concession owners received their land titles from national governmental agencies before decentralization occurred in the region. At the time of writing, the issue had not been resolved, and respondents pointed out that the case demonstrates the urgent need to implement ZEE and the OT process. This tenure issue will also affect Arca Pacahuara’s ability to expand, as the DRA will not grant its land extension until the issue is resolved.

A high-level central government official reported in a private meeting that the Ministry of Economy and Finances is reluctant to approve funds for regional governments to resolve overlapping land tenure claims. The official said that “they do not understand the implications or urgency of the problem” and “see such funding as paying twice for the same thing,” since they previously funded the concessions and titles.

to land-use planning, the titling of native communities and control over forest concessions. Given San Martin’s efforts to encourage cross-sectoral coordination for integrated regional territorial planning (see next section), informants focused on the need for all sectors to align themselves to the ZEE and the corresponding land-use policies.

One former ARA official mentioned the “process of change” that the regional government is experiencing and particularly the ARA’s growing relationship with the Regional Directorate of Agriculture. This informant described the agriculture sector’s institutional culture as “Jurassic,” referring to an archaic way of dealing with land use characterized by top-down planning that favors large investment over livelihoods. The two offices reportedly had better interactions with regards to land-use planning in indigenous territories, where the agriculture sector is still responsible for titling.

While decentralization has faced these multiple challenges, some progress has been made. First, multiple actors recognize that the fragmentation of regional governance is problematic and that some kind of horizontal integration within regional governments is needed for the development of more coherent land-use policies. Though the formation of the ARAs does not guarantee coordination between the environmental and productive sectors, there is evidence of attempts to articulate common goals in addition to institutional reforms that place value on cross-sectoral coordination in decision making over land use.

Second, while environmental tasks were also fragmented among different multiple regional authorities in recent years, these are now gathered together under the ARAs in all three regions. The ARAs hold some responsibility over forestry concession authorization, administrative oversight and monitoring for compliance with the national forestry policy. They now play an important role in advancing sustainable land-use and conservation projects, as well as providing an appropriate space for addressing horizontal coordination.

All of the regions are beginning to address cross-sectoral decision making. In 2014, the regions affiliated with the Amazon Interregional Council (CIAM) and discussed plans for institutionalizing cross-sectoral coordination for land-use decision making by requiring the Directorate of Economic Development to consider the ARA’s opinion in land-use decisions. While the CIAM’s coordinating role was weaker in 2015, San Martin is the one region that has begun this process, as discussed above.

4.3.2 Other challenges

Another recurrent perception among regional informants was that the transfer of functions to the regional level has not been supported by an adequate transfer of financial and human resources to regional governments. Some regional governments, such as Ucayali and Madre de Dios, face difficulties in training and maintaining government employees and thus fulfilling their responsibilities. In many sites, regional governments have experienced delays in receiving funding from the Ministry of Economy and Finances (MEF), which has not only stifled progress, but also enabled corruption in government offices, according to many regional key informants. In some sites, a lack of sufficient funding has also led to high employee turnover and a loss of institutional memory. While Madre de Dios and Ucayali experience significant employee turnover and corruption, San Martín is praised for its institutional stability and capacity in addition to its ability to overcome these issues of insufficient funding. Institutional differences across regions help explain the way in which the regions have confronted these challenges.

The MEF has an annual budget for personnel and projects that goes through the National Planning Office, but financing for projects is also available through the National Public Investment Program.⁴¹ Regional government personnel must apply for this funding on an annual basis, and thus the amount received depends on each regional government office's ability to apply for funding and projects as well as the number and quality of personnel required to accomplish its goals. Little support has been provided to regional officials for such applications.

In Madre de Dios, several informants questioned the power of the regional government (particularly the DREHM) to resolve mining-related conflicts, suggesting that the central government does not provide the regional government with either the financial or other means to do its work. One respondent from a regional producer federation mentioned that certain authorities that also work in the court system and police department often make pacts with illegal miners, enabling them to continue their operations. He recognizes that while the government aims to formalize mining concessions in the region, it does not offer adequate support or incentives to successfully complete this process. In legal mining areas, the law is not enforced with regard to requirements to recover degraded lands. One informant from DRFFS even suggested that mining be transferred back to the national government as the regional government cannot control it or the problems it generates. Problems related to the formalization of mining activities in Madre de Dios illustrate the regional government's inability to control the mining sector and the various factors driving the proliferation of illegal mining operations in the zone (See Box 5).

Several other regional government offices in Madre de Dios have insufficient financing to complete their activities. For example, the director of titling processes in the Regional Directorate of Agriculture claims that it received approximately 20,000 requests for agricultural titles that they are unable to respond to as a result of limited funds and a lack of cross-sectoral coordination. According to an informant from the DRA, it has only titled 1500 agricultural areas since 2011.

Concerns regarding corruption were also seen in Madre de Dios and Ucayali (see Box 6), particularly around the granting of concessions. Regional respondents claimed that bribes are prevalent among government employees who receive money to expedite concession paperwork, forest management plans and the authorization of concession permits in unauthorized areas. Respondents in Madre de Dios reported that some DRFFS employees have gone months without pay yet do not complain because of these 'extra' payments. Informants from both regions suggested that the lack of resources to enforce regulations through control mechanisms and monitoring essentially facilitates activities such as illegal logging and illegal mining, with many recognizing that existing government weaknesses make these challenges more serious. Furthermore, respondents in both Madre de Dios and Ucayali believed that corruption was not a product of decentralization, but had further weakened the regional government.

41 *Sistema Nacional de Inversión Pública.*

Box 5. Governance challenges in relation to illegal mining and the formalization of mining in Madre de Dios.

Respondents from protected area management, the ARA, MINAM and land-user organizations, as well as activists, mentioned several factors contributing to the proliferation of illegal mining activities, such as in La Pampa, and the lack of progress made on formalizing mining concessions in Madre de Dios. As discussed below in Section 5, fragmented governance and insufficient regional government resources have enabled overlapping concessions and inadequate control and regulation of mining activities. The Regional Directorate of Energy, Hydrocarbons and Mining (DREMH) also lacks the personnel and budget to formalize more mining operations. In 2009, there were only three employees in the DREMH office, an insufficient number to deal with the influx of miners, while the problem of informal and illegal mining continued to grow. The increasing scale of illegal mining activities has generated expectations over national government action, particularly in light of the limited capacity and resources of regional government entities.

Key informants also suggest that the lack of clarity regarding the functions and roles of regional entities also complicates cross-sectoral coordination. For example, the decentralized auditing agency, EFA, which is responsible for controlling infractions of small-scale and artisanal mining regulations, is not yet operating. Several informants attribute this to the fact that EFA is housed in the Regional Office of Natural Resources and Environment (GRRNYMA) and not in the DREMH, which replicates the national ministerial architecture. At the same time, the GRRNYMA reported neither having participated in the auditing process nor having any knowledge of it.

All respondents pointed to authorities' intentional abandonment of control and regulation, which they associate with the corruption of regional and national government entities alike. Many also suggested that the inaction of the national government, particularly the MEM and the MEF, represents a lack of political will and distrust on both sides. According to regional government informants, in the last 10 years, approximately 2000 informal miners have been unable to formalize their activities due to the continuous changes in the requirements involved. Informants argue that such changes prevent the formalization process. For example, it is difficult or almost impossible for artisanal miners such as those in the AMATAF and APAYLOM miner associations to formalize. A representative from one of these organizations feels they are "marginalized" by the government and that "the state is absent" in their area. But why? Although the answer is unclear, several informants suggest this lack of commitment may have to do with the limited importance placed on the mining sector by the national government, which is more invested in the gas and petroleum concessions that make up a much larger portion of the region and are more profitable for the State. They also point to the legislative norms that have been passed, making the process "long and tedious," as one respondent said, and not one of which has been implemented. A recent report by the NGO *Sociedad Peruana de Derecho Ambiental* (SPDA) suggested that the State should distinguish different types of miners so as not to criminalize them all, as if they are all practicing illegal and irresponsible mining.

Leaders from a regional producer federation and the Tambopata management committee mentioned their involvement in the interventions against illegal mining in the buffer zone of the Tambopata Reserve and in the area called La Pampa. Although unsuccessful, they stressed the importance of support from government and other authorities in order to avoid and prevent corruption. They also highlighted the need to involve local producer groups in addressing illegal mining. According to a leader of the protected area's management committee, these actors are "the most affected," but also the most powerless in decision making related to the surrounding illegal mining activities:

"They are forgotten most of the time because their economic power is limited. On the contrary, [the miners] are able to pull strings from Lima...they are able to manipulate the system from Lima and influence from Lima. Here OSINFOR investigates and inquires into the forestry concessionaires, but they do not do the same with the illegal miners."

Finally, different interests are also at play. With regard to miners operating in areas already under the possession of farmers, one regional government informant referred to the conflicting objectives of the institutions in charge (DRA and DREHM). Another respondent from a regional producer association contends that the problem is that MINAGRI does not want to give up its role, which would cede jobs and institutional power to the DREHM. Other actors point out that the government failed to act when it had the chance, and that the sheer quantity of miners today is simply beyond its control (Gordillo 2014).

Box 6. Corruption in the land-use and forest sector: The case of Ucayali.

Ucayali is an Amazonian region known by its high rates of public officials implicated in corruption acts. In 2014, more than a hundred cases were registered (*The Economist* 2014). The information below is taken from national news sources, regional reports and interviews.

The case of Henderson: illegal logging

The former vicepresident of the región of Ucayali, Carlos Henderson Lima, is also legal representative of the logging company Maderera Marañón SRL. OSINFOR found that Henderson's 4,491,892 cubic meters of wood did not come from his forestry concessions but from illegal logging. OSINFOR closed his four concessions and fined him more than 247 thousand Peruvian soles (over \$80,000 at current rates). However, a local court accepted Henderson's appeal and re-activated his concessions. "It is not possible that the national authority determines that there is an illegal act, denounces it and a judge lifts the sanction, going against of the technical opinion of the forestry authorities", stated Fabiola Muñoz, director of SERFOR. After new investigations and a new fine of more than 200 thousand Peruvian soles (approximately \$66,000), Henderson presented another appeal (Jimenez 2014).

The case of Saweto: indigenous land tenure rights

The regional rural titling office (*Dirección de Saneamiento Físico Legal de la Propiedad Agraria*) of the regional government of Ucayali denied a property title to the native community of Saweto for 12 years, since 2002. This entity first contended that there were insufficient funds for the demarcation of the community's territory, and then that Edwin Chota – the leader of the community – needed to reach an agreement with the owners of the logging concessions that were overlapping the territory. Fabiola Muñoz, director of SERFOR, rejected this last argument, ensuring that there is no regulation with such a requirement. "In the regional government of Ucayali, the loggers rule," said Roberto Guimaraes, leader of the Federation of Native Communities of Ucayali and its Tributaries (FECONAU). After denouncing illegal loggers on their community land claim, Edwin Chota and three other leaders of the Saweto community were murdered (Jimenez 2014).

The case of Zanja Seca: legalizing deforestation

The former director of the Regional Direction of Agriculture of Ucayali (DRAU), Miguel Seijas del Castillo, is being investigated since 2013 for crimes of collusion, embezzlement, bribery and the irregular sale of 4,759 hectares to the private company Plantaciones Ucayali. The officials under his charge are also being investigated, such as the heads of the regional titling offices (Inforegion 2014). The denouncement was presented by the association "La Perla del caserío Zanja Seca", which had unsuccessfully sought the right to the same land claim with the regional government previously. The land was first "privatized" as property of the DRAU, and was then sold to Plantaciones Ucayali, which was allowed to convert it to oil palm after the government determined the soil vocation was agricultural. The Zanja Seca members affirm the land was mostly primary forest and that part of it did have forest fallows and agriculture (Ravikumar et al, forthcoming). (See also Box 3).

Despite similar challenges,⁴² though clearly not as difficult to address as mining in Madre de Dios, San Martín has made notable efforts to address illegal activities in the forest sector. According to the director of the regional forest directorate, the 100,000 Peruvian Soles (approximately \$33,000 at current rates) designated for the control of forest activities in the region is insufficient, but this is complemented by funding from the regional government and donors such as the United States Forest Service. To maximize efficiency, the directorate collaborates with the regional legal office (*fiscalía*), police and the *Ronda*⁴³ to ensure the functioning of the 10 control posts in San Martín. The Ronda is an important organization with substantial local legitimacy that works to protect local communities

42 Informants from San Martín recognize that despite the support from external institutions, the decentralization process and the institutional requirements and changes that must occur are generally slow and incomplete.

43 The Rondas emerged during the years of armed conflict as rural self-defense committees. They enjoy substantial legitimacy today and are regulated by law.

from delinquency, crime and illegal activities in and around communities (including forests) through daily and nightly patrols. Through this collaboration, rather than receiving monetary compensation, members of the Ronda receive the illegal timber that is confiscated, which they can then use in their communities for public works projects, such as for school furniture.

Another problem attributed to insufficient resources was the failure to complete the ZEEs in Ucayali and Madre de Dios. Ucayali's Sub-Directorate for Land-Use Planning was transferred full land-use planning powers in 2007, but according to key informants, these powers are not being fully exercised because the office still requires training, equipment and funds. Some also attribute the incompleteness of the ZEE to unclear regional policies around land-use planning, as well as corruption and the misuse of designated funding. A list of the structural problems and challenges to multilevel governance and cross-sectoral coordination, particularly noted in these two regions, are presented in Box 7.

Box 7. Structural problems that prevent effective multilevel and cross-sectoral coordination and land-use planning and management.

- Insufficient economic and human resources to execute responsibilities
- Weak regional capacity to implement programs
- Institutional fragmentation
- Institutional instability
- Lack of political initiative to execute responsibilities
- Corruption

In contrast, San Martin completed its ZEE in 2006 and has been able to overcome problems related to insufficient financial and human resources. Informants attribute this progress to its clear regional vision guiding land-use decisions, as well as political will, institutional capacity and the prioritization of forging alliances with strategic actors, as discussed below. These factors also explain why San Martin was the first region to create its ARA. Over time, and as a result of the former regional governor's support for improved environmental governance, San Martin adopted an integrated approach to land-use planning that is expected to enable coordination across sectors and provide a more integrated regional land governance model.

4.4 Conclusions

Our findings demonstrate that jurisdictional complexity persists at the subnational level in Peru, with actors from multiple levels and sectors of government playing distinct roles across multifunctional landscapes. To some extent, decentralization has empowered regional governments in the aftermath of a decade in which power was highly centralized in Lima. On the one hand, many subnational actors believe that decentralization has been insufficient, arguing that key powers are still legally held by the central government and that not enough human and financial resources have been allocated for subnational governments to execute their mandates. On the other hand, sites such as those involved in the expansion of oil palm in Ucayali demonstrate that empowered regional governments do not always pursue environmentally sustainable and socially equitable policies. Decentralization related to land use decisions largely stops at the regional level, with very few meaningful powers transferred to local governments.

Moreover, some sectors remain more powerful than others in land-use decision making. The overall priorities for investment in Peru, such as those in the Economic Stimulus Package, are set at the highest levels by the PCM, while decisions over subsoil resources are concentrated in the mining and

energy sector. Critical powers related to land-use classification and also land titling and permitting remain in the agricultural sector, at the national and regional levels respectively. The environment sector has ostensible power over the process of territorial planning, but the outcomes of these processes are not binding, and the environment sector in general is much less powerful than the others. Furthermore, informants point out that some technical processes, such as the classification of land uses, are used for political ends given the national government's interest in extractive resources such as oil palm, minerals and petroleum.⁴⁴

The decentralization process is still ongoing and has occurred with some variation across regions due to differences in the timing of power transfers and the particularities of regional governance dynamics. Across regions, different government offices typically do not coordinate on land-use planning or decision making. Overlapping rights granted by different government offices are signs of fragmented governance that have created social conflict and confusion. These governance dynamics and structural problems are more serious and have fueled more tension in Madre de Dios and Ucayali than San Martin, as they have a greater variety of conflicting land uses and higher stakes are involved due to the price of gold, especially in the former.

External financial and technical assistance has been important in all regions, but more so in San Martin, which is now able to conduct its own 'lobbying' and generate investment in the region to implement its policies. Although the formation of the ARAs suggests progress on environmental governance in all three regions, it remains to be seen what impact they will have on broader regional planning and land use in each case.

44 We do not discuss any sites involving petroleum in this report.

5 Coalitions for low-emissions initiatives versus ‘business-as-usual’ development

This section examines actors involved in ‘business-as-usual’ development activities that tend to promote deforestation and forest degradation in comparison to those involved in low-emissions projects such as REDD+. It begins with a discussion of respondent perceptions regarding the actors responsible for deforestation and, conversely, for promoting low-emissions alternatives in the three regions. It considers each of these actors in turn, based on the research findings. The second section discusses multistakeholder processes associated with low-emissions options, with particular emphasis on REDD+ and the experience of the regional REDD+ roundtables. Finally, the third section analyzes the emergence of low-emissions options and the extent to which REDD+ and other such alternatives have broad support or the possibility of making inroads into ‘business as usual.’ This is followed by a short conclusion.

The research finds, as revealed among government agencies in the previous section, that the group of actors supporting low-emissions projects such as REDD+ has little relationship with or influence over the more powerful actors driving land-use change. REDD+ projects are working primarily with smallholders and at a relatively small scale. REDD+ has supported multistakeholder dialogues, particularly between government and non-governmental actors through the national and regional roundtables, but discussion still primarily involves those with similar interests in the environment or conservation.

5.1 Multilevel governance and the actors that drive land-use change: An analysis of actor perceptions

This section presents findings on perceptions of the drivers of land-use change based on interviews with actors across the three study regions. We find that, in general, smallholders and community actors were perceived as the most important in driving deforestation and forest degradation, followed by large private companies (see Table 8). At the same time, national- and regional-level government actors were perceived as having an important role in enabling such land-use changes. Among the regions, there was variation in the specific types of activities that drove deforestation and the ways in which government at multiple levels enabled the conversion and degradation of forests.

Table 8. Frequency with which different actors were cited in interviews as driving deforestation and forest degradation or low-emissions development activities.

	Actors involved in deforestation and forest degradation	Actors involved in low-emissions development activities
Smallholders, individuals and community-level actors	Very frequently cited (130)	Frequently cited (41)
Private companies and concessionaires	Frequently cited (69)	Frequently cited (33)
National government	Frequently cited (45)	Frequently cited (33)
Regional government	Frequently cited (46)	Frequently cited (49)
Local government	Very rarely cited (5)	Occasionally cited (21)
National and local NGOs	Very rarely cited (6)	Frequently cited (53)
Donors, international NGOs and research centers	Very rarely cited (4)	Occasionally cited (20)

Note: As the sample was not random or calculated to be balanced across types of actors, regions or levels, the numbers should be seen as indicative and only considered in relative terms.

Governments, however, were not only perceived as drivers of deforestation and degradation. According to respondents from across the regions, some government actors have played an important role in supporting low-emissions development. Local governments, for example, though not often cited, were mentioned far more in reference to low-emissions activities than to deforestation; regional governments were mentioned equally in relation to both; and the national government was cited substantially more as supporting activities leading to deforestation. Unsurprisingly, national and local NGOs were cited more than any other actor with respect to low-emissions activities. Small-scale local actors and private companies were also mentioned in reference to low-emissions development activities, though much less so than in reference to deforestation.

These actors are described in turn below. The results presented in Table 8 reveal a complex picture of the drivers of land-use change, which is affected by the design of policies at multiple levels and their implementation on the ground.

5.1.1 Smallholders, local community actors and microenterprises: Changing land use on the ground

In general, activities carried out by smallholders, individuals, and other actors at the community level were widely perceived as critical direct drivers of deforestation and forest degradation. The specific activities cited varied from region to region. Respondents from Madre de Dios commonly cited mining and logging. In San Martín and Ucayali, respondents from diverse sectors and levels cited agricultural expansion linked to migration, including coca growing and coffee and cacao cultivation. Across study regions, respondents from diverse backgrounds perceived deforestation to be driven by migrants involved in small-scale agriculture and mining.

In San Martín, respondents involved in a case where communities had come into conflict with an oil palm company explained that smallholders who had migrated to the region from the highlands employed different strategies than farmers who had been present for longer. One local activist suggested that more recent immigrants in particular were responsible for greater deforestation and forest degradation than those who have long inhabited the region. The same pattern is seen in Madre de Dios, where respondents believed that colonists and miners from the highlands employed unsustainable land-use practices, unlike longer-term residents.

While the overwhelming frequency with which small-scale actors were mentioned as drivers of deforestation is consistent with the common notion that ‘migratory agriculture’⁴⁵ is the principal driver of deforestation in the Amazon, local actors were also seen as key players in sustainable land-use activities. In Madre de Dios and Ucayali, community members and NGOs stressed the importance of local farmers in adopting and implementing sustainable land-use practices. Such practices included agroforestry and reforestation, as well as participation in REDD+ projects. These activities were often associated with projects led by NGOs, private companies or the government.

5.1.2 Private companies: Investing in land-use change, sometimes for environmental aims

Large firms and concession holders were also mentioned by many respondents. In Madre de Dios, large companies involved in mining were cited by respondents from international cooperation agencies, the regional government, the national government, local communities, NGOs and also land-user groups. Several of these said that larger mining companies were able to pay the upfront costs of formalization but often did not undertake reforestation activities to mitigate the environmental damage from mining operations.

⁴⁵ Please refer to the discussion in Section 3 on the problems with this term.

Respondents drew a contrast between large mining companies and small, often informal or illegal, mining. To some extent, opinion was divided as to which type of mining presents a greater deforestation threat. A respondent from the Madre de Dios Consortium, for example, suggested that illegal and small-scale mining was a principal driver of deforestation, while larger-scale and formal mining was not so problematic. Others believed that large-scale mining was more of a problem, and argued that formalization does not resolve the environmental problems that emerge from mining.

Also in Madre de Dios, timber concessions were flagged as potential drivers of deforestation and forest degradation. Respondents from both the regional and national government offices addressing forestry and from NGOs reported two principal mechanisms through which logging drives degradation. First, logging concessionaires do not always comply with forest management plans that would render their activities sustainable. Second, sometimes the plans themselves are insufficient to ensure sustainability and reforestation is inadequate. In Ucayali, such systemic issues in logging concession institutions were mentioned by a small number of respondents, whereas illegal logging was cited as more rampant.

Respondents from San Martin and Ucayali, including NGOs, communities and multiple government levels and sectors, cited large-scale ranching in addition to oil palm plantations, although ranching⁴⁶ is not as heavily practiced as other land uses in these regions. Oil palm was discussed at length by respondents involved in two of the study sites, which were discussed previously in Boxes 2 and 3 (see also case descriptions in the Appendix). In both sites, private firms were perceived as driving forest conversion to establish or expand plantations; and again in both sites, local communities and activists believed the government – national in one case, and regional in the other – was supporting them.

Private companies and concessionaires were not only linked to deforestation and forest degradation, however. In Madre de Dios, one private for-profit firm – Bosques Amazónicos, S.A.C. (BAM) – was a leading proponent of a REDD+ project. Respondents from a brazil-nut collectors' association that partnered with the firm, NGOs and the government all mentioned this company as a promoter of low-emissions land uses.

5.1.3 National policies: Setting the context for land-use change

While smallholders, local people and private companies were widely presented as direct drivers of deforestation across regions, respondents did not perceive these activities as taking place in a vacuum. Informants across regions pointed to various enabling factors, as well as contradictions in land and forest policies, ineffective implementation of these policies by the corresponding authorities and the problem of corruption. They also mentioned the role of the national government in incentivizing deforestation and degradation. Our findings suggest that national policies and practices create key enabling conditions for land-use change. There are mixed perspectives on the types of impacts different levels of government have on land use; indeed, individual respondents often described entities from the same level of government working at cross-purposes, as presented in the previous section. This is not paradoxical, but rather stems from the sectoral compartmentalization of governance at all levels.

Regional government officials and NGO staff in all three regions also argued that national policies have historically incentivized the conversion of forests to agricultural uses. Multiple respondents explained that the construction of highways had driven and facilitated both agricultural expansion, such as in San Martin, and other land-use activities, such as mining in the case of Madre de Dios. In addition, policies that involved direct subsidies for crops and roads that allow access to forests are linked to deforestation in fairly obvious and direct ways. For example, across study regions, informants

⁴⁶ Cattle ranching is the second most popular activity after coffee farming, but is not considered a major deforestation driver. The influence of cattle ranching on deforestation in San Martin is very low, as it occurs in already deforested areas. This activity often corresponds to hills, mountain slopes and high terraces in the provinces of Rioja, Moyobamba and Lamas, which contain about 68% of the pastures in the region of San Martin (Info Region 2013). Most often, farmers in this area convert fallow lands to pasture for raising cattle.

emphasized the drastic effects on land use of government policies in the 1980s that promoted cash crop cultivation through agrarian loans. The case involving the Awajun territory in northern San Martín illustrates the effect of such policies, which incentivized significant land-use change (see the Appendix for study site description). Informants agree that such policies also generated a shift in Awajun culture that defines the territory today.

Other policies, however, drive deforestation and forest degradation in subtler ways. In Ucayali, for example, several respondents from NGOs and regional government, as well as independent activists, highlighted the inherent flaws in, and several conflicting aspects of, the land and forestry laws that can be linked to resulting land-use change in the region. A number of respondents referred to the Land Law, which enables formal use rights and titling only when land is under active use (usually interpreted as farming or ranching), thus incentivizing forest clearing and even land trafficking. One regional government respondent explained that in practice, migrant farmers clear forest in order to legalize their occupation and demonstrate that they are farming. He said that this is the trend in palm oil cultivation. Although the Forestry Law indicates that farmers need to maintain 30% forest cover within the parcel, it is unclear if this is enforced. Meanwhile, the agricultural bias in titling makes it difficult for environmental or conservation projects to compete with agricultural production.

Moreover, respondents from two NGOs in Ucayali working in the forestry sector criticized policies and procedures around logging concessions as being ineffective and inequitable, leading to illegal logging and driving deforestation. One respondent believes that the Forestry Law has “automatically turned all timber extractors into illegal loggers because it only granted concession rights to a few concession holders, who manage areas larger than 5000 ha.” He argued that small-scale loggers need less than that, as they do not have the capacity to work in such large areas, concluding that the law was “not compatible with the actual needs of the people dedicated to forestry.” As a respondent from the Regional Office of Natural Resources and Environment in Ucayali argued, smallholders remain informal “because the system pushed them to be informal.”

The land-use classification system has also been employed as an indirect lever to facilitate the conversion of forests to other uses. Some informants provided examples that they attribute to corruption, although this is only one of several possible explanations. To illustrate, in the controversial oil palm case in San Martín presented previously, a private company in the region was able to establish a plantation on contested lands, facilitated by the resizing of a BPP (see Box 2). In this way, a national government ministry was able to influence land-use change on the ground through the targeted implementation of land classification policy.

Respondents also agreed that other national policies support low-emissions land uses. Both San Martín and Madre de Dios are home to REDD+ projects that involve protected areas and their buffer zones. Key informants from SERNANP, which falls under MINAM control, touted their participation in enhanced conservation activities, particularly in Madre de Dios.

Several government institutions have also taken a lead in controlling some drivers of deforestation. Respondents from the regional offices of forestry and wildlife and of natural resource management described MINAM policy projects that support low-emissions development and the ZEE project. The former reportedly attracted smallholders interested in receiving payments for forest conservation and sustainable management activities, while the latter was described in hopeful terms as a tool for broader sustainable land-use planning.

NGOs and respondents from MINAM itself flagged the importance of collaborative REDD+ implementation projects in protected areas, as well as MINAM’s reforestation efforts on degraded lands. In Ucayali, one respondent representing the national Monitoring Agency for Forest Resources and Wildlife emphasized the importance of its role in controlling the forestry sector. In Madre de Dios, two district mayors and one local farmer said that MINAGRI was supporting agroforestry by providing seedlings. Meanwhile, two district mayors highlighted the role of the National Commission

for Development and Life without Drugs (DEVIDA), which aims to eradicate coca production by promoting alternative crops and agroforestry, and a respondent from DEVIDA itself confirmed working with local governments and smallholders. Nevertheless, DEVIDA was also mentioned as driving deforestation in the introduction of some of its alternatives.

5.1.4 Subnational governments and policy

Other levels of government, particularly the regional government, were also linked to deforestation and forest degradation in Ucayali and Madre de Dios, with none of the mentions referring to the San Martin regional government. Respondents in the first two regions often highlighted the contradictory objectives of different regional government offices and alleged corruption linked to some land-use changes that seem to stifle land-use planning in general, as discussed previously.

In Ucayali, respondents from diverse backgrounds cited the regional government as an explicit driver of deforestation. Those from local communities in Ucayali affected by expanding palm oil plantations, from NGOs, and also from the regional government itself said that the DRSAU supports the expansion of oil palm through multiple mechanisms, even though it leads to deforestation. The policy levers involved include conferring titles to oil palm companies in forest areas and, according to community respondents, delaying or denying local peoples' requests for titles or using permit renewals to allow companies to acquire more land (see Box 3). One regional government respondent also pointed to the slow pace at which the DRSAU processes sites or projects. This person believed that the directorate prioritized larger projects, delaying the consideration of smaller requests that take longer to review per unit area. In the meantime, the applicant company proceeds with its plans, clearing land and beginning operations.

As mentioned, some respondents suggested that corruption was a factor in Ucayali and that informal payments have been made by actors seeking to convert forests to other uses. One smallholder and independent activist affected by the expansion of oil palm by large companies illustrates this point and the lack of support given to smallholders by the regional government in the following way:

“The authorities do not support us. The Director of Agriculture even told us ‘Take the chance now. Sell your lands to the company; this is a good opportunity for you.’ We tell her that we want our land, and if we sell it we will have nowhere else to go. This is not fair. The authorities are not helping; they are on the company’s side. I have my land, and the company set it on fire. It tried to burn it all down. My house is there. The company has told us that if we don’t leave in 24 hours, they are going to kill us. We need protection, we want the authorities to help us, please – we’re asking for the president of the Regional Government to give us some support.”

There was also a perception that regional governments play a moderate-to-important role in low emissions development, from regional conservation projects to their involvement in REDD+. For example, REDD+ roundtables have emerged to foster coordination and planning, albeit with differing levels of activity in all three regions (see Section 5.2 for further discussion).

When prompted about the extent to which low-emissions projects in Ucayali are effective in addressing the underlying causes of deforestation, almost all respondents agreed that the actions were insufficient. One respondent from an international research institution believes that the GOREU’s reforestation projects, for example, have not shown results and points to the absence of a monitoring system for such efforts. Others agreed that these projects have marginal results and said that efforts should aim at larger changes in laws and institutions to create more adequate policies, advance decentralization, address corruption and provide incentives for actors involved in land use.

Almost all informants from Ucayali recognized the contradiction in the regional government’s development agenda between its conservation discourse on the one hand, and the promotion of key crops such as oil palm and cacao, for which they have begun to offer agricultural loans, on the other. For example, the regional office of natural resources (now part of the ARA) was reportedly supporting

reforestation projects, while the agricultural directorate supported oil palm expansion in forested areas. Respondents pointed out that the regional government failed to promote the cultivation of such crops on degraded soils instead. Moreover, several informants said that in its efforts to incentivize agricultural production, the regional government overrides or fails to incentivize local interest in conservation projects, such as REDD+ projects.

In Madre de Dios, respondents were rather ambivalent about the impact of the regional government on land-use changes. Land-use decisions and objectives are characterized by clear contradictions both within and across regional government offices, with some simultaneously promoting agricultural expansion and conservation,⁴⁷ while these and others grant different land-use rights, such as for mining and agriculture, over the same areas (see Section 4). None of the 77 respondents from Madre de Dios explicitly described the Regional Directorate of Energy, Hydrocarbons and Mines as driving deforestation or forest degradation *per se*. However, several did point to the lack of coordination between the national and regional government offices in addressing mining. The Regional Directorate of Agriculture and the Madre de Dios Special Project (*Proyecto Especial*) were mentioned as drivers of agricultural expansion. Yet according to respondents associated with a site where that project was active, the directorate also supports agroforestry and reforestation activities.

Madre de Dios does not have a regional conservation system despite several attempts to create one. According to respondents from the regional government, there were three proposals for conservation areas in 2010, but none were approved because the regional government took too long to process them at a time when it was also granting use rights to miners, farmers and others in the same areas. These actions generated both significant social conflict among the different land users and frustration among those who invested time, money and efforts in the conservation requests.

San Martin is different from Ucayali and Madre de Dios with respect to both land-use change and institutional arrangements. No respondents from San Martin perceived the regional government itself as a driver of deforestation or forest degradation. According to all regional key informant interviews, deforestation is primarily associated with smallholder agriculture, in contrast to the greater complexity of drivers in the other two regions. Many informants highlighted the importance of San Martin's conservation vision and integrated approach to land-use planning. In contrast to Ucayali and Madre de Dios, San Martin developed a regional forest plan and established its regional conservation system in 2009, while the ARA was able to create conservation areas on state-owned lands with the transfer of decentralized powers that same year. As mentioned above, the election of the regional president in 2007 led to a new regional strategy and, soon thereafter, an institutional infrastructure that was created to address the accelerated rate of deforestation in 2006-2010. By 2013, deforestation had decreased substantially. Most respondents from San Martin attributed the rationale behind these decisions to its "Green Region" policies (see Box 8). As one former official of the ARA explains:

“...it's a concept that goes beyond the color and has more to do with the sustainable development alternatives we look for in the region... it's about offering alternatives to traditional development... it's about how we generate our own development model based on our natural and social capital.”

Nevertheless, other efforts have been minimal. The majority of district-level informants expressed dissatisfaction with the lack of budget for and minimal priority placed on reforestation. One district government respondent even suggested the regional president “confuses brown with green,” suggesting that regional reforestation efforts have been insufficient. Nevertheless, three district mayors from San Martin reported collaboration with the regional government on reforestation and agroforestry projects. Some districts have been able to implement such projects with support from external institutions, with the province of Lamas, for example, having planted 5 million trees in all of its districts with support from DEVIDA since 2012.

47 Respondents from diverse backgrounds reported that the regional directorates of forestry and wildlife and of agriculture also supported reforestation and agroforestry projects.

Box 8. San Martin: The “Green Region.”

San Martin’s regional vision stresses the importance of the integral nature of land-use decision making. Though it has an extensive conservation system, it aims to balance both conservation and development objectives. In the words of the director of the ARA at the time of this study, “conservation cannot be [an impediment] to development.” She mentioned how important it is to balance the State’s interests in mining and energy and the region’s interests, orienting land-use planning around ecosystem services in a way that represents the population’s agrarian interests in order to generate economic opportunities.

One of San Martin’s goals is to expand the conservation area from the current 35% to 50% of the total land area. Respondents from NGOs and the ARA alike applaud the steps taken by the regional government to create conservation opportunities through regional conservation areas, often financially supported by regional, national and international NGOs. The regional government provides opportunities for anyone to establish his or her own conservation concession, with the goal of protecting the area of interest and sustainably harvesting its existing forest products as allowed. There are a total of 21 conservation concessions, comprised of approximately 200,000 ha, with a further 29 under evaluation. If approved, concession holders with no previous land rights may sustainably harvest forest products with great possibilities of obtaining environmental certifications, which regional government informants suggested is “value added” for concession holders.

The integrated land-use planning model has drawn support from NGOs and international cooperation to the region. Several regional NGOs have formed an important coalition with the ARA to develop and strengthen regional state and non-state projects, including REDD+ projects. Regional respondents emphasize the importance of the regional government’s institutional capacity and continuity in attracting greater investment from external institutions. San Martin also faces challenges from populations and sectors whose activities are not in line with its regional model. In this respect, informants have discussed the difficulties in addressing the widespread concern of land trafficking. In the words of one regional respondent, “there are people that don’t want to adopt the model... they will continue trafficking land and timber... it’s the daily struggle to make progress and generate results...”

Others mentioned the successful agroforestry program experiences of the regional government and other entities that focus on cacao and palm production, and that have restored once degraded grasslands.⁴⁸ A statement by a respondent from a regional NGO represents the perspective of several others regarding the change in attitude and behavior of local people in addressing deforestation and land-use change through such conservation efforts in general: “You can feel and see that it’s palpable... that the attitude of the population has totally changed... This attitude is driving people to make decisions with respect to [the best use of] their territory in an orderly manner.”

5.1.5 NGOs and international donors: Supporting REDD+ and conservation

Respondents across all regions and respondent types agreed that NGOs and the donors that support them were key supporters of low-emissions development activities. In particular, NGOs were cited as key proponents of REDD+ projects and important partners for government in implementing conservation and sustainable land-use projects. Further analysis of the types of projects that NGOs are supporting, including REDD+ projects, is provided below.

Low-emissions development projects in Peru, such as REDD+, primarily set out to address small-scale drivers of deforestation and degradation over other activities that present greater threats in this respect, such as illegal logging and mining. In general, these projects primarily focus on work with smallholders, providing them with compensation for implementing more sustainable natural resource management activities.

48 *Alianza Cacao* and USAID’s Alternative Development Program.

5.2 Multistakeholder coordination on the environment and REDD+

The National Environmental Management System Framework Law (Law No. 28245),⁴⁹ passed in 2004, set up the National Environmental Commission (CONAM) to ensure the compliance of public entities with the country's environmental objectives and strengthen mechanisms for cross-sectoral coordination in environmental management. CONAM also set out to ensure that regional and local public entities complied with their responsibilities. This commission was set up to plan, promote, coordinate, oversee and sanction actions related to environmental protection and contribute to environmental conservation. In 2009, both CONAM and its responsibilities were transferred to the newly-established Ministry of the Environment (MINAM).

Environmental commissions also exist at the regional and local levels in the form of regional and municipal environmental commissions (CARs and CAMs, respectively), established by regional ordinance in line with Law No. 28245. The CARs are made up of public and private-sector entities, as well as civil society organizations. These bodies are meant to enable multistakeholder dialogue around regional environmental policies and to work with regional and local governments in the implementation of their regional and local environmental management systems. Respondents from the three regions suggest that the CARs have had limited influence in practice, because they are all more or less inactive and do not involve a wide range of actors, particularly lacking actors from the private sector or those involved in agriculture and mining. Informants in San Martin expressed hope that the inactive CAR would be strengthened, recognizing its potential to provide important technical and institutional support in decisions over land use. Similar hopes were expressed by informants from Ucayali and Madre de Dios.

The aforementioned Amazon Interregional Council (CIAM) was established as a secretariat to coordinate environmental policies among the Amazonian regions of Peru. CIAM also played a key role as a focal point for the Governors' Climate and Forests Task Force platform, which San Martin, Ucayali, and Madre de Dios have joined along with the regions of Loreto, Amazonas and Piura. This platform also aims to support jurisdictional REDD+ programs and serves as a space for exchanging ideas, commitments and the resources to strengthen them. In practice, CIAM was not as active in 2015, and the elements of jurisdictional REDD+ in Peru have been emerging slowly.

With regard to REDD+ specifically, the national REDD+ Group has played an important role in consolidating civil society feedback on proposals for programs such as the World Bank's Forestry Investment Program (FIP) and the Forest Carbon Partnership Facility (FCPF). This group brings together civil society organizations (CSOs), NGOs and regional and national government entities involved in the REDD+ process to discuss and negotiate emerging developments in relation to REDD+ in Peru, although it is NGOs that have participated most in practice. As the elements of REDD+ – such as reference levels; monitoring, reporting and verification (MRV) systems; benefit-sharing policies; and land-use policies – continue to be developed at the national level, regional actors have moved ahead with policy discussions through their own REDD+ roundtables. The development of REDD+ in the regions has moved at different rhythms, as each region is characterized by different regional governance dynamics, including the types of actors participating in the REDD+ process and land-use issues.

Created at different times in each region, regional REDD+ roundtables have provided an important forum for the development of REDD+ projects, discussion of regional REDD+ activities and contributions on the development of national REDD+ policies. They are regional interinstitutional working groups that allow actors operating at the subnational level to address concerns related to forests and REDD+, including MRV and benefit sharing, and to negotiate future steps. San Martin and Madre de Dios have made more progress on REDD+ than other regions, as they are the two pilot

49 *Ley Marco del Sistema Nacional de Gestión Ambiental.*

regions where the Ministry of the Environment has allocated funding and support since 2012.⁵⁰The roundtables vary as to their level of activity. Based on information from participating respondents in the regions, at the time of the research, the Madre de Dios roundtable was the most active, meeting frequently with all members. By contrast, only the limited technical team met regularly in San Martin, while multiple respondents from NGOs involved in REDD+ and other projects in that region reported being unaware of the existence of the REDD+ roundtable, and one preferred not to participate in it. In Ucayali, respondents reported that the roundtable was starting to meet more frequently, although it was the most recently created.

The existing subnational-level REDD+ capacities are found mainly in civil society institutions and private-sector organizations that have spearheaded the majority of REDD+ projects in Peru (Piu and Menton 2013). The most active participants in the roundtables include the regional environmental authorities, project proponents (mainly NGOs) and other NGOs. In some sites, other CSOs such as indigenous groups and producer organizations are invited, but few attend, in part due to lack of resources, such as travel funds, to facilitate their participation; in other sites they are not invited. In addition, the technical nature of roundtable discussions discourages broader participation.

Local governments are not invited. Almost none of the 22 district governments interviewed were informed about REDD+ and in most sites they did not even know about REDD+ project activities in their district or province. Also, district governments do not have much legal power over land use and REDD+ and were thus generally more focused on their actual responsibilities, such as urban planning and infrastructure issues in addition to tourism promotion and planning. Nevertheless, previous research has suggested that government involvement in, and ownership of, such processes can be key to advancing REDD+, underscoring the importance of this issue (Sehring et al. 2013).

Some actors were concerned about the NGOs' high level of influence on the regional agenda, criticizing their control over projects and information. Some respondents even characterized them as having 'infiltrated' government decision-making processes. For example, in Madre de Dios, one representative from the Regional Federation of Brazil nut Producers of Madre de Dios (FEPROCAMD) worried that the regional government would become a "flock of sheep" behind the NGOs, following their agenda instead of what is important to user groups and producers. At the same time, in regions where the regional government works closely with regional NGOs, such as in San Martin, NGOs have also filled some gaps at the regional government level, such as by providing information, technical capacity and expertise. NGOs in San Martin have been essential to progress made on REDD+ at the project and regional levels, as well as the implementation of regional forest and land-use policies expected to complement REDD+.

Another major concern that emerged from key informant interviews is the lack of coordination in government, both within and between national and regional levels, which had stifled roundtable activity and meetings at the time of this study. For example, different offices at the national level were using conflicting deforestation maps, which is something that affects all regions. Still other maps were used at the regional level, such as in Madre de Dios. Some regions had moved faster than the national government and felt hampered by slower national progress, as well as the lack of methodological clarity, all of which leads to confusion.

Although indigenous organizations have not participated much in the broader regional roundtables, the Interethnic Association for the Development of the Peruvian Amazon (AIDASEP), a leading indigenous peoples' organization in Peru, spearheaded the creation of parallel national and regional indigenous REDD+ roundtables in 2011. While many were initially skeptical of REDD+, key indigenous organizations have moved towards the position that REDD+ is acceptable if compatible

50 Funding and support were not equally distributed to the two regions, however.

with indigenous land-tenure security, livelihoods and cultural values.⁵¹ A representative of AIDSESEP's regional branch in Ucayali (ORAU) argues that “without territory [rights], we will not accept REDD+.”⁵² In practice, several indigenous communities in Ucayali are already participating in REDD+ projects, such as the environmental services projects led by the Association for Research and Integral Development (AIDER). AIDSESEP is negotiating directly with the World Bank to manage a large “Indigenous REDD+” fund under the Forest Carbon Partnership Facility. The indigenous REDD+ roundtables meet separately from the regional ones and the indigenous organizations are more oriented around their long-term political claims for the recognition of indigenous rights.

Across regions, we found that few informants from the regional governments were aware of REDD+. Regional offices outside the ARA were uninformed and had little knowledge or understanding of the technologies used to measure and implement REDD+. Regional offices managing other sectors, such as agriculture and mining, were not involved in the roundtables, even though these actors have substantial influence on land-use decisions, especially in terms of land tenure and land-use rights. One informant in Madre de Dios suggested that the poor representation of farmer organizations in the roundtable was due to the agricultural sector's lack of involvement in REDD+ projects in Peru.

In Madre de Dios the failure to share information across sectoral offices is partially due to institutional instability, staff turnover and the constant need to re-train officials. In San Martín and Ucayali it is a consequence of the relative ‘exclusiveness’ of the REDD+ roundtable, as only a few individuals from ARA's Office of Climate Change were actively involved. In San Martín, even people working in other ARA offices were unfamiliar with REDD+ until 2014, when the new director encouraged the integration of the different ARA offices into regional and national REDD+ meetings. As a result, there is increasing knowledge of REDD+ within the ARA, but still little knowledge of it in the other regional government offices.

Despite these limitations, the REDD+ roundtables have fostered coordination among governmental and nongovernmental actors operating at the subnational level, including pilot project proponents. In Ucayali, respondents who commented on the roundtable agreed that it had strengthened coordination among all the actors involved. They perceived that civil society organizations and government institutions alike have learned from the various presentations, training courses, information exchanges and discussions. In the words of the head coordinator of Ucayali's REDD+ roundtable:

"What I like about the roundtable is that it brings together development and research organizations and government. The regional government of Ucayali cannot do its work without the support of the research institutions. Most of the information they (the research institutions) manage, we cannot produce."

Nevertheless, the roundtable members recognize the need for more public dissemination of their activities in radio and newspaper outlets, which they believe would lead to more knowledge, credibility and transparency about their projects. In Madre de Dios participation is open, but only members attend meetings. Information about agreements reached and the scheduling of upcoming activities is shared only among members, and the lack of public outreach constrains the engagement of other civil society actors. One representative from the Directorate of DRYFYS, which is not included in the roundtable, said the regional government is “wasting its money on REDD+ projects by giving it to the NGOs and not spending it on the actual beneficiaries.”

51 For example, indigenous leaders sometimes refer to *vida plena* (“full life”).

52 ORAU's Declaration and Regional Agreement on Indigenous REDD+, 28 June 2011.

5.3 REDD+ developments and policy discussions in Peru

REDD+ is the most recent means by which an alternative to traditional development, which often leads to deforestation, has been introduced in the Amazon region. This section will analyze the emergence of REDD+ and the extent to which it represents a coalition for transformational change.

The previous two sections discussed perceptions of deforestation and the set of actors involved in activities associated with either deforestation or more sustainable alternatives. The research demonstrates that – apart from local governments, which have relatively little influence over land-use decisions – only NGOs are overwhelmingly identified as supporting more sustainable options (see Table 8). Perceptions of the regional government were evenly divided between those who saw them as supporting deforestation versus low-emissions options, although activities associated with deforestation and degradation all referred to Ucayali and Madre de Dios, and none to San Martin. The other actors were far more often associated with deforestation: smallholders were mentioned more than three times as often regarding deforestation over more sustainable options, the private sector more than twice as often, and the national government, 50% more often.

Despite progress on alternatives, low-emissions projects in Peru have had little effect on the underlying drivers of deforestation and degradation. REDD+ funding and efforts are directed primarily at smallholders, and even if these local actors are commonly perceived as the main direct, proximate deforestation drivers, their actions are influenced by multiple other actors, policies and economic incentives beyond their control. As such, REDD+ remains compromised due to the absence of the private sector and agricultural institutions – actors that retain significant decision-making power over forests. Why do REDD+ and those steering its course not involve these actors that are central to land use change? Drawing on analyses in this report, we find several major trends in, and challenges to, regional and multilevel governance that limit the influence of coalitions for low-emissions development, including REDD+.

The highly sectoralized nature of land governance helps explain why different actors are involved in low-emissions development projects (the environment sector) than those driving land use change (agriculture, mining, and others). As discussed above, although the environment sector works with programs aimed at conservation and the sustainable use of natural resources in forests and is charged with responsibility for important powers over forests, the majority of the authority driving what happens in or to forests is in the hands of the agriculture sector. The environment sector is responsible for the development of REDD+, but if the large-scale agriculture sector and the private sector are not involved, such projects will have limited potential for reducing deforestation and degradation or shifting current ‘business-as-usual’ patterns, particularly given the strong coalitions between these two actors.

The actors and sites analyzed above shed light on how these patterns emerge. In Ucayali, for example, a strong regional agricultural office has formed a coalition with private sector firms to promote agricultural expansion. In particular, the regional government supports private firms in establishing and expanding palm oil plantations. While there are REDD+ and reforestation projects in Ucayali, they do not attempt to tackle deforestation due to oil palm. Interviews with local community members who oppose oil palm expansion, as well as actors from environmental NGOs and the ARA, demonstrate that there are few – if any – points of entry for low-emissions development and REDD+ coalitions to influence decision making around small- and large-scale agricultural expansion. In general, environmental coalitions in Ucayali are perceived as weak. One of the suggested reasons is the limited nature of their legal powers and of their practical ability to intervene in land-use decisions. Similarly, REDD+ projects in Madre de Dios do not address mining, which is the major land-use driver in the region. This is, of course, combined with the economic opportunities presented by mining, which are more attractive even than palm oil and which poor and non-poor alike find difficult to resist.

The situation is different in San Martin, where most importantly conservation and alternative development are an official priority. As discussed in Box 8, regional government leaders were elected on a “green” platform and developed policies and plans to address the region’s environmental problems, at least in part because of the extent of deforestation and degradation in the region by the late 2000s. Discussions around conservation began prior to the emergence of REDD+, with projects focused on small-scale agriculture. Like the other three regions in this study, REDD+ projects in San Martin focus on smallholder agriculture, but unlike the other two regions, other drivers are much less important (though the oil palm industry is still relevant and is not involved). The San Martin case demonstrates improved efforts at coordination, as well as apparently greater influence from those actors supporting sustainable alternatives, at least in comparison with the other regions. Again, the region demonstrates that leadership, political will and policy can have an important influence on the overall trajectory of land-use change.

The lack of coordination between groups of actors operating in different jurisdictions and with different levels of decision-making power presents a major challenge for REDD+ and other low-emissions alternatives. While REDD+ provides new economic opportunities for some actors at different levels of government, the existing fragmentation across sectors may inhibit its potential impact. This fragmentation is also related to the unconsolidated institutional framework for REDD+ in Peru.

5.4 Conclusions

The results presented here paint a complex picture of the actors and policies that influence land use. Fundamentally, however, actors associated with ‘the environment’ have assumed a leadership role in REDD+ and other low-emissions activities, while key actors driving land-use change, such as those in the agriculture and mining sectors, are neither involved in such projects nor in discussions around these activities.

REDD+ has opened up opportunities for horizontal coordination, with multistakeholder platforms emerging to facilitate coordination among actors that might otherwise operate in isolation. The REDD+ roundtables at both national and regional levels permit multiple actors with common interests to come together to consider alternative development options, though the extent to which they do this is questionable. There are also other national- and regional-level environmental platforms that bring together different government and non-government entities and may have potential in enabling increased cross-sectoral coordination, although they are largely considered weak and some are inactive.

It is worth noting that the analysis in this section has not focused on net deforestation (i.e. the net outcome of projects that deforest, on the one hand, and those that conserve or increase forest or carbon stocks, on the other). Rather, our approach has examined the more exclusive association of certain actors and policies with certain types of activities. Of the three regions, only the regional government of San Martin comes close to taking an approach that would merit a more nuanced analysis. It is an approach called for by many respondents, based on integrated land-use planning.

6 Low-emissions development initiatives: Potential for change?

The low-emissions development (LED) projects discussed in this report represent an alternative approach to conservation and development by involving compensation mechanisms that are expected to incentivize conservation and sustainable natural resource management through monetary and nonmonetary benefits. Though most initiatives studied are too new to measure their land-use outcomes, in this section we examine how they are encouraging changes in land-use practices by examining their benefit-sharing mechanisms and the processes by which these were developed. We use the concept of legitimacy to consider the extent to which communities accept these initiatives and would thus be more likely to accept their associated land-use goals. We look at data from 109 interviews from the nine project sites that include benefit-sharing mechanisms (see Table 9)⁵³ to assess the incentives and burdens for project proponents and local communities alike, in addition to the legitimacy of the process of developing the benefit-sharing arrangements. Evidence from across the three regions studied suggests that it may not always be possible to simultaneously achieve desired livelihoods, equity and carbon outcomes.

In this work, legitimacy is conceptualized as being comprised of two interrelated components: the legitimacy of processes, or procedural legitimacy, and the legitimacy of outcomes. Legitimate processes are expected to generate legitimate outcomes (Backstrand 2006). Legitimacy refers to the democratic nature of decision-making processes and reflects opportunities for representation and participation, as well as the transparency of such processes (Beisheim and Dingwerth 2008). Procedural legitimacy refers to a participatory democratic process and “depends on the degree to which those affected by [decisions] have been included in the decision making process and have had the opportunity to influence the outcomes” (Young 2000, 5-6). This understanding of legitimacy holds that the process must be open and inclusive because only groups that feel they have had a legitimate opportunity to participate will develop a commitment to that process (Ansell and Gash 2008). By requiring representation and participation, coordination, and transparency in all phases of the decision-making process, procedural legitimacy facilitates understanding and cooperation. REDD+ must enable the engagement of a range of stakeholders (Mayrand and Paquin 2004) who are affected by decisions and who should have the right to access information during the REDD+ process (Corbera et al. 2007; Vignola et al. 2012; Pham et al. 2014). Their involvement in, and input into, the design process can enhance their chances of shaping benefit sharing and other outcomes.

Procedural legitimacy is also linked to outcome legitimacy, as legitimacy also refers to “the way in which outcomes are negotiated, administered and accepted by stakeholders, including a fair distribution of decision-making power” (Corbera and Schroeder 2011). The legitimacy of the decision-making process facilitates long-term project support among the local population and could lead to better conservation outcomes as a result. Given that the outcomes of the existent benefit-sharing arrangements in Peru were not yet measurable at the time of this study, however, the analysis in this section emphasizes procedural legitimacy.

53 Our methods did not include household-level interviews and thus we were not able to get at some very important issues such as gender in benefit-sharing arrangements, which are being researched in other CIFOR activities.

Table 9. Types of benefits and burdens of projects.

Region	Madre de Dios			Ucayali		San Martin			
	1	2	3	4	5	6	7	8	9
Case no.	1	2	3	4	5	6	7	8	9
Case name	BAM-MDD	AIDER-Tambopata	ACCA-ACOMAT	AIDER-Ucayali	BAM-Ucayali	CIMA-PNCAZ	CI-AMPF	ACOPAGRO	Mishquiyacu-Rumiyacu
REDD+-related certification	VCS: 2013 CCB: in progress	VCS: 2012 CCB: 2012	N/A	VCS: in process CCB: Process not yet begun	VCS: 2008 CCB: 2009	VCS: 2009	VCS: 2012 CCB: 2012	N/A	N/A
Benefits									
Direct monetary	Yes	No	No	Yes	No	No	No	Yes	No
Capacity building	Training and workshops on sustainable forest management	Training for tour guides; capacity training for GIS mapping and wildlife inventories	No	Training and workshops on forest management and territory surveillance	Training and workshops on sustainable forest management	Environmental education	For employees (on how to work with oil palm)	Training on sustainable forest management	Training on sustainable management practices and sustainable coffee production
Technical assistance	FEPROCAMD technicians offer assistance with various forest management plans required to legally harvest or sell brazil nuts	Reclassification of indigenous communities as occupying “special use zones” (not currently recognized in park legislation)	ACCA offers technical and administrative advice on sustainable natural resource use alternatives in concessions	AIDER is responsible for MRV, advising communities and providing technical assistance for project implementation	No	No	Sustainable coffee management techniques	Securing land titles for members through a project with the ARA	No
Burdens									
Reduced access to natural resources	No	Yes - increased monitoring for areas within the park and its buffer zone	No	Communities will need to adjust customary practices to meet the project’s aims	No	Yes - indigenous communities prohibited from hunting in park or buffer zone (even though their conservation efforts increased the animal population)	Yes - communities within the park are prohibited from deforesting	No	Yes - communities within the regional conservation area are prohibited from deforesting

6.1 Main benefits of LED initiatives

As mentioned previously, the REDD+ projects under study are still in their early phases and are primarily distributing only nonmonetary benefits, rather than cash payments for environmental services or carbon credit sales. All projects provide nonmonetary benefits to locals in the form of goods and services, including capacity building and technical assistance for improved forest management (for a full description of benefits see Kowler et al. 2014). Land tenure was largely absent from the benefit-sharing arrangements explored. This section summarizes the types of benefits and burdens found in the diverse study sites (see Table 9 and Box 9). Projects are referred to by their case names presented in Table 3 and the Appendix.

Box 9. Burdens and costs for proponents and beneficiaries.

Burdens for project proponents: Our findings demonstrate that the delay in carbon sales and the cumbersome process for obtaining voluntary certification for REDD+ projects have placed significant pressure on project proponents to obtain external funding to cover substantial start-up costs.

Burdens for beneficiaries: Communities incur costs when they are barred from continuing their traditional practices as part of a project, as in the sites of Mishquiayacu- Rumiayacu, CIMA-PNCAZ and AIDER-MDD. Despite the delay in payments from carbon sales, project participation has placed few burdens on communities to date primarily because proponents take on the burdens or costs while communities receive benefits and incentives. The extent to which required behavioral changes – such as discontinuing traditional agricultural practices – represent costs or burdens depends on the availability of alternative livelihoods or compensatory payments, as well as on the legal tenure and *de facto* use status of land.

In the sites examined in this study, direct monetary benefits were rare and were identified in only three projects at the time of the research. To some extent, the lack of direct monetary benefits in Peru's REDD+ and other low-emissions development projects is due to the absence of a global or national compliance market for carbon, although some project proponents do promise direct monetary benefits once linkages to carbon markets are reliably established.⁵⁴ For example, once the BAM project sells carbon credits,⁵⁵ it will retain 70% of the profits, relinquishing 30% to the brazil-nut concessionaire association involved in the project (FEPROCAMD) to disperse equally among its members. In addition, BAM invested USD 500,000 in FEPROCAMD in 2009, which partly supported micro loans to concessionaires. In the case of ACOPAGRO, the company Pur Projet provides farmers with trees for its reforestation project and pays them one Peruvian Sol for each tree they plant and maintain for several months after planting. Local participants refer to this project as “my retirement” (*mi jubilacion*) and see it as an investment for their children, who can benefit from the future timber harvest.

As for nonmonetary benefits, several sites supported training on issues such as the environment, REDD+, strategic planning, forest management, territory surveillance, business management, tourism and park management. Capacity building is central to the benefit-sharing arrangements of BAM-Ucayali, AIDER-Ucayali, AIDER-MDD, CIMA-PNCAZ and CI-AMPF. As part of the conservation agreements in CI-AMPF, subscribers are trained in improved coffee management and production.

54 Many of the projects included in this study were in the early stages of REDD+ project development at the time of the study and were not yet receiving carbon payments. One example is the AIDER-Ucayali case where each community developed its own arrangement, including different benefit recipients, fund transfer methods and activities to be funded with future REDD+ revenues. At that time, the project was only providing nonmonetary benefits.

55 As mentioned in the Appendix, this project had come to a halt and it was not clear when it would start up again.

However, sometimes training efforts are concentrated more on community leaders than the broader population, as in the case of AIDER-Ucayali.

Some respondents linked capacity building to environmental changes witnessed on the ground. Reflecting on CIMA's training and education on the environment and strategic planning in relation to a national park, one municipal authority stated: "before, [communities in the park's buffer zone] hunted animals without taking precautions, but now this has been controlled." Another local authority remarked that people "are becoming more environmentally conscious," are now "making decisions based on this and respect the watersheds" and see that "saying 'no' to logging results in the improved management of their coffee plantations." Informants also pointed to a notable change in the population's interest in park management since the beginning when the population was "divided" and "rejected" CIMA's message.

In the case of AIDER-Ucayali, the seven community authorities interviewed considered they had gained more knowledge on REDD+ through capacity building. Key informants and other researchers that interviewed many community members on their knowledge of REDD+ indicated that this knowledge is concentrated more among the communal authorities and the six members of the Consultative Group in each community than in the actual communities (Vasquez C., M.L., personal communication, May 24, 2014). Such information asymmetries have led to social tensions and the communities' request for AIDER to include more community members in the Consultative Group (see Box 10).

Box 10. Local representative organization in Ucayali.

AIDER helped establish the Consultative Group in its Ucayali project, comprised of six members of each of the seven communities who will receive training from AIDER on issues related to forest management and REDD+. Group members are expected to disseminate information about REDD+ in their communities. One key informant from AIDER reported that the Consultative Group would be involved in developing the REDD+ strategy. Nevertheless, communal authorities said that the community assembly (the traditional community decision-making arena) would make final decisions on AIDER activities.

According to six of the seven communal authorities interviewed, communities were initially unhappy with the creation of the Consultative Group, disapproving of electing a committee that would make a small group more knowledgeable than the rest. They reported that this group would be exclusive and argued that all community members should receive the same training and information. After discussions among community authorities and AIDER, however, a decision was finally made. AIDER argued that a smaller group was more practical, as they prefer to work with a committed group to build capacities in order to support project activities and generally facilitate the process. In interviews, AIDER mentioned the risks of working with communities, particularly when internal power struggles make governance unstable, as chiefs and authorities are often removed and replaced.

Technical assistance is another of the major benefits included in almost all of the benefit-sharing arrangements explored. Given the general goal to reduce deforestation and degradation, project proponents have focused on providing technical advice to ensure the support and assistance of participants in reducing potential and existing deforestation and degradation threats. The BAM-MDD, ACOMAT, CI-AMPF and CIMA-PNCAZ sites demonstrate the different forms of technical assistance provided by project proponents, helping with paperwork and providing legal/administrative advice for diverse purposes such as harvesting forest products and complying with forestry regulations. They also provide technical support for exploring alternative sustainable livelihoods, such as the technical support for coffee production provided by Conservation International in the AMPF, as mentioned above.

While land tenure was largely absent from the benefit-sharing arrangements explored, several sites (AIDER-MDD, BAM-MDD, ACOMAT, BAM-Ucayali) have demonstrated efforts to reduce threats to land tenure security by setting up mechanisms to stop encroachment into project areas. While the other sites also intend to reduce deforestation threats, they have fewer control mechanisms on the ground. In almost all of the protected area sites, projects attempt to address SERNANP's insufficient control mechanisms caused by its lack of human and financial resources. In these projects, local people control the areas involved in return for other benefits, while also benefiting from the collective effort to secure their own properties. However, the only case in which the project proponent made a concrete commitment to secure land titles for local people was that of ACOPAGRO, which was working with the regional government to obtain titles for the majority of its members. The case of BAM-MDD provides an example in which rights to carbon are transferred to the company, demonstrating that tenure is not a benefit itself but rather a requirement for benefits (see Box 11).

Box 11. When tenure is not a benefit but a requirement for benefits.

In the benefit-sharing arrangement established in the BAM-MDD case, concessionaires had to first show FEPROCAMD their concession agreement with the regional government of Madre de Dios, which demonstrates their (temporary) legal rights to land and forest products. After that, they signed an agreement that gave FEPROCAMD ownership and use rights over sequestered carbon – but not their products (i.e. brazil nuts and timber). FEPROCAMD then signed an agreement with BAM that demonstrates that FEPROCAMD transfers the rights to sequestered carbon from the project area to BAM, which in return is responsible for providing business development and investment to FEPROCAMD. This case demonstrates the potential importance of tenure in qualifying local people for participation in projects and underscores the complex property rights transactions that may occur as part of low-emissions development projects.

SERNANP's involvement in the AIDER-MDD project also signifies an additional form of land security and protection for community members, as it has placed nine control towers in the Tambopata Reserve and buffer zone and increased monitoring and control in this area. AIDER also plans to build a control tower in the traditional mining sector of the buffer zone. These projects have helped protect local peoples' lands from invasion.

The benefits discussed may very well fall short of alternative livelihood opportunities, particularly when local livelihoods depend on them. Some scholars emphasize the need to recognize and address the wider social and economic benefits and beneficiaries of land uses that REDD+ seeks to replace in the course of negotiating and implementing REDD+, in order to ensure the long-term viability of the mechanism and hence effective environmental outcomes (Ghazoul et al. 2010, 397).

Despite the much-awaited carbon payments, many of these projects and initiatives bring economic benefits to those proponents implementing them, thus providing an incentive to pursue the often arduous design process. The sites explored are strongly influenced by an NGO or private company, as they can assume the initial burden that the government generally cannot. On the one hand, REDD+ offers new opportunities to generate funding to continue their work with the local populations with which they were already working. CIMA-PNCAZ, BAM-Ucayali and AIDER-Ucayali had all invested years of time and effort into community work prior to the emergence of REDD+. In the case of AIDER-Ucayali, several informants noted the problematic nature of project proponents' playing the role of both community advisers and project proponents, because spaces for dialogue as well as community representation are ultimately aimed at advancing their projects. On the other hand, other projects primarily grew out of the prospects of REDD+ funding itself, such as CI-AMPF, ACOPAGRO, ACOMAT and BAM-MDD. The NGO ACCA used REDD+ funding to develop ACOMAT, which has increased its funding potential as an NGO, and for its Los Amigos Conservation

area, which it hopes to get off the ground in the future despite not having originally been able to do so. Similarly, CI's collaboration with SERNANP in the AMPF was inspired by prospects of REDD+ funding. Shortly after their activities began in the area, Disney invested USD 2 million to develop the REDD+ project in the AMPF in 2009.

6.2 Burdens for project proponents and local participants

The implementation of benefit-sharing arrangements, including REDD+ projects, has primarily centered on private and private-public sector projects. Many of these have experienced hiccups in the design and implementation process for a variety of reasons, including the high start-up costs, the absence of a global carbon market, and the international and national mechanisms and standards guiding carbon sales. This has resulted in a delay in carbon sales, numerous steps involved in designing equitable benefit-sharing arrangements (particularly for REDD+ projects, with all the requirements for obtaining the existing international certification standards), and other circumstances that tend to complicate projects in the design phase. Most project proponents have depended on external funding sources, with a few fortunate enough to obtain pre-sale agreements; the only private company project proponent covered its own costs, which have proven more burdensome than it had expected. Despite these difficulties, we found that project proponents maintain a positive outlook as they hope for an improved market and institutional infrastructure for REDD+ in the near future.

Burdens for communities are experienced primarily in the form of limits on prior livelihood activities. In the case of CIMA-PNCAZ, for example, the local communities reside in the park's buffer zone and are prohibited from entering the area to hunt without prior authorization, and are limited as to how often they can hunt. Informants noted the lifestyle change as they used to hunt frequently in the park, but are now limited to the species, quantity and season stipulated by park management regulations. One communal authority admitted that his community opposed the presence of park rangers because "We are protecting our forests!" And a municipal authority reflected on the challenges presented by these limits in the buffer zone: "it was a little shocking because [the communities in the buffer zone] didn't like that they were told they could *not* hunt during certain seasons." On the other hand, he noted that over time people have seen how the animal population has risen and that there is now more trust between local communities and park rangers than when the park was created.

Similarly, in the case of Mishquiyacu-Rumiyacu, local communities are prohibited from undertaking certain land-use practices. For many, participating in the project does not provide sufficient livelihood alternatives or immediate benefits to meet their short-term needs. Several participants interviewed take part in the local apiculture association and benefit from honey sales, although the associated income is minimal. Others expressed frustration with the limits placed on them and the meager benefits they receive from the project. Nevertheless, since most participants also have a house in the nearby city of Moyobamba, they feel less burdened by the project restrictions. However, this calls the project's sustainability into question, as most of the people from the participating rural communities may ultimately leave in the future.

6.3 The legitimacy of existing low-emissions development initiatives

REDD+ and similar projects depend on the quality of governance arrangements and the perceived equity of benefit sharing (Corbera et al. 2007; Pham et al. 2013). Benefit-sharing structures and processes can be characterized as more or less legitimate. Below, key aspects of procedural legitimacy are analyzed in the context of the sites involved in this study to shed light on how existing processes fare with respect to the normative components of procedural legitimacy.

6.3.1 Representation and participation

The establishment of ‘representative’ organizations and/or committees of local participants helps to build procedural legitimacy and potentially outcome legitimacy, if they create a truly representative entity for dialogue and information-sharing among actors involved in the project. In several sites, project proponents have helped organize or strengthen representatives of local communities in relation to the design and oversight of the projects. For example, AIDER created the Consultative Group in Ucayali (see Box 10), and BAM helped reorganize and legally establish FEPROCAMD in Madre de Dios in order to create a forum that would enable information sharing and support project activities. Meanwhile, several other sites are discussed that did not involve the creation of representative organizations to illustrate the general trend across projects with respect to project design.

Several concessionaires from the BAM-MDD project reflected that while the project was explained in many workshops with concessionaires, only a small group of leaders were involved in the negotiation of the benefit-sharing arrangement itself. That final agreement established that 30% of net revenues from carbon sales would belong to the concessionaires and 70% to BAM. Interviewees from FEPROCAMD and concessionaires suggest that they were not aware of the potential amount that can be earned through carbon sales and they claimed this information was not made clear. Knowledge of this type of important information could have affected concessionaires’ decision-making and bargaining power, especially during the design of the project when they agreed to receive 30% of the profits. Based on interviews with BAM and other key informants, we also gather that the company withheld information related to the price of carbon since it could not determine the potential amount of carbon payments earned from the project or what it can share with concessionaires due to the uncertainty of the carbon market.

Likewise, the municipal government and NGOs involved in the Mishquiyacu-Rumiyacu project organized multiple workshops, but several respondents mentioned that the attendance of local participants and civil society actors decreased over time. According to PEAM and GIZ, the two institutions that designed the project, they did not want to involve local people at the beginning to avoid generating false expectations, especially because the National Sanitation Service had not yet approved the coverage of the additional Peruvian Sol on local water bills, which would finance community payments. After this was approved, project informants reported that PEAM consulted individual households, local authorities and producers in meetings to explain the mechanism and discuss and debate the envisioned benefits, then considered proposals from those consulted before directing the signing of agreements with producers. Nevertheless, instead of prolonged discussion and debate around the benefit-sharing agreement, other informants reported that PEAM only approached them with its proposal and asked for their approval. As one community member recalled, PEAM’s message was: “you all conserve and we will compensate you.” Though not unlike the other projects discussed, this and other evidence suggest that the design phase was handled in a top-down manner. Furthermore, the participation challenges mentioned are linked to information and transparency issues, which are discussed below.

At the same time, as free, prior and informed consent (in accordance with ILO Convention No. 169) has recently gained importance in Peru through Law 29785 (which, however, refers to prior *consultation* rather than consent), engaging communities in such processes is becoming more common. However, there are still challenges facing implementation and the impact of consultation on final decisions is debatable.

6.3.2 Coordination

In the case of national protected areas, collaboration between NGOs and SERNANP is important for obtaining funds from REDD+ for improved protected area management. To illustrate, by mid-2012 the local SERNANP office in the AMPF had just 16 rangers – far too few to patrol the protected area with its estimated 5,000–8,000 settlers, let alone establish a proper monitoring system (Entenmann

2013, 57; Zelli et al. 2014). And prior to CIMA's work in PNCAZ, SERNANP had a total of 11 park rangers, compared to the current total of 26. Similarly, in Madre de Dios the SERNANP office was able to increase its number of control points and local park rangers in the buffer zone of the Tambopata National Reserve through financing from the AIDER-REDD+ project. It is expected that opportunities from REDD+ will continue to provide an important source of funding to maintain and control deforestation threats in protected areas. In this way, the collaboration between NGOs and SERNANP provides an important opportunity for the improvement of protected area management.

Actors involved in the CIMA-PNCAZ project stated that coordination between SERNANP, CIMA, local communities and some local governments was essential in developing strategies that were universally acceptable. Evidence suggests that such collaboration between government and nongovernmental actors could help hold each entity accountable to the local population, improve the information flow among these entities and optimize resources to better serve the local population (Zelli et al. 2014). For example, CIMA provides environmental education and capacity training sessions on forest management, as well as information on illegal logging and the protection of wildlife and watersheds. According to CIMA's former director, its work with municipalities is central to the project, as one aim is to increase the level of coordination between communities and their local governments. Respondents working in and representing communities that were more remote from the core of CIMA's activities also suggested that CIMA's presence and work with both SERNANP and the regional government has been important. At the same time, some noted their communities have faced reduced hunting access with the establishment of the park. This underscores that tradeoffs may occur even in projects that enjoy a high degree of coordination among multiple stakeholders.

The case of Mishquiyacu-Rumiyacu also involves government entities in discussions regarding the project, although this has not directly contributed to project management. It is also the only project in our sample in which the proponent is a government entity and that involves different levels of government and non-governmental actors, including local community representatives. Informants interviewed note the ARA's minimal involvement in and contribution to the process and suggest its participation could strengthen its current weak control of forest activities in the ZOCRES, where the ARA holds jurisdiction. Although PEAM is a regional government entity that implements projects, informants suggest that the ARA could also play a role because it deals with forest and water use and is responsible for monitoring forest use and sanctioning infractions in forested areas.

Similarly, in the case of CI-AMPF, there was very little coordination between the project administration and the ARA in the protected area's buffer zone, where the regional government holds jurisdiction. Although more significant deforestation threats and struggles were experienced in the area in the past, the buffer zone continues to be affected by illegal loggers and land grabbers. The AMPF administration has thus turned to the Ronda as the most strategic partner in addressing these issues and enforcing park management regulations. Since 2011, CI and SERNANP have worked on strengthening their relationship with the Ronda, which has recently resulted in a more positive response to protected area management by the general population. One key informant explained that in the beginning there was no relationship between the area management and the Ronda because of a "clash" between the former, which set restrictions, and the population itself. In his words, "that tension has finally balanced... although there is still mistrust, it is less... we are just in the process of building trust and raising awareness to define the responsibilities of the Ronda."

Until recently, the district governments in the buffer zone allocated funding to create schools and health centers without communicating such plans to the park's administration. In response to these issues, the protected area management has coordinated with the ARA to establish areas referred to as "*nucleos funcionales*." These locations have the largest populations, which justifies the placement of health centers and schools there, while at the same time limiting the creation of others where the population is lower. In this way, the collaboration has set up a mechanism to address migration and settlement issues. Still, greater attention needs to be paid to increased coordination between protected area management, the ARA and local government to strengthen control mechanisms in the buffer zone.

Findings indicate that effectively designed and maintained projects include a balance of government and nongovernment actors working together with communities. In the sites in which NGO project proponents establish a co-administration agreement with SERNANP, consistent efforts are made to engage local communities in dialogue and regarding the benefit-sharing arrangement. This collaboration could also help hold the government and nongovernmental entities accountable, increase the information flow between them and optimize resources to better serve the local population (Zelli et al. 2014). While these sites provide no conclusive link between government involvement and success or failure, anecdotal evidence suggests that collaboration among government and nongovernment actors could lead to increased process legitimacy.

6.3.3 Information flow

An important aspect and precondition for meaningful participation in REDD+ is local knowledge of climate change and the REDD+ project itself (Resosudarmo et al. 2012). It is important for the information shared with the participating communities to include benefit sharing options, rights, responsibilities and also costs associated with local involvement in the project (Resosudarmo et al. 2012). Although some project proponents share information on REDD+ and benefit-sharing arrangements with local participants and beneficiaries, they differ as to when, how and what they have shared. Overall, there were several indications that information sharing was insufficient. For example, most project proponents withheld information from local populations to avoid generating false expectations or confusion about REDD+, given its complex and abstract nature. This observation reflects global findings regarding information flow and REDD+ (Resosudarmo et al. 2012). One project in Madre de Dios held multiple workshops to disseminate information among local participants and generate buy-in. According to a local participant, however, these workshops failed to disseminate information in a way that was understandable, with many materials written in technical language and even English, targeting elderly concessionaires who claimed to be illiterate. This respondent added that she was unable to gain access to carbon measurement data taken from her land. This may have been linked to the proponent's desire not to raise false expectations about carbon revenues, but was nevertheless frustrating for that participant.

In the case of AIDER-MDD, interviewees from SERNANP (ranging from upper-level officials to park rangers), certain AIDER staff and identified user groups/community members were unclear about various details of the arrangement, source of funding and structure. Interviewees internal and external to AIDER acknowledged the need to better inform communities of planned activities and to differentiate the REDD+ project and its funding from other ongoing activities in coordination with these communities.

In relation to the AMPF, meanwhile, the head of the CI project stressed that specific knowledge of REDD+ at the local level is not necessarily critical, nor would it be unjust to withhold this information. The AMPF is not a typical case, however: it is a protected area where CI has facilitated conservation agreements that allow illegal settlers to remain (see Box 12). In his words:

“The carbon credits that are generated here are for the AMPF and [CI] doesn't have the right to distribute the incentives [or benefits] to the local population. For REDD+, when you read the standard it says the distribution should be to the local population, right? This has been something that required a lot of work with the VCS representatives for the PDD (project design document) so they understand that ‘look, this population is illegal and doesn't have any rights [here].’ What we are doing as part of the strategy of working with the local population is totally different than if they had a right to the distribution of incentives, no?”

Moreover, according to this informant, given the requirements of the Climate, Community and Biodiversity (CCB) Standards, what CI demonstrates is that:

“The actions that we are taking to avoid deforestation are not affecting the populations' socioeconomic level. Actually, we have improved the livelihoods of the subscribers involved. We haven't affected

Box 12. The Alto Mayo Protected Forest in San Martin.

The Alto Mayo Protected Forest (AMPF) was legally created in 1987, but in practice lacked management and enforcement until 2001. During this time, migrants who were unaware that the protected area had been established colonized the land and engaged in unsustainable coffee production, land trafficking and illegal logging. At the time of its creation, there were only two communities inside the protected area as compared to the 26 that exist today. In 2010, the NGO Conservation International (CI) joined forces with SERNANP to establish a 15-year co-administration agreement to strengthen conservation efforts after years of government absence and insufficient funding to manage the area. CI had to inform people of the existence of the protected area – a classification that considered all migrants who arrived after 1987 as illegal. It negotiated with SERNANP to allow these settlers to remain if they complied with certain conditions laid out in conservation agreements, which would be signed by CI, SERNANP and local participants or “subscribers.”

The conservation agreements were included in the protected area’s master plan. They were modeled primarily on experience from another project involving CI that was implemented in another part of the region. CI and SERNANP established the agreement guidelines, specifying conditions for permissible activities, as well as commitments and accountability mechanisms linked to different activities. In 2011, CI and SERNANP visited communities with their proposal. The agreements included land-use restrictions that required subscribers to abstain from logging, selling timber and hunting. As part of the negotiation, however, the population could make proposals regarding what they would want in return for obeying the law. One key informant from CI referred to the negotiation process as a “tug of war,” but in the end, they reached an agreement on the provision of extensive technical assistance for coffee production. In 2012, CI and SERNANP began implementing conservation agreements with the local population within the area and with those settled in the buffer zone.

According to key informants, the situation was initially laden with conflict, but little by little the project won greater trust from the local population and today there is more interest in signing agreements. When Disney purchased carbon credits for USD 3.5 million in early 2013, local media delivered the misleading message that Disney had bought the area. The local population reacted with skepticism and fear, as they assumed this meant they would be evicted. In response, the park management visited communities and rectified the misunderstanding. Overall, project proponents note a substantial shift in local interest in the project, although people in one remote area of the park still refuse to work with CI or accept the existence of the park.

those that are not subscribers. If there’s someone who is not a subscriber to the agreement and doesn’t commit environmental infractions, well they can stay in the AMPF. But if that person deforests, they will obviously have to be reported. Thus there aren’t many options – you [follow the rules] or you don’t.”

Limitations and asymmetries of information are also related to the low level of participation in project discussions, as well as users’ minimal identification with the project and their accompanying lack of interest. Multiple respondents associated with projects in all three regions suggested that local participants are not always interested in attending meetings and workshops, and consequently are not as well-informed as those who consistently attend. To address this, some projects, such as AIDER-Ucayali, rely on representatives of communities to attend workshops and disseminate information back to other community members. Evidence suggests, however, that information about REDD+ was not yet flowing adequately to the communities and that the most informed individuals in the AIDER-Ucayali project were the members of the Consultative Group, who had just begun their training at the time of this research.

This study did not assess how well this system keeps all local participants informed, though it appears that little information is shared with these communities. These findings suggest that involving a diversity of actors from multiple levels and sectors can improve the legitimacy of processes and

outcomes associated with benefit sharing. In the case of Mishquiyacu-Rumiyacu, the regional government entity, the PEAM, organized a management committee consisting of representatives from the government, the private sector and civil society. This committee is responsible for planning, monitoring and implementing the benefit-sharing mechanism, and for coordinating activities with local participants and public entities (though, as mentioned above, this project was still seen as top-down by the households involved). Similar efforts elsewhere could focus on involving local governments in low-emissions development projects and ultimately building their capacity to deliver services to their constituents. As it is today, however, NGOs are dominating REDD+ governance at different levels, particularly the project level. In general, NGOs are performing many functions expected from governments, which lack the resources to carry them out. In the context of the legitimacy of benefit-sharing arrangements, these issues should be carefully considered.

6.4 Conclusions

REDD+ and similar projects depend on the quality of governance arrangements and the perceived equity of benefit sharing (Corbera et al. 2007; Pham et al. 2013). The results presented above reveal a mixed picture of the processes related to benefits, incentives and burdens around benefit sharing, with important implications for procedural legitimacy. The findings demonstrate that REDD+ offers an important incentive to project proponents because it offers new opportunities to generate funding to enable ongoing development efforts with local communities. Despite the long wait for carbon payments, these economic opportunities outweigh the burdensome nature of the design process for project proponents. The findings also illustrate the benefit of collaboration between the proponents – often NGOs – and SERNANP, as REDD+ offers an important source of funding for the government to meet its protected area obligations. The sites of CIMA-PNCAZ, AIDER-MDD and CI-AMPF demonstrate the importance of innovative solutions to protect local livelihoods in and surrounding these areas. However, the nonmonetary benefits present limitations in the project's potential to change land-use practices. In order to ensure the viability of low-emissions development projects on the ground, benefits must provide appropriate incentives to deter business-as-usual activities and sustain local support for these proposed activities. Many of the projects studied maintain a conservation orientation, but would benefit from providing alternative livelihood options to local participants to ensure the projects' financial viability.

The quality of information sharing at the project level has been mixed, with considerable information asymmetries between project proponents and local people. These asymmetries have been generated to some extent by project proponents' reluctance to discuss REDD+ openly during the first stage of the projects, out of concern over creating confusion and false expectations in the context of persistent uncertainty about the future of an international carbon market (see also Sunderlin et al. 2011). Similar to findings from REDD+ projects in Brazil, Cameroon and Indonesia, Resosudarmo et al. (2012) found that the overall lack of local-level familiarity with REDD+ suggests that information communicated to participants was primarily focused on specific project activities rather than the broader REDD+ project or the concept of REDD+ in general. However, withholding information, even in the interest of avoiding false expectations, can threaten the legitimacy of processes linked to the design and implementation of benefit-sharing arrangements. Project proponents should therefore make concerted efforts to explain REDD+ to local actors, including possible associated trade-offs. Such efforts should include workshops to engage as many local stakeholders as possible in these discussions, employing accessible and non-technical language.

Findings also indicate that the creation of new organizations intended to represent local people does not necessarily guarantee a robust and legitimate benefit-sharing arrangement. While these entities could facilitate information flow to communities and involvement in the process, there is no guarantee they will be transparent or accountable: the selected few need to engage those they represent, and those they represent need ways to hold them to account (Agrawal and Ribot 1999). Reflecting on these complexities, project proponents should consider promoting fair and locally-legitimate selection

processes for representatives and provide guidance to communities regarding transparency and accountability mechanisms. This also includes respecting, to the extent possible, existing local rules and norms where they exist (Larson and Pulhin 2012). It also may be beneficial for project proponents to reconsider the role of local participants in projects by expanding their involvement in the design and oversight of the project. This could help increase local identification with, and thus support for, projects. There is also a need to hold regular workshops that are more accessible to all stakeholders to discuss specific issues related to project design. This would help ensure that information reaches the broader local population, without relying only on local representatives who may fail to transfer knowledge to their communities (Zelli et al. 2014).

Evidence suggests that the involvement of different types of actors – including government actors – in REDD+ projects enables not only communication and coordination across actors, but also a supportive environment for local populations, while also encouraging the accountability of local government officials to their populations. In this way, government support for policy around low-emissions development options could foster the legitimacy of land-use decisions, especially by providing an enabling policy environment in which local communities have the opportunity to participate in land-use decision making processes.

7 Conclusions

Decentralization reforms and the resulting changes in the institutional arrangements for natural resource governance in Peru have placed increasing powers over land-use decisions in the hands of subnational governments. Though expected to enable more efficient and democratic service delivery and governance of natural resources at the subnational level, the reforms are faced with several challenges. There are overlaps, grey areas and potential contradictions among levels of government that generate confusion, while important powers are still legally held by the central government. Regional informants report that the allocated financial and human resources have been insufficient for subnational governments to execute their mandates. Although regional governments have important powers over land use, they are sometimes blamed for problems they did not create, such as those related to cross-sectoral coordination resulting in overlapping land-tenure regimes in Madre de Dios.

Across regions, different government offices typically do not coordinate on land-use planning or related decision making. Overlapping rights granted by different government offices are signs of fragmented governance that have created social conflict and confusion on the ground. Issues around capacity, institutional fragmentation and corruption have also exacerbated problems on the ground in the forest sector, particularly in Madre de Dios and Ucayali, which is sometimes visible, for example, in illegal mining and logging activities. These problems existed before responsibilities were transferred from the national to regional level, and lack of cross-sectoral coordination is probably even more pronounced at the national level. Insufficient public sector funding for the monitoring and control of forests has also encouraged corruption in Madre de Dios and Ucayali, unlike San Martin, which has made steps to overcome these challenges through institutional capacity, external funding support and alliances with local actors, such as the Ronda.

Various other legal-jurisdictional complexities characterize land-use decision making. The agriculture sector remains the most influential actor in land-use decisions with its statutory power over land-use classification and land-use titling and permitting. For example, the environment sector has ostensible power over land-use planning, but the results of this planning process are not binding. Decisions over subsoil resources are concentrated in the mining and energy sectors, which also retain greater power than the environment sector in land-use decisions. Our findings suggest that agro-industrial commodities like oil palm provide a strong economic incentive for the conversion of forests to agriculture. The private sector has demonstrated substantial leverage with government, which has resulted in both deforestation and conflict with local communities in San Martin and Ucayali.

San Martin has become a model region with respect to land-use planning given its policy orientation on integrated land-use planning. The initiative taken by a coalition of regional actors in promoting integrated land-use planning, involving different sectors in decision making around land use, may be a product of its already high rates of deforestation and resource scarcity. Also, San Martin does not face the diversity of land-use challenges that complicate natural resource governance in Madre de Dios and Ucayali. Political will, institutional stability, capacity and external funding have enabled San Martin to overcome existing challenges and pave the way towards improved land-use planning and natural resource governance in general.

Communication and dialogue across actors and sectors is clearly an important step toward better planning. It would, in theory, allow for the negotiation of both development and conservation activities in a transparent discussion of tradeoffs and explicit planning for the needs of multiple actors under a low-emissions or sustainable future paradigm. Integrated land-use planning, however, is not a panacea. The actors supporting alternative development options still need to win respect and influence in a larger arena: without this, even if land-use plans were generated under environment sector leadership

and were legally binding, they would likely not be enforced. Shifts in governance and priorities would need to be made to allow sustainability concerns to govern, or at least more strongly influence, development decisions in Peru.

Our research suggests that the creation or strengthening of coalitions and strategic alliances between the State and different local actor groups of similar positions could improve governance. For example, calls to address illegal mining in Madre de Dios suggest that such alliances would strengthen efforts to combat these activities. Coalitions that bring together land users and neighbors to monitor and improve forest management may enable greater control of such areas, particularly considering the lack of government attention to illegal mining activities. Regional platforms associated with REDD+ have created opportunities for dialogue and coordination among actors but still fail to involve the spectrum of actors affecting land use change.

Despite progress made on low-emissions development, it remains compromised. At the national level, the environment sector has weak legal power and influence in land-use decisions, and actors leading low-emissions development projects at the regional level have limited such efforts to smaller-scale and more localized activities around smallholder agriculture. Funding and efforts aimed at reducing deforestation and degradation currently come primarily from international donors and NGOs, while the private sector and government actors outside of environmental entities – particularly the agriculture sector – are not involved in low-emissions development. If the key actors that drive the conversion of forests for other uses are not brought on board, or effectively regulated, low-emissions development projects such as REDD+ will have a limited impact and their potential for reducing deforestation and degradation or shifting current patterns in business-as-usual will be minimal. In addition, the burdensome nature of REDD+ project development for proponents limits the viability of these projects compared to business-as-usual activities.

At the local level, evidence suggests that diversified benefits from low-emissions development activities are important for providing comparable livelihood opportunities in order to sustain support for these activities on the ground. In addition to the appropriate incentives for local participants, we suggest that procedural legitimacy was affected by information sharing, participation and the representation of the different actors involved. It is to the advantage of project proponents to promote an inclusive and transparent environment in the design of benefit-sharing arrangements and in sites where they try to create local, representative organizations to ensure that the local leadership facilitates information flow on project developments and the legitimate representation of local concerns. Building relationships and supporting the capacity of existing local organizations may lead to more effective and sustainable efforts. Moreover, it is the balance between incentives and an inclusive and transparent decision-making process that enables more viable and sustainable initiatives. There is also a need for private companies to invest in the recuperation of deforested and degraded areas that could involve the very communities using and depending on them. Evidence suggests that current nonmonetary benefits provided by projects limit the potential to change land-use practices as these ‘incentives’ do not yet outweigh opportunities for local engagement in other land uses often considered unsustainable.

In response to the reduced flow of REDD+ financing and the resulting delay in national and international architecture for REDD+ in Peru, some project proponents have chosen to pursue markets for carbon credits using private certifications while others have opted to make their REDD+ projects time-limited pilots and not continue these interventions. Still others have sought out complementary sources of funding and incentives for sustainable forest management (de Sassi et al. 2014).

Interviews conducted as part of this research reveal a consensus that REDD+ currently does not engage the different sectors and entities involved in activities causing deforestation, which limits its ability to effectively address the larger pressures on land-use change. The case of San Martín demonstrates the central role of leadership and political will in forging support for a new development paradigm and integrated land-use planning. Dialogue around low-emissions development and REDD+ would benefit from involving local organizations and communities that will be engaged in or affected

by these activities, as well as other sectors that influence land-use decisions such as agriculture, mining, planning and economic development. We suggest that in addition to striving for legitimacy through the wider involvement of stakeholders from all relevant levels and sectors, promoting forums for policy deliberation related to benefit-sharing arrangements – like the REDD+ roundtables – may also foster broad and creative thinking about the multiple types of benefits that low-emissions development can generate.

The theme of legitimacy and equity ran throughout this report, but primarily with respect to the development of benefit-sharing arrangements. This study underscores the need to strengthen the role of local communities, indigenous organizations and other CSOs in decision making around REDD+ and land-use planning at the regional and project levels. At the subnational level, the limited participation of strategic actors such as indigenous organizations and local governments, for example, has weakened opportunities for local influence on the development of REDD+, with participation dominated by project proponents. At the project level, information sharing is highlighted as central to securing local trust and buy-in and minimizing conflicts and misunderstandings. The dual role of proponents as project developers and advisors makes efforts to provide unbiased information difficult, suggesting the need for independent entities or advisors that help engage communities in the process, thus enabling more informed decisions (Resosudarmo et al. 2012). Since REDD+ is a promising mechanism for promoting forest conservation and local livelihoods, the representation of local people in such initiatives and processes is considered essential in shaping decisions at the project, regional and national levels (Resosudarmo et al. 2012) and facilitating the embedded nature of local initiatives or their scaling-up to the national level.

While questions remain over what a jurisdictional system for REDD+ will look like and how pilot projects will scale up, we stress the importance of improving communication channels across levels and sectors to involve more diverse actors in discussions and debate around alternative land-use options. There is no single, magic formula for subnational governments to shift the political and economic arena around land use. The incentive to invest in alternative development models will require research and information, political support, economic incentives, viable livelihood investments, grassroots pressure, the strengthening of cross-sectoral alliances and innovative leadership.

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Appendix: Introduction to sites

This section provides a brief introduction to each of the sites studied, with an emphasis on the history of land-use change and the actors involved. We first present the five projects associated with drivers of deforestation and degradation and then turn to the nine sites aimed at decreasing emissions (avoiding deforestation, undertaking reforestation). For the decreasing emission sites, in particular, we consider the costs and benefits of projects for participating local communities, including explicit benefit-sharing arrangements, when they exist, and how these were negotiated.

A.1 Sites associated with increasing emissions

A.1.1 Arca Pacahuara – Madre de Dios

The community of Arca Pacahuara was established between 1992 and 1995 by 12 families that migrated from Cuzco and Puno in search of arable land, improved livelihoods and the freedom to practice their religion. The community has since grown to 2500 inhabitants and become the largest corn producer in the region. It is made up of *Israelitas*, members of a Peruvian Evangelical Christian group predominantly active in the Sierra areas of Peru. Located in the district of Iberia in the northeastern section of Madre de Dios, the community of Arca Pacahuara has 6000 hectares, of which 3500 are dedicated to corn production, representing almost 70% of the corn grown in the region of Madre de Dios (key informant, 2013). According to informants from the Regional Directorate of Agriculture (DRA), each family has 30 hectares of farmland registered and titled with the DRA, 5 of which are under the category of “mechanized farming.” Most community members do not believe they are negatively impacting the land as, according to one community member, “there is no deforestation here because we just use what we need. We just burn (vegetation cover) and sow seeds for agriculture.” The *Israelita* community believes that “mother earth” exists for the sole purpose of providing them food.

From the 1940s to the 1980s the northeastern region of Madre de Dios was settled by large-scale landowners and rubber tappers. As the market demand for rubber dwindled, so did the economic activity. By the early 1980s, agricultural activities (i.e. rice and corn) increased in the area and the existent small-scale farmers were able to sell the majority of their agricultural products to a nearby state-run company that operated between 1985 and 1992. In the 1990s, during the presidency of Alberto Fujimori, parastatal and state-run businesses in Peru were dissolved, including the local agricultural business in Madre de Dios. This led local farmers to search for new markets – a difficult feat for families in the districts of Iñapari, Iberia and Tahuamanu as poor road conditions (non-asphalt roads and flooding for part of the year) cut them off from the regional capital of Puerto Maldonado and other potential buyers.

In the early 1990s, regional and national government agencies started supporting agricultural production and increasing the community’s farmland in this area through substantial financial and technical assistance. In the following years, two important infrastructure improvements influenced land-use change and commercialization in the northeastern districts of Madre de Dios: the 1997 construction of the Tahuamanu bridge and the expansion and paving of the Interoceanic Highway in the mid-2000s, which connected the northeastern districts to Puerto Maldonado, thus connecting inhabitants to new markets in Peru. These developments not only greatly facilitated the transportation of local agricultural products, but were also cited as leading to a sharp increase in the extraction and transportation of timber from the area. Logging and associated clearing freed up space for agricultural activities, which also led to a new influx of migrant farmers to the northeastern districts.

Over the years, Arca Pacahuara has been strongly supported by governmental agencies and their projects, due to the potential of agricultural production to support regional growth. These include the DRA, the Regional Office of Natural Resources and Environment (GRRNYMA) and the Madre de Dios Special Project (PEMD). The DRA has also granted the community land titles and enabled its access to local agricultural loans from COMPETE and AGROBANCO. Meanwhile, the GRRNYMA has been involved with the community since 2010 with its project “Recuperation of deforested areas in Arca Pacahuara”; and the PEMD has financed road construction from Arca Pacahuara to the highway, subsidized farming machinery and equipment, and funded agroforestry projects within degraded areas of the community. In general, the objectives of governmental agencies in the region have been identified as being contradictory, as they provide financial and technical support to increase the production area, which leads to deforestation, while at the same time promoting conservation and land-restoration projects. Arca Pacahuara is a prime example of this trend.

As of June 2013, the Arca Pacahuara community has been awaiting the approval of a 26,000 ha extension by the DRA to increase its production capacity. However, this process has been replete with overlapping land disputes with two neighboring timber concessions and is at a standstill until this land conflict is resolved. If the extension is granted, the Ministry of Agriculture and Water (MINAGRI) office in Lima will have to approve this soil classification and land-use change and will thus become another influential actor in land-use change in this area.

A.1.2 La Pampa – Madre de Dios

La Pampa is the informal name for an area greatly affected by illegal and informal mining activities that is located in the buffer zone of the Tambopata Reserve in the districts of Laberinto and Inambari in Tambopata Province. There are three tenure categories in La Pampa – legal, illegal and informal – and there are many conflicts over land-use rights due to land invasions, bribery and corruption by government employees and miners. Legal mining occurs in mining concessions where people have land titles for mining activities and where the land was zoned by the government for this use. Informal mining occurs in concessions and areas zoned for mining activities, but where the owners have not formalized their operations, received final approval for mining activities or paid local taxes. Those mining in La Pampa do so both in informal mining areas and in illegal areas, which are not zoned for mining and include reforestation and conservation concessions, as well as farmlands located within the Tambopata Reserve’s buffer zone.

In 1974–75, the first permits for land settlements were granted in Tambopata Province, which influenced the increase of farming and timber extraction activities in La Pampa and other areas alongside the highway. By 1985, the government had authorized farmers to legally settle and farm along the highway axis (in an area of 2 km), and in 2002 these farmers were granted reforestation concessions (or already degraded lands) as an extension of their agricultural land. The creation of the national parks and reserves in Madre de Dios in the late 1990s and early 2000s limited the areas where miners could legally extract gold.⁵⁶

The predominance of illegal mining in La Pampa is the result of several factors, such as roads and infrastructure, the global demand for gold, the lack of government control, prior illegal activities and multilevel and multi-actor corruption (see Gordillo 2015). The completion of the Interoceanic Highway in 2005 generated increased migration and traffic into the region. Migrant miners began to enter and continued to do so at an ever-increasing rate in 2008 as international gold prices peaked.⁵⁷

⁵⁶ With over 44% of the region under national protection and with increased restrictions on entering these areas, miners have set up camp both in sites close to the highway and in areas quite close to protected areas, such as in La Pampa.

⁵⁷ Respondents indicated that a farmer’s average daily wage is PEN 50, while miners have been known to make PEN 400-500 per day, or even as much as PEN 1500 if they obtain 80-100 grams of gold.

Individuals acknowledge that these high levels of migration have been positive for the economy, but complain that it has not been properly controlled by the government. For example, the government has not controlled urban expansion, which has led to many social and health problems.⁵⁸ In La Pampa, ‘shanty towns’ with migratory mining populations have increasingly developed alongside the highway. These do not have proper infrastructure (i.e. sewage management), which leads to the contamination of surrounding water sources and land areas and perpetuates inhospitable living conditions. La Pampa is also renowned for its high prevalence of child and female prostitution. These towns and occupations developed due to the inflow of financial resources from mining activities but are cited as being subjected to very little district- and regional-level government intervention.

Regional government offices are also blamed for their lack of control over – and thus passive promotion of – illegal mining activities in La Pampa. Despite the decentralization of powers over small-scale and artisanal mining to the Regional Directorate of Energy, Hydrocarbons and Mining (DREHM), it does not have the power or resources to authorize legal permits. The regional government also lacks the capacity to enforce and supervise the reforestation of legal mining concessions after mining activities come to an end. Evidence suggests that corruption is one of the leading causes of government inaction and the lack of political will to solve issues around illegal mining. In some cases, government authorities themselves were illegally mining; some had previously been illegal loggers. Other authorities charge illegal fees for permission to operate and evade taxes, which affects the government budget.

Nonmining concessionaires in the area allow miners to set up camp and conduct illegal mining in areas zoned for logging, reforestation or agriculture. Bribery among land users is also common, as newcomers (mainly illegal immigrant miners) will offer these other land users high monetary compensation. Many farmers see this as an opportunity to sell their land or invite these people to mine even in their own areas. Police and DREHM officials have also been known to accept bribes, but landowners aware of these illegal activities are afraid to approach the authorities or make formal accusations for fear of repercussions.

In 2010, the DREHM created the “Mining Project” to focus on formalizing mining operations by offering technical training, legal counseling and information dissemination, as well as minor financing to help operations during the solicitation process. This project attempts to increase interaction between the regional government and the private sector in order to assure that private sector actors have the tools necessary to formalize and improve their mining extraction techniques. Meanwhile, MINAM took a more coercive approach to illegal mining, and in October 2013 the central government sent military troops to quell mining strikes on the highway that restricted the transportation of goods into Puerto Maldonado for a number of days. These strikes were an attempt by small-scale miners to confront the government with issues caused by the restrictions it had placed on oil and gas consumption to end illegal mining activities in the region.

A.1.3 Oil palm-Ucayali: Plantaciones Ucayali SAC (Zanja Seca-Bajo Rayal) and Plantaciones Pucallpa SAC (Tibecocha) – Ucayali

Through a variety of strategies, the Plantaciones Ucayali SAC and Plantaciones Pucallpa SAC oil palm companies⁵⁹ acquired property rights over a total of 10,729 ha in Zanja Seca-Bajo Rayal (in 2012) and Tibecocha (in 2011) in what is known locally as the Lower Aguaytia River. Both companies’ interventions have led to conflicts with small farmers. Their clearing of the existing forests to produce

58 According to key informants, the government does not enforce the documentation of new permanent migrants from other regions of Peru. Temporary migrants that become permanent residents are reportedly still using their identity cards documenting them as residents of other regions and are therefore not included in census data.

59 Information for this site was collected exclusively from interviews with regional government and third parties, but not with the company itself. The information presented reflects the views and information shared by these key informants and does not necessarily reflect the perspectives of the authors.

oil palm generated conflicts related to the lack of transparency during the process; the overlapping of land claims, farms and farmers' livestock and infrastructure; and the impacts of clearing forest that used to be part of the population's resource base. Through the Ucayali Regional Agriculture Directorate (DRSAU), the regional government prioritized and facilitated the process of obtaining land rights for these companies and farmer associations that had a pre-existing relationship with regional government officials, while smallholders without such connections faced multiple constraints.

Settlers began migrating from San Martin, Huanuco, Cerro de Pasco and Junin to the pristine forests of the Lower Aguaytia in the early 1970s, establishing small villages on state lands along both banks of the Aguaytia River. They practiced traditional activities such as agriculture, hunting, fishing, subsistence logging and coca cultivation. Logging has been an important activity in the area. Over time loggers obtained access to the forest through timber extraction contracts, permits for local forests and possession certificates. In the late 1980s and early 1990s, coca producers (known as *cocaleros*) fell victim to violence and extortion from armed groups operating in the region. Many farmers abandoned their fields, but others stayed, took possession of the abandoned fields and increased their landholdings.

In 2005, "alternative development" programs emerged with the aim of eradicating the cultivation of illegal crops. These were implemented by the National Commission for Development and Life Without Drugs (DEVIDA), the DRSAU and the United States Agency for International Development (USAID). Between 2005 and 2007, the program provided farmers with alternative crops, technical support, seeds, and economic incentives to join. It also provided incentives for the establishment of farmer associations for cacao production and assistance for obtaining possession certificates that would enable farmers to obtain titles in the future. Smallholders also began organizing to claim land rights with the support of DEVIDA and the regional government. Simultaneously and gradually, the lower Aguaytia started becoming an attractive place for the development of agro-industrial plantations, especially for oil palm. Since then, the area has experienced increased immigration along with oil palm cultivation by large companies, farmer associations and individual smallholders. The process has been promoted by the Regional Government through investment incentives and future plans for road network development. It has also been facilitated by the availability of large areas of land and ideal soil conditions.

Land-use change in Zanja Seca

Plantaciones Ucayali SAC owns a total of 4759 ha in Nueva Requena (Coronel Portillo) and Curimana (Padre Abad) in the sector known as Zanja Seca-Bajo Rayal.⁶⁰ According to the reports of several small farmers, the DRSAU used false arguments to deny them property rights over that land in order to give it to the oil palm company, which then deforested it to cultivate oil palm.

When the government started supporting associated farmers in 2005 to eradicate illegal crops, a group of approximately 110 local ex-*cocaleros* formed the Association of Palm Producers of La Perla de Zanja Seca with the purpose of securing tenure over nearly 4500 ha, arguing that they had long occupied that land. Their initial plan was to produce oil palm, but they changed that to start an ambitious large-scale plantation to produce organic cacao for export. While their association was completing the required paperwork with the national office responsible for titling at the time (COFOPRI), between 2007 and 2012 the DRSAU completed a process to acquire 12,481 ha as its own property through a legal process called *inmatriculacion* ("unregistration"),⁶¹ which included the land being requested by the association. The DRSAU then denied titles to most of the farmers, arguing that

60 Zanja Seca and Bajo Rayal are two communities located in the Lower Aguaytia River, an area that covers the course of the river as it passes through the districts of Curimana (Padre Abad) and Nueva Requena (Coronel Portillo) to the river mouth.

61 *Inmatriculacion* allows the conversion of state lands into lands owned by regional government agencies in order to reserve them for future agro-industrial projects. This term was defined as "a process by which ownership of an area of land is first unregistered from the state domain, and is registered in the Regional Government's name."

the land was forest (which is not subject to private title) and that they were not inhabitants of the land (*lugareños*),⁶² but rather recent immigrants using the land to grow coca. Nevertheless, according to key regional informants, in 2012 the DRSAU sold that same land to Plantaciones Ucayali SAC through a simple and fast legal mechanism called “direct sale” and granted land-use change authorization from forest to agriculture. The DRSAU regularized the sale after writing a technical report stating that the soil was apt for agriculture and that the land was no longer “forest” but rather degraded, and hence subject to sale and private ownership. The oil palm was planted on the land that same year. In the neighboring community of Bajo Rayal, the company expanded into over nearly 826 ha of farmers’ land between 2013 and 2014, affecting 60 farmers – many of whom had lived there since before 2004 – who lost their rights as a result. These farmers have also lost rights as a result of land grabbers that many speculate are encouraged by the company.

The process of land allocation became highly contested among smallholders, private companies and the State. Accusations of mismanagement and corruption were presented to the Public Ministry of Ucayali⁶³ on behalf of the affected farmers who claim that government officials may have been bribed to benefit the company. According to the respondents interviewed for this study, the Regional Government favored giving land rights to private companies rather than granting tenure to smallholders. While the latter faced bureaucratic barriers and their legitimacy as long-term occupants of the land was questioned (only 17 farmers were recognized as having tenure rights), the former were given all the necessary facilities and support. According to a report by the Peruvian Eco-Development Society (SPDE), the sale required an environmental impact assessment (EIA) and soil studies because it involved clearing forest, but the regional government did not request such a study and declared it a “project of national interest.” Regional government officials argue that these accusations are ill-founded and come from “land trafficking mafias.”

This case has also been the subject of criticism from other areas of the Regional Government, the central government, non-government institutions and civil society for the alleged lack of transparency and inconsistencies during the land-allocation process, as well as the Regional Government’s unfettered disposition toward favoring private investment for the expansion of large-scale agro-industrial operations. This case exceptionally illustrates one way that land-use decisions are made in response to the promotion of private investment. According to local informants, the DRSAU had promised to issue the titles, yet it took advantage of certain laws to delay the process and deny permits to the smallholders who claimed they met the criteria for these certificates. In this way, one regional government office was able to promote oil palm expansion despite local smallholder farmers’ competing claims. Moreover, there are no checks on the DRSAU from the environment sector, as neither MINAM nor the regional environmental authority has the power to influence tenure-related decisions.

Land-use change in Tibecocha

Tibecocha lies 10 km northeast of Zanja Seca-Bajo Rayal, approximately 6 km from the riverbank, beyond the farms of the inhabitants of Esperanza and Nueva Union Progreso. Here, according to interviews, Plantaciones Pucallpa SAC deforested an area it acquired from a non-local farmers’ association that had previously acquired it from the DRSAU. This led to conflict with the local smallholders who claim, as in the previous case, that the DRSAU inappropriately denied them tenure over the land in order to give it to the oil palm company. Interviewees claim that this large-scale land-use change not only eliminated the source of game animals and timber consumed by the communities, but also altered and dried out streams, affecting local farms.

62 In other words, they could not demonstrate peaceful, continuous, and economically productive activity prior to December 31, 2004.

63 According to *Disposición No. 04-2013-FPEDCF-UCAYALI, Formalización y continuación de la investigación preparatoria del Ministerio Público de Ucayali*.

This land was originally “unclaimed” state land being used by the local population for hunting, gathering and logging. In 2008, a farmer association (*Comité de Productores Agropecuarios las Palmeras de Tibecocha*) applied for reclassification of the land⁶⁴ and a possession certificate (user rights) for 5970 ha. After the local authorities unsuccessfully tried to claim the area, the DRSAU authorized first the possession certificate for the association in 2008 and then a land title in 2010. Title was granted to the association in disregard of Law 1089, which requires the claimant to demonstrate prior occupation and agricultural use of the land in question.

In 2011, the association sold the land to Plantaciones Pucallpa SAC. Local people only became aware of the transaction in May 2012, when the company began using bulldozers to clear primary and secondary forest and started hiring workers to prepare the soil for the plantation. Moreover, local authorities reported that farmers felt forced to sell their lands, since these were becoming physically isolated as the company restricted access into the area. Informants indicated that land speculators – which local people believe were hired by the company – were purchasing land from the farmers at low prices and then offering it in large blocks to the company. After its entry and as a way of avoiding possible tensions with the communities and improving its relationship with the local population, the company hired local labor and began providing local support (attention to emergencies, sports activities and infrastructure). So-called ‘social support activities’ have helped subdue opposition to the project.

As this process was completed without the knowledge of the local inhabitants, who used this forest area for their livelihoods, they have been forced to accept the outcome. Their expectations from the project, however, are increasing now that Plantaciones Pucallpa is offering credit in the form of a guarantee, palm seedlings and technical advice to enable local farmers to produce oil palm, on condition that the producers sell their products to the company. Several informants have expressed their suspicion that farmers may end up losing their land due to foreclosure and hypothesize that this might be a medium-term strategy by the company to acquire more land.

A.1.4 Oil palm-San Martin: Barranquita – San Martin

In 2007, a total of 3000 ha of primary forests in the district of Barranquita were sold and shortly after cleared by the company Grupo Romero in order to plant oil palm. Having had no prior knowledge of this transaction, the local population responded by denouncing the company, arguing that the land was cleared without the completion of the legal requirements.

Prior to 2007, these 3000 ha were classified as a permanent production forest (BPP) and could not be sold or used for agriculture. The residents of the town of Barranquita, located 10 km from this site, considered the area to be a “communal forest,” although they had not officially requested the rights to it from the regional government. In 2006, MINAGRI accepted Grupo Romero’s request to purchase the land and resize the BPP to 900 ha, allowing the company to clear the remaining 2,100 ha over a two-year period. In 2007, the company began clearing this area at a very fast pace, before the completion and approval of its EIA and prior to the government’s approval of the land-use change to agriculture. The forest was completely cleared in less than a year.

In 2007 the residents of Barranquita reported these actions to the municipal and regional governments. With support from the district mayor at the time, several Catholic Church activists assumed a leadership role in the coalition formed to defend Barranquita, referred to as the “Local Defense Committee” (*Comite de Lucha*). In 2010, the municipal government of Barranquita for the period 2007–2010 initiated a court case at the provincial level (Lamas) accusing the company of: (1) clearing 2100 ha without having an approved EIA;⁶⁵ (2) deforesting the entire area all at once when it was authorized to change land use in two parts;⁶⁶ (3) not leaving 30% of the land (900 ha) untouched, but rather selectively harvesting

64 To change the soil vocation category from forest production or protection to agriculture.

65 The Forestry Law stipulates that any large-scale agro-industrial project must submit and have its EIA approved prior to changing land use.

66 The first 1100 ha one year and the rest the next year.

valuable timber species from the area; and (4) resizing the BPP, an area that was also considered locally to be a “conservation” area for the population of Barranquita (even without legal claim). The Defense Committee protested against the company for not consulting with the population and not considering the regional ecological and economic zoning (ZEE) completed by the regional government in 2006. The company responded by arguing, among other things, that the Law of the Environment that establishes the EIA system (Legislative Decree No. 613) was not enforced until 2009.⁶⁷ After three years of the provincial court case, Grupo Romero was found innocent of these claims in October 2013.

When asked why the company was able to do this, informants pointed to the national government’s interest in investing in oil palm for domestic consumption and use, as established in the National Oil Palm Plan in 2000. Informants arguing against the company also recognize that it had and maintains ties to MINAGRI, which facilitated the resizing of the BPP and the sale of the area. They also recognize the company’s alliance with the Ministry of Energy and Mining (MINEM) and the Commission for the Formalization of Informal Property (COFOPRI). From 2004 to 2006, the national government put in place a series of incentives for the production of biofuels, after which Grupo Romero sought the conversion from forest to agriculture.

One informant from Grupo Palmas indicated the following conditions as having guided their identification of an area for palm oil cultivation: (a) not in a buffer zone, (b) far from indigenous communities, (c) distance (must be accessible), and (d) an area with less than 2000 mm annual rainfall. When questioned if the company considers cultivating oil palm on degraded lands, this informant emphasized that they avoid such areas as they tend to be under possession, which could potentially lead to conflict with the rights holders. He emphasized that these were important considerations given the scale of the investment. According to this person, there are several reasons they proceeded with the project once the area was identified: (1) the completion of a soil study before the land was purchased indicating it was appropriate for palm,⁶⁸ (2) the area’s accessibility (it is close to highway), and (3) support from Alto Huallaga Special Project, a regional government entity dedicated to the implementation of infrastructure, environment and investment projects.

A.1.5 Awajun territory: Land rentals – San Martin

In the last 20 years, the Awajun indigenous territory in the Alto Mayo region of San Martin has been rented out to and/or invaded by many mestizos that have migrated from the Peruvian highlands over the past four decades in search of lands for agricultural production (coffee, rice and corn). Of a total of 137,811 ha encompassing 14 Awajun communities, approximately 10,000 (in seven communities) are under rent and 7000 (in four communities) have been invaded. The results for the Awajun people include deforestation, economic dependency on mestizos and a rise in social conflicts, illnesses and crime.

In the 1960s and early 1970s, a significant migration wave brought the Awajun people from Alto Marañón and Alto Amazonas to San Martin and other regions in search of forests to provide for their subsistence through hunting. In the mid-1970s, approximately 7000 Awajun settled in Alto Mayo (northern San Martin) and in 1974 the Awajun communities received land rights from the Peruvian government for approximately 11,000 ha of primary forest.

The Awajun people were considered hunter-gatherers, a forest-dependent people, but over time they became increasingly tied to the market economy. The agricultural loans offered through the Agrarian Bank in 1985 during Alan Garcia’s presidency encouraged the Awajun people to cultivate crops to earn cash, and in so doing they cleared areas of primary forest. When the loans came to a halt in 1989, the Awajun were unable to pay them back and financially maintain their fields.

67 When the law’s implementing regulation was passed.

68 The soil analysis was conducted in 2006 by government-approved consultants. At the time, the National Institute for Natural Resources (Instituto Nacional de Recursos Naturales, or INRENA)-San Martin approved this analysis along with ‘opinions’ issued by MINAGRI and the National Institute for Development (Instituto Nacional de Desarrollo, or INADE), two entities that no longer exist.

After the Marginal Highway was completed in 1978, mestizo migrants from the highlands started settling increasingly closer to the Awajun territory in search of land for agricultural production. Contact with the mestizos increased the incidence of illness and crime among the Awajun people. Nevertheless, they noticed the mestizos' greater technical and financial capacity for profitable agricultural production and began to turn to them for knowledge and labor. Out of financial desperation, in 1996 the Awajun people of the Bajo Naranjillo community began to rent their land to mestizos for agriculture, a practice that spread to the surrounding Awajun communities over the coming years. The original rental contracts were informal, not requiring the authorization of community leaders or the approval of the community and applying no limits or rules to the rental price. The absence of rules and accountability mechanisms resulted in a number of problems and conflicts. For example, some migrants involved in organized crime were reported to be hiding in communities and renting lands using several and/or false identity cards, some renters did not always pay the Awajun and some fled the area entirely. Also, land invasions started occurring in several communities. Today, only one community has never rented its land. As a result of much more extensive forest clearing, community members now have to walk much further to hunt for bush meat, depend economically on the mestizos and face increasing social conflicts. The Awajun have witnessed significant cultural changes as a result of this recent land-use history and the integration of their people with a previously unfamiliar mestizo culture.

In the last several years, indigenous leaders and organizations have grown worried about the environmental, social and economic impacts of their land-use decisions. In 2009, with technical assistance from the NGO Practical Solutions, the leaders of the Regional Awajun Indigenous Federation of Alto Mayo (FERIAAM)⁶⁹ proposed extensive governance mechanisms to ensure the fairness of the transactions involved (including decision-making process rules, a range of prices, deforestation control, accountability mechanisms and a limit on renting until 2021). As a result of these discussions, FERIAAM has recently prohibited communities from renting land after their current contracts expire.

Many informants referred to the trend of renting during this period of time as a “virus” that was “contagious” and spread from one community to the other until the majority of the Awajun communities found themselves renting their land. Also, according to one key informant, all the communities that were invaded had leaders and authorities that were considered corrupt.⁷⁰

The Awajun people interviewed note that their financial situation has only worsened, as just 20 years later they now remain economically dependent on the mestizo population and have insufficient financial or technical capacity for agricultural production. They also consider that their cultural practices and former lifestyle – rooted in hunting and gathering – have quickly vanished. As one community leader put it:

“Two worlds exist here – indigenous and occidental. Previously, our ancestors lived in an immense forest without electricity, cars, etc...an environment without contamination. We haven't forgotten our culture, our customs – hunting, gathering, fishing – three activities that we practiced. There were other needs...education began and teachers arrived. Everyone had to survive...our culture wasn't based on money, the [market] economy. The teachers introduced the idea of the [market] economy [that we had to integrate into].”

69 Thirteen of the 14 communities are affiliated with FERIAAM.

70 For example, according to one informant, in the community of Cachiyacu, a corrupt official from the municipality of Moyobamba acted alongside several mestizo and indigenous community leaders to encourage the mestizo invasion and the creation of the community of Cielito Lindo within the indigenous community of Chachiyacu. According to this informant, an indigenous leader was supposedly paid to split the land up into parcels, yet made no efforts to resolve conflicts between the indigenous and mestizo communities and received payments from the mestizo community. In the community of Moroyacu, mestizos rented land with authorization from a corrupt leader in 2010, after which they began cultivating coca. Problems surfaced rapidly as the native people confronted the mestizos, resulting in the deaths of several indigenous people.

A.2 Sites aimed at decreasing emissions

A.2.1 AIDER-Tambopata: The REDD+ project of the Association for Research and Integral Development (AIDER) and the National Protected Natural Areas Service (SERNANP) – Madre de Dios

This REDD+ project includes the coadministration of the Tambopata National Reserve and a section of the Bahuaja Sonene National Reserve by the national NGO AIDER and the National Protected Natural Areas Service (SERNANP). The project is consolidated by a 20-year contract (2008–2028). It is located in the province of Tambopata and encompasses a total of 573,299 ha.⁷¹ Partial payment for carbon credits has been secured with the Peruvian Pacifico Seguros insurance company and will be used to cover monitoring, research and community outreach projects for the protected areas and communities in the buffer zone. In the REDD+ project, AIDER is currently working with two settlements (Nueva America and Sandoval) and two native communities (Palma Real and Sonene).⁷² The project also received VCS and CCB Gold validation in 2013 and will be verified annually.

The expansion of the Interoceanic Highway in 2005 and the increasing price of gold in 2008 caused migration and land occupation, in addition to illegal mining in the reserve's buffer zone. An estimated 1189 ha were deforested annually during the first 10 years of the project due to land occupation alongside the highway. The project's objective is to reduce deforestation and forest degradation, avoiding 457,750 tCO₂e annually. To do so, it aims to halt the expansion of agricultural and mining activities in the buffer zone and to promote conservation activities. Another objective is to strengthen the SERNANP regional office in Madre de Dios and the local population by introducing volunteer park rangers from local communities, providing technical support and enhancing community participation and collaboration.

In 2008, AIDER designed the REDD+ project and proposed it to SERNANP through a coadministration contract. As a result, AIDER deals with the carbon auditing agencies and potential buyers, while SERNANP participates in the monitoring and community outreach activities, reviews AIDER's plans and has the legal authority to dissolve the contract if AIDER does not hold up its end of the commitment. However, interviewees from SERNANP felt that their involvement in the design was minimal. The Environmental Management Committee of Tambopata, comprised of individual land users, community members from the buffer zone and SERNANP representatives, is responsible for reviewing AIDER's management plans and can influence its decision to permit or deny specific land-management and land-use activities.⁷³ However, the ultimate decision to authorize land-use permits and related activities is still controlled by the Regional Forest and Wildlife Directorate (DRFFS). Furthermore, according to AIDER, communities did not fully participate during the project's design due to a general feeling of mistrust of AIDER and NGOs in general in the region at the start of the project. AIDER decided to not directly involve the local mining associations (APAYLOM and AMATAF) and farmer associations although they had initially been included, resulting in the associations feeling AIDER had abandoned them because of the increasing mining conflicts and the associations' undetermined legal status.

In 2011 the Peruvian Pacifico Seguros insurance company signed a pre-sale agreement with AIDER to demonstrate its interest in purchasing carbon. However, many communities started losing interest in working with AIDER given the delay in selling carbon credits and financing activities. Only after many trips, workshops and a project working with communities on forest governance, territorial planning and livelihood planning that AIDER started in 2012 with the Rainforest Alliance and USAID

71 The project includes the districts of Inambari and Tambopata.

72 Additional communities and organizations with which AIDER originally planned to conduct activities in its PDD were: Nueva America, Loero and Jorge Chavez, the APAYLOM mining association, and the Infierno native community. Infierno left the project in order to implement its own REDD+ project with AIDER.

73 This agreement comes more from the coadministration of the parks' set-up than the REDD+ project.

financing, was AIDER able demonstrate the project's sustainability and its long-term commitment to the area.⁷⁴ AIDER and SERNANP finally signed a contract in 2013 for USD 500,000 to cover monitoring, research and community outreach projects for the protected areas and communities located within the buffer zone.

According to AIDER, one of the most important project benefits for communities is increased protection from illegal land invaders involved in agriculture or mining activities, given an increase in the number of control points within the park and buffer zone⁷⁵ and stricter law enforcement. Although "leakage" still persists, park rangers have confiscated mining equipment. SERNANP benefits from its relationship with AIDER by receiving necessary equipment and additional capacity training from the NGO's specialists. This is especially important given that the regional SERNANP office does not receive sufficient funding from the national budget to carry out its mandate. Likewise, communities benefit from stronger security, technical support and legal counseling. AIDER has also provided local capacity building for young SERNANP park guards and forest rangers (both volunteer and paid), as well as for tourism guides. In addition, it has conducted agroforestry projects in the native communities of Palma Real and Sonene and in the Nuevo America settlement to provide alternative income sources, and is updating the settlement's tourism management plans so that families living close to Lake Sandoval (a very important destination for tourists and research scientists) can be involved in tourist activities.

Additional benefits, however, remain uncertain as financing from carbon sales had not yet occurred during the fieldwork term of this report.⁷⁶ The community of Infierno attended AIDER's REDD+ meetings in 2013, but then decided to create its own separate REDD+ project based on ecotourism. Since the completion of this study, AIDER began selling carbon credits through the agroforestry project involving cacao from the Althelia Climate Fund.⁷⁷

Generally speaking, SERNANP employees would like to be more active participants in the REDD+ project. They complain that the DREHM does not help control illegal mining in the buffer zone (as it only deals with miners on concessions that are in the process of being formalized) but could benefit from allying with SERNANP. SERNANP also feels that the police and Regional Government of Madre de Dios should be more involved and in communication with it, but there are no funds to pay for officials to visit the problematic areas. With respect to municipal governments, AIDER indicates that they are not very involved in the project or the area. The municipal government demonstrated more interest in promoting general tourism activities in the region, seeing tourism as an economically viable option. AIDER and SERNANP officials also express the need for more alliances with adjacent community members and groups like APAYLOM and AMATAF (which have helped keep miners out of the buffer zone and the project's area).

74 In addition, AIDER joined the Rainforest Alliance in 2012 through USAID financing, working on a project that involves communities in its three components: forest governance, territorial planning assistance and livelihood activity planning. While this is not part of the REDD+ project, AIDER feels it brings benefits to the communities and helps complement REDD+ project activities.

75 SERNANP has placed nine control towers in the park and buffer zone and increased monitoring and control in this area.

76 This research would benefit from additional stakeholder interviews with members of the committee and communities. Committee members were interviewed for the La Pampa mining case, but not specifically for this REDD+ project and as a result the study lacks their additional perspective.

77 See http://unfccc.int/secretariat/momentum_for_change/items/9254txt.php.

A.2.2 BAM-MDD: The REDD+ project of Bosques Amazónicos S.A.C. (BAM) and the Federation of Brazil Nut Producers of Madre de Dios (FEPROCAMD) – Madre de Dios

This REDD+ project, which spans a period of 31 years (2009–2040),⁷⁸ includes a partnership involving the private, national environmental company Bosques Amazónicos (BAM), the Regional Federation of Brazil Nut Collectors (FEPROCAMD), and 400 brazil nut concessionaires. Its objectives included preventing deforestation from the encroachment of ranchers and farmers into the brazil nut concession areas, improving the national private company's forest management techniques, and boosting brazil nut collectors' market competitiveness through the construction of a brazil nut processing plant. Located in the provinces of Tahuamanu and Tambopata, the project encompasses 308,757 ha within a broader project area of 1,015,316 ha (VCS PDD-BAM 2012). The broader area includes more than 600 nonparticipating brazil nut concessionaires, as well as adjacent agricultural land, other forestry concessions and mining areas. Since 2000, the project area has suffered an annual forestland loss of 1.23%, mainly due to encroaching farmland and pasture alongside the Interoceanic Highway, forest fires and illegal mining activities. With brazil nut concessions averaging 800 ha in size, farmers are unable to monitor or protect their areas year round (Entenmann 2012, 46; Zelli et al. 2014). The estimation for the first 10-year project period is to avoid deforestation in 100,297 hectares and achieve a reduction of 21,925,266 tCO₂e within the project area (VCS PDD-BAM 2012).

The project submitted its first project design document (PDD) in September 2009, after which BAM took several steps to negotiate the benefit-sharing arrangement (BSA) with the participation of a steering committee it had created. This committee is composed of one representative (elected by vote) from the 11 local brazil nut associations, as well as one president and four elected delegates. Some people questioned the representative nature of the committee's leadership, as the design of the BSA was decided upon with limited participation or input from the associations' members themselves (Garrish et al. 2014). Interviews with local participants revealed several local concerns, such as fears that the project would not adequately compensate them for the loss of forest income, that it would not be implemented and that concessionaires would lose their land rights. The authors contend that such concerns were largely attributable to unaddressed misunderstandings or unfounded rumors generated within communities. Garrish et al. (2014) also suggest that unrealistic outcomes may have been communicated to the concessionaires during the project's preliminary phases to encourage their participation.

In 2011, when the concessionaires first signed the agreements, BAM experienced an economic crisis and the construction of the processing plant was halted. This generated mistrust among the concessionaires, although they were still interested in continuing the project as the prospect of the plant greatly influenced their decision to participate. In 2012, the project received VCS certification and the parties signed a binding agreement: BAM will supply the concessionaires with a processing plant for brazil nuts, with 70% of the net profits going to the concessionaires and 30% to BAM. The idea was that the processing plant would buy brazil nuts at guaranteed fair prices to help increase the concessionaires' income. Additionally, BAM will receive 70% of the carbon payments for the project area and concessionaires will receive 30%. The agreement allowed FEPROCAMD to sign individual contracts with interested brazil nut concessionaires in which individuals concede their rights to sell environmental services and carbon from their concessions, with FEPROCAMD then conceding these same rights to BAM. As of October 2013, however, BAM had still not sold any carbon credits or built the processing plant, although it had purchased the land on which the plant would be built and the equipment to begin construction. It is unclear how the project will overcome price fluctuations driven by international commodity markets (Garrish et al. 2014).

As part of the project, brazil nut concessionaires are legally allowed to use 1–2 ha within their concession for farming, but are not permitted to cut primary forest, only secondary regrowth. Many

⁷⁸ The length of the contract must be less than 40 years as most of the brazil nut concessionaires involved in this contract legally received 40-year concessions between 2002 and 2007.

of the concessionaires were unaware of any contractual recourse; in other words, what would happen if any of the participating actors (FEPROCAMD, BAM and the concessionaires) did not meet their obligations or if the concessionaires decided to leave the project. Furthermore, FEPROCAMD and concessionaires were not clear about the amount of carbon expected to be captured, or on how much might be earned through carbon sales (Garrish et al. 2014).

Beside the two main project benefits of the brazil nut processing plant and payments for carbon credits, BAM also helped re-establish and legally register FEPROCAMD in 2010. In addition, FEPROCAMD provided economic and technical assistance to develop forest management plans (PMFs, AOPs and *quincenales*) and to harvest and commercialize timber. In 2009, BAM invested USD 500,000 in FEPROCAMD and the project, while another USD 1.4 million went towards FEPROCAMD's work and infrastructure, including the brazil nut processing plant. Given the problems that brazil nut concessionaires face from land invasions by miners and farmers,⁷⁹ FEPROCAMD also provided concessionaires with legal assistance to resolve fines and disputes they had with the OSINFOR regulating agency. FEPROCAMD and its concessionaires generally agreed that the national, regional and district governments and environmental authorities were largely absent. At the time of writing, this project had been suspended as a result of insufficient remaining funds due to the high transaction costs involved in the project and the delay in the sale of carbon credits.

A.2.3 ACCA-ACOMAT: Project of the Association for the Conservation of the Amazon Basin (ACCA) and the Association of Forest and NTFP Concessions in the Provinces of Manu and Tambopata (ACOMAT) – Madre de Dios

The NGO ACCA promoted the creation of ACOMAT to consolidate conservation areas in a biological corridor connecting the Tambopata and Manu National Protected Areas. ACOMAT consists of 11 concessionaires and four different land-use types (ecotourism, conservation, timber and NTFP), encompassing an area of 316,282 ha. Concessionaires range from individuals to private companies and NGOs. In total, 51% of the area consists of timber concessions and 48% of conservation concessions. ACCA's Los Amigos conservation concession area is the largest (at 145,954 ha) and it is centrally located in relation to the others. As part of this project, ACOMAT plans to deter deforestation and degradation caused by land invasions of illegal miners and illegal timber traders in its areas, while also improving the current land use of those areas. The concessionaires propose to delimit buffer zones around their territories in order to guarantee biodiversity conservation and the recovery of production areas. The project includes several activities that promote sustainable forest management techniques, such as Forest Stewardship Council certification, increasing conservation areas and/or reforestation within each concession, implementing agroforestry and aquaculture alternatives, and payments for environmental services. ACOMAT is not involved in a REDD+ project and does not yet have a benefit-sharing arrangement in place, but one of its ultimate goals is to implement a REDD+ project in order to attain public and/or private financial sources.⁸⁰

A few years prior to the creation of ACOMAT, ACCA's Los Amigos conservation area was undergoing VCS and CCBA certification for a REDD+ project, but ACCA was unable to attain certification due to the low level of deforestation threats in its conservation area. This period coincided with increased mining-related migration and growing pressure was caused by people entering by river from the mining corridor. ACCA strategized to add other neighboring concessions in the hope of attaining VCS certification and using REDD+ as a financial source to promote sustainable management in the larger corridor. To this end, ACOMAT was created as part of ACCA's project in August 2011. If this ACOMAT pilot project is accepted, the communities will be able to partially cover the costs of control, monitoring and research in the concession area. ACOMAT is thus important for ACCA, as it increases the funding potential for the NGO and its Los Amigos conservation area. Forming an association has

⁷⁹ A fraction of the project zone (2.9%, or 8053 ha) also rights overlapping with mining concessions (Garrish et al. 2014).

⁸⁰ As of 2014, the ACOMAT project was suspended due to the costs involved in developing the project and challenges that emerged in the process.

allowed ACOMAT's concessionaires to forge an alliance that could potentially help them protect their areas from illegal forest activities and land invasions, while also making it more likely they will be heard by external actors (i.e. regional and national government agents and international agencies) with respect to addressing illegal mining in their areas and receiving technical and administrative assistance. The latter is needed both to consolidate concessionaires' legal documents and to create sustainable natural resource-use alternatives in their concessions (i.e. certification, reforestation, agroforestry, ecotourism development, aquaculture and payment for environmental services).

Project participants interviewed mentioned numerous tangible and intangible incentives that have influenced some members to participate in the project, although others did not perceive these as benefits. Benefits mentioned ranged from technical and legal counseling to improved neighbor relations and land-tenure security. In particular, ACOMAT concessionaires have frequent conflicts with neighbors and trespassers, particularly in an area of greatest deforestation threat that lies along the river due to its proximity to the mining corridor and related pressures. Other issues involve overlapping land titles, especially with mining concessions and farms for those located along the southern border. Concessionaires along the northern border have problems with isolated native communities that use their forest lands.⁸¹ Another important land-tenure conflict that has not been resolved is with Bolivian Aymara families entering the Los Amigos conservation concession.⁸² Concessionaires also mentioned concern over a private road that the Tropical Wood company is expanding on their concession. This road would connect to the Interoceanic Highway and many ACOMAT members worry that it will facilitate invasions into the area, especially if not properly monitored.

Concessionaires suggest that the development of the project was fair and reported consistent communication with ACCA throughout the initial ACOMAT meetings. However, this communication tapered off due to ACCA's limited financial resources to facilitate staff travel for meetings. Concessionaires expressed an interest in the project and in investing time in it if they see that funding is made available. At the time of this research, they were still interested but noted that it was difficult to progress without funds for travel or staff. ACCA personnel and concessionaires mentioned the need to meet at least once a month to maintain a consistent information-flow, which has motivated ACCA to continue to search for potential funding sources. As a result of insufficient remaining funds due to the high transaction costs involved in the project and the delay in the sale of carbon credits, however, this project has come to a halt.

A.2.4 AIDER-Ucayali: REDD+ project of the Association for Research and Integral Development (AIDER) with indigenous communities - Ucayali

This project – called “Valuation of Environmental Services in the Managed Forests of Seven Indigenous Communities in Ucayali, Peru” – is being implemented by the Association for Research and Integral Development (AIDER) with funds from the International Tropical Timber Organization (ITTO). It aims to strengthen the technical and management capacities of seven indigenous communities⁸³ for sustainable forest management through instruments such as certification, reforestation, NTFP harvesting, forest surveillance and participation in the carbon market. AIDER conceived the project as a continuation of its previous community-based forest-management projects involving Shipibo-Conibo communities implemented since 2000. Project activities began in April 2012 in seven communities identified as highly dependent on their forests. These communities are home to approximately 1000 families and hold collective titles over an area of 142,247 ha. The project covers a forest area of 127,004 ha (VCS PDD-AIDER 2014).

81 In the San Juan zone pressure is being exerted on the forest by brazil nut collectors who hunt there illegally.

82 In 1995, Peruvian President Alan Garcia passed a law allowing 300 indigenous Bolivian families of Aymara descent to move to Madre de Dios and obtain 50,000 ha, all of which are located inside the current conservation area. The families never came to the area, but there have been recent moves to claim this territory. This conflict has not yet been resolved.

83 The seven communities – Callería, Curiaca, Flor de Ucayali, Pueblo Nuevo de Caco, Puerto Nuevo, Roya and Sinchi Roca – were chosen based on their interest and their involvement in previous sustainable forest-management activities.

Despite having secure tenure, the communities' forests are under constant threat from illegal logging, petroleum exploration, illegal coca cultivation, road construction and immigration. They also face threats due to the mismanagement of their annual forest management plans for logging. The overall aim of AIDER's REDD+ project is to improve livelihoods, promote biodiversity conservation and improve the commercialization of timber, non-timber products and environmental services, particularly carbon. Over the project's first ten years, the plan is to conserve 1826 ha annually in the area by stopping deforestation and to avoid emissions of 5,699,386 tCO₂e (AIDER 2014). The project has a 20-year cash flow that includes the operative costs and technical assistance. The contracts are signed between the community and logging companies.

AIDER began this project as a continuation of its work on sustainable forest management with these communities from 2002, when it provided technical assistance on forest management, promoted sustainable economic activities and supported forest monitoring and surveillance. AIDER chose the seven current communities based on their interest and willingness to protect their forests, as well as their participation in the earlier efforts (Rodriguez-Ward and Paredes del Aguila 2014).

The REDD+ project activities began in April 2012 and at the time of this research had consisted mostly of meetings, workshops, studies and forest monitoring and surveillance activities carried out in the seven communities. In 2013, AIDER met with community leaders to discuss an explicit benefit-sharing arrangement regarding carbon payments and other benefits. AIDER suggested that part of the revenues be used to cover the costs of territorial surveillance to be carried out by community members. Communities consented through verbal agreements reached in communal assemblies, although no contracts or agreements had been signed as of August 2014. AIDER is in charge of implementing project activities that require the approval of the communal assemblies and is responsible for sharing all information regarding the progress of the project with them. AIDER staff mentioned that it will maintain an "advisory role" during the BSA design process, presenting communities with a set of alternative arrangements allowing enough room for communities to propose and develop their own benefit-sharing arrangements with the main objective of reaching an equitable agreement (personal communication with Daniz del Aguila, 2013). According to AIDER, after the BSA is agreed upon, it will help the community sell the carbon credits on the market. However, there is no information about how this will play out after the end of the present project or how AIDER's advisory services will be funded.

AIDER encouraged the establishment of a consultative group in each community comprised of six community members who will participate in and receive training on issues related to forest management and REDD+. According to AIDER, the group will be responsible for disseminating information about REDD+ in the communities. According to communal authorities, the consultative group does not hold decision-making powers, but rather all decisions are discussed and made by the community assemblies. The group will also work alongside the existing "natural resources surveillance teams,"⁸⁴ which control local activities, as well as ensuring that the extraction of natural resources is done according to management plans and that contracts signed by communities with the forest service are respected. The election of the consultative groups, however, was not free of criticism. Some interviewees explained that people in the communities feel that all community members should receive the same training and information, disapproving of the idea of electing a committee and making a small group more knowledgeable than the rest.

Community leaders interviewed mentioned training on sustainable timber harvesting as one partial technical benefit from the project and expected to generate additional income to improve land and forest administration and management. They also perceived communities to be better organized for improving forest management and avoiding illegal logging as a result of both this intervention and previous community-based forest-management projects. One key AIDER informant highlighted that communities have gained knowledge about REDD+ and payments for environmental services.

84 Put in place as part of AIDER's participatory Monitoring, Reporting and Verification (MRV) project.

However, in a more in-depth community-level study, Rodriguez-Ward and Paredes del Aguila (2014) report a general lack of knowledge about REDD+ and confusion about its meaning, as few households had heard of or understood AIDER's project. These authors note that this lack of knowledge could be because AIDER had only begun dissemination activities a few months earlier and that it was difficult for communities to separate the REDD+ project from their prior activities with AIDER.

The leaders interviewed also expressed a number of concerns about participating in the project. They are expected to practice sustainable natural resource management without clearing forest, as well as participating in territorial surveillance. Those interviewed were concerned that as a result they would have to change and/or restrict their livelihood activities, which could lead to a reduction in their household income without due compensation. They worried that the project would not provide an alternative income source and that it would not protect their forests from claims by big companies. Individuals also feared they would not be sufficiently informed of planned REDD+ activities and that only a select group of community members would benefit, as had happened with previous external interventions. AIDER, meanwhile, expressed concerns about the risks involved in working with communities, suggesting that communities have often abandoned previous agreements made with other parties. In addition, internal power struggles have led to unstable local governance as chiefs and authorities are often removed and replaced.

AIDER submitted the project design document in August 2014, after the end of our fieldwork and during the data analysis process. The document includes a summary of the organization and governance structures⁸⁵ in place for the distribution of benefits, as well as the final benefit-sharing arrangement discussed and approved by the communities. Each community developed its own arrangement, which includes different benefit recipients, funds transfer methods and activities to be funded with future REDD+ revenues. In the majority of the communities, carbon payments will be received through transfers to the community bank accounts and will be managed by the community councils with the authorization of the community assemblies. One community decided that part of the revenues would be used to make direct payments to households. In other communities, revenues will go to a community fund and to cover the costs of reforestation activities, territory surveillance and forest management plans.

A.2.5 BAM–Ucayali: Bosques Amazónicos (BAM) REDD+ reforestation project - Ucayali

The private company BAM runs the Campo Verde project in the Pucallpa area of Campo Verde District in the province of Coronel Portillo. The project's aim is to turn degraded, almost useless soils into a large-scale carbon-storing reforestation project using species with high timber value. The total property of 16,493 ha is divided into three properties owned by BAM: 1) Campo Verde (1474 ha), registered in 1992; 2) Marianita (2289 ha), registered in 1985; and 3) Selva Maestra (12,730 ha) registered in 2000.⁸⁶ According to the 2008 project design document, although it was planned for the reforestation project to cover 739.63 ha, only 602 ha were suitable for the plantation as much of the remaining areas was unsuitable for reforestation. The project is directly neighbored by three communities and is close to seven others, but there are no communities living within it. Urban dwellers hold private property bordering the project that they mainly use for cattle ranching and the production of oil palm, plantain, cassava and other crops.

85 Governance structures include: (1) a REDD+ project board consisting of one representative from each of the seven communities who will be in charge of coordinating and conducting the project activities; (2) a technical adviser (AIDER) that will be responsible for MRV, advising communities and providing technical assistance for project implementation; (3) a supervisory committee that includes regional- and district-level indigenous organizations (ORAU, FECONADIP, FECONAU), which will be in charge of supervising the actions of the project boards and technical advisers to ensure compliance with the REDD+ strategy; and (4) seven community members and their assemblies who will supervise implementation and elect community councils.

86 Titles are registered with SUNARP, the Peruvian national title deed registration office.

BAM's project was conceived in 2007 as a commercial plantation and requested as such from MINAGRI. Within the effective area of the plantation, the soil was extremely degraded and unproductive due to the effects of overgrazing and wildfires, requiring high investment for restoration. The current reforestation area is thus very small compared to the total area of the property, though the company hopes to use more of its land for reforestation, depending on its financial capacity. The PDD was completed in 2008, validated by the Verified Carbon Standard (VCS) and the Climate, Community and Biodiversity (CCB) standards in 2009, and the carbon inventory was completed in 2010. In a 30-year crediting period (VCS) BAM aims to store 170,000 tons of carbon. The company sold 11,000 carbon credits to a South American-based airline (LAN) at USD 8 per metric ton in 2011; and a Brazilian cosmetics company (Natura) bought 34,000 carbon credits in 2013.

BAM approached the communities during the first stage of the project and invited them to the plantation to receive information. Although the project is independent, the company wanted to forge "strategic alliances" with the surrounding communities. During these visits, it expressed its willingness to strengthen ties with neighbors and establish mutually-beneficial agreements. BAM's staff then met with each of the communities to learn what kind of support they needed so it could offer technical assistance and support to replicate its reforestation model. Each community had one designated authority who is responsible for formal communications with the company and supervising the communities' compliance with the project activities.

Since 2008, several communities have signed contracts with BAM, as well establishing certain agreements regarding land surveillance, alerting the company to land invasions or other potential dangers and avoiding fires. In return, the company prepares workshop training sessions, internships, technical assistance and social events. Benefits appear to vary depending on the communities' distance from the plantation and the potential for a mutually-beneficial relationship. Closer and neighboring communities received specific and more significant benefits (e.g. Santa Teresita's access to BAM's road). Everyone interviewed felt that the agreements with communities involved ample participation and were negotiated openly, but that the benefits were not enough to ensure their continued participation.

The plantation is now in its seventh year and has overcome both financial and technical challenges. BAM experienced a financial crisis between 2012 and 2013 that affected the development of some of its activities, especially those involving community relations. According to BAM's regional director, maintaining a plantation requires economic resources and technical expertise. He also sees the project as a high-risk investment given the constant risk of fire in the area. BAM mitigates risks by building firewalls both on the plantation's borders and inside the parcels, while it also reduces the presence of pests by imitating the composition of the forest. BAM plants grass, herbs, shrubs (guaba) and both rapid and slow growth trees. Other risks involve border disputes between the provinces of Coronel Portillo (Ucayali) and Honoria (Huanuco), despite the existence of a law clarifying limits (Law 27853) and the legality of their title.

BAM's main objective of transferring knowledge and technology to communities to replicate its reforestation model was met with initial interest from the communities, but this waned over time because, among other things, there is not enough collective land to install a plantation⁸⁷ and not enough people have the time to work on such a project in which reforestation efforts can take several years to yield benefits. Communities showed a preference for more immediate benefits, specifically in the form of oil palm and cacao plantations. Two communities replicated the model, however, and their plantations are growing. BAM considers the other benefits to include pest control, the recuperation of wildlife, cleaner air, the reduction of carbon emissions (reduced fires) and the recovery of degraded soils. Most of the communities do not see these environmental improvements as substantial benefits. One community greatly benefits from having physical access to markets through BAM's road.

87 The communities are composed of privately-owned lands, but maintain an area of collective property.

However, the leaders interviewed agreed that the benefits were not enough to ensure their sustained participation in the project and only one community still had an active contract at the time of this research.

A.2.6 CIMA-PNCAZ: REDD+ project of the Center for Conservation, Research and Management of Natural Areas (CIMA) and the Cordillera Azul National Park (PNCAZ) – San Martin

The Cordillera Azul National Park (PNCAZ), created in 2001, is an area of approximately 1.3 million ha of riparian, lower-montane forests that lie between the Huallaga and Ucayali Rivers and cover portions of seven provinces in four Peruvian regions: San Martin, Loreto, Ucayali and Huanuco. The park was created to protect the diverse ecosystems that provide important environmental services and were under threat from colonization and intensive agriculture primarily in the park's buffer zone, an area of 2,303,414 ha.⁸⁸ While there are no organized human settlements within the protected area, there is an estimated population of 170,000 in the buffer zone and 270,000 in surrounding communities. This population has grown substantially since the 1990s with improvements made to the main highway along the length of the Huallaga River. The western side of the buffer zone is inhabited by *mestizos*, while the eastern side, in Ucayali, differs markedly as the population is sparse and predominantly indigenous.

Upon its formation in 2002, CIMA signed an interinstitutional agreement with SERNANP to support the park's management in order to address increasing migration to the area along with illegal hunting, fishing and logging, mainly in the buffer zone. In 2008, CIMA signed a 20-year, full-management contract with SERNANP for the national park and buffer zone, which also grants legal authorization to CIMA to use revenues from the sale of carbon credits from avoided deforestation for park activities during this period of time. As a result of financial difficulties in 2007, CIMA and its technical advisor at the time, the Field Museum of Chicago, sought a more sustainable source of funding and pursued a REDD+ project to enable the continuation of its activities in the park and the communities in the buffer zone.

CIMA's work centers on the protected area's buffer zone and it has established priority areas in three rings around the park. CIMA works in approximately 50 of the 225 communities and has implemented its "intervention model" in 20 communities that are the focus of its conservation and development efforts. CIMA's objective is to reduce deforestation threats to the PNCAZ, from illegal logging and land trafficking, for example, and it works with communities in the buffer zone to raise environmental consciousness through environmental education programs. It also helped facilitate coordination between communities and their municipal governments.

Hunting and fishing are the principal subsistence activities for people living in the buffer zone. Other activities include harvesting NTFPs such as resins, fibers, dyes and other materials used for house-building, handicrafts or traditional medicines. Agriculture has changed with increased migration into the area: villages closest to the area practice swidden-fallow agriculture; cultivate coffee, corn, fruit and cacao; and have cattle. Cattle ranching is small-scale with little mechanization or technical assistance. Logging is another economic activity practiced in the buffer zone.

According to informants from CIMA, the main benefits derived from CIMA's efforts are strengthened local capacities that have created greater awareness of people's impact on the environment. While these benefits have been felt in some communities, participants interviewed highlighted that they are prohibited from entering the area to hunt without prior authorization and are limited as to how often they can hunt. Informants noted a lifestyle change as they used to hunt frequently in the park and are

⁸⁸ The park's buffer zone, an area of 2.3 million ha, was officially recognized by the Peruvian government in a Supreme Decree establishing the park. The buffer zone was expanded by legislation in 2007 and 2011, resulting in an area of 2,303,414.75 ha (VCS-PDD CIMA 2012).

now limited in terms of species, quantity and the season in which they can hunt for bush meat, as stipulated by park management regulations. However, all informants noted the recent recuperation of wildlife and game animals as a result of their conservation efforts and the reduction in deforestation. In this way, the recovery of ecosystem goods that communities depend or depended on incentivizes many to participate in conservation activities. Some informants, however, expressed frustration with their inability to hunt forest species and consume bush meat that was once an integral part of their diet.⁸⁹

CIMA has four offices in the cities of Tarapoto and Tocache (San Martin), Contamana (Loreto) and Aguaytia (Ucayali). It pays 18 park rangers, 12 technicians that spend 20 days per month in and around 5 communities, and 18 communal park rangers (many from Ronda Campesina) who received training in GPS and environmental education to assist the park rangers' patrols. It also works with children and women through environmental education programs. The idea is for the communities to understand their role as "part of the solution instead of part of the problem" (CIMA employee 2013) through a participatory process. In October 2012, CIMA's field staff began disseminating information about the REDD+ project to the local communities and in April 2014 the organization completed the CCBA validation process. While its field staff have communicated that REDD+ will be a means of providing economic support for community projects, they have not specifically explained REDD+ given its very technical nature and to avoid creating false expectations.

CIMA works hand-in-hand with the director of the protected area and maintains fluid coordination with MINAM and SERNANP in Lima. It also coordinates closely with several municipalities. SERNANP is integral to the discussions, work groups, presentations, and conferences that precede development of each PNCAZ master plan, as well as their approval. The working relationship between CIMA and SERNANP allows the latter to provide ongoing input into the project's implementation and any improvements that may be made over time as new information is obtained. Although illegal activities have decreased in the buffer zone, they still continue. CIMA collaborates with the ARA to intervene when migrants are invading concessions. This has generated more patrols and more alliances, as well as serving as a medium-term conflict resolution mechanism.

A.2.7 CI-AMPF: Alto Mayo Protected Forest – San Martin

The Alto Mayo Protected Forest (AMPF) was legally created in 1987, but in practice its borders were not enforced until 2001. During this time, migrants colonized the land and engaged in coffee production, land trafficking and illegal logging, unaware that the protected area had been established. At the time of its creation, there were only two communities inside the protected area compared to the 26 that exist today. The AMPF is an area of high value for biodiversity conservation and watershed protection. According to the ARA of San Martin, it provides drinking water to an estimated 200,000 people, irrigation for 24,000 ha of rice and 13,000 ha of coffee, and water for agro-industries in the surrounding cities of Moyobamba, Rioja and Nueva Cajamarca.

According to key informants from the NGO Conservation International (CI) and SERNANP, CI signed a 15-year co-administration agreement with SERNANP in 2010 to strengthen conservation efforts after years of government absence and insufficient funding to manage the area. CI's collaboration with SERNANP was inspired by prospects of REDD+ funding from an initial investment by Walt Disney Company for the development of the REDD+ project in 2009.

With the start of the co-administration agreement, CI and SERNANP had to inform people of the existence of the protected area – a classification that considered all migrants who arrived after 1987 to be illegal. Nevertheless, CI negotiated with SERNANP to allow settlers to remain if they complied with certain conditions laid out in conservation agreements, which would be signed by CI, SERNANP and the local participants or "subscribers". The conservation agreements were included in the protected

⁸⁹ Hunting wildlife is prohibited in the buffer zone and is considered an environmental infraction (article 308). At the same time, however, park rangers do not have the legal authority to prohibit hunting in the buffer zone.

area's master plan. The design of the agreement was modeled primarily on the experience of another project involving CI that was implemented in another part of the region. CI and SERNANP established the agreement guidelines, specifying conditions for permissible activities, as well as commitments and accountability mechanisms linked to different activities.

In 2011, CI and SERNANP visited communities with their proposal. The agreements included land-use restrictions that required subscribers to abstain from logging, selling timber and hunting. As part of the negotiation, however, the population could make proposals regarding what they would want in return for obeying the law. One key CI informant referred to the negotiation process as a "tug of war," but in the end they reached an agreement on the provision of extensive technical support and supplies to transform their current coffee production practices to high-quality, shade-grown production. While the benefits are nonmonetary, increased quality and yields could potentially improve livelihoods. The agreements have been implemented in the reserve and buffer zone since 2012.

According to key informants, the situation was initially fraught with conflict, but the project has gradually won greater trust from the local population. Interest in signing agreements has increased and there are now over 700 subscribers. In 2013, the Walt Disney Company purchased carbon credits for USD 3.5 million – funds that would be used for the administration of these and other park activities. Local media, however, reported the misleading message that Disney had purchased the area. The local population reacted to this misinformation as might be expected, fearing they would be evicted, and the park management had to visit communities over the following months to regain their trust. One positive result was that CI had to explain REDD+ to the communities, which it had not previously done. CI's intention in this respect had been to avoid creating false expectations, so it had focused more attention on climate change and the financial opportunities available to the communities through the support from Disney and other future investors.

Overall, project proponents note a substantial shift in local interest in the project, although people in one remote area of the park still refuse to work with CI or accept the existence of the park. One of CI's strategic actions is its coordination with the Ronda Campesina, the community-based patrol organizations in which community members (primarily men) volunteer on a rotating basis to patrol the communities and surrounding areas day and night. CI and SERNANP have won the including stricter surveillance and law enforcement (Zelli et al. 2014).

A.2.8 Mishquiyacu-Rumiyacu: Government payment for environmental services project – San Martin

In 2008, together with the Alto Mayo Special Project (PEAM), the Regional Environmental Authority (ARA) of the Regional Government of San Martin declared a 2500-ha municipal conservation area in three micro watersheds – Rumiyacu, Mishquiyacu and Almendras – that provide water to the city of Moyobamba. The project became Peru's first experience of implementing benefit-sharing mechanisms for environmental services, working in the three communities of San Vicente, San Andres and San Mateo. The PEAM was the main project proponent from 2008–2012 and the public water and sanitation entity (EPS Moyobamba) took over in 2012, with ongoing collaboration from the PEAM.

The objective of the Mishquiyacu-Rumiyacu project is to maintain or recover forest in the watersheds by reforestation with native species and providing incentives for the different actors to participate in conservation and management. After the initial environmental studies, the project began with a public hearing in Moyobamba, organized by the municipal government, EPS and the PEAM. The population of Moyobamba (approximately 10,000 households) accepted an increase of one Peruvian Sol⁹⁰ in their monthly water payments to ensure the conservation of the highest parts of the watershed. The payment is then transferred to a fund for projects implemented by the lead entity, which is now EPS.

90 The Peruvian currency (in 2015, USD 1 = approximately 3 Peruvian soles).

The previous benefits offered by the PEAM project (which are those examined here due to the study period) are in the form of strengthening and developing organizational capacities; the development of agroforestry systems and the diversification of production activities; and tools and materials to assist local production. As such, the benefits are not direct payments to the local communities. The PEAM provided improved latrines, stoves and technical assistance to coffee farmers in exchange for conservation efforts, while the EPS provided seedlings for reforestation. In order to receive these benefits, the local population has to respect conservation rules, which in this case make deforestation illegal. If local residents wish to cut down a tree they must request permission from the ARA.

The project was initially colored by distrust. Members of the local population, who do not hold property titles, were concerned they would lose their land with the creation of conservation and ecological recuperation zones (*zonas de conservación y recuperación ecológica*, or ZOCRES). Local participants expressed their frustration at not even being able to cut down so much as a tree without requesting government approval, suggesting that their desire to expand their agricultural areas for subsistence agriculture and coffee is not permissible.

Though the project model was based on another GIZ project in Piura and designed externally, the PEAM worked closely with the 67 families (out of about 200) that elected to work with them in the development of contracts. These contracts establish the conditions of the conservation agreements, including land-use restrictions such as not cutting down a tree without obtaining authorization, as well as the benefits they will receive, as discussed above. The PEAM has also helped develop local organizations, such as a beekeeper organization that formed once this activity started up with the project. After the PEAM's funding ended in 2012, project leadership shifted to EPS, which implemented a reforestation project. The project with EPS provided participants with trees and did not, therefore, give the same benefits as was the case with the PEAM.

At the start of the project, the PEAM organized a management committee (*comité gestor*) – including representatives from the municipal government, regional government, NGOs, EPS and the communities – to provide a forum to discuss emerging issues that may affect the project. The committee was initially involved in designing and negotiating the conservation agreements, since when it has monitored the impact of the “mechanism” and overseen the management of the EPS fund, as well as the application of actions taken in the case of the noncompliance with conservation agreements. It is an important arena for dialogue, conflict resolution and articulation among the various actors. Notably, the ARA, which manages the ZOCRES and monitors forest use, does not play an active role. Several management committee members interviewed suggested that the ARA could strengthen control of forest activities in the watershed.

A.2.9 ACOPAGRO: Cooperativa Agraria Cacaotera Ltda. (ACOPAGRO) and Pur Project reforestation project – San Martin

ACOPAGRO was formed in 1992 in response to the crisis caused by narcoterrorism and coca cultivation in the region in the 1970s and 1980s. Initially funded by the National Commission for Development and Life without Drugs (DEVIDA) and located in the city of Juanjui in Mariscal Cáceres province, ACOPAGRO is a fair trade and organic cacao cooperative that began with just 27 producers and now has approximately 2000 members in four provinces. In 2008, the French company Pur Projet contacted ACOPAGRO to launch the Alto Huayabamba reforestation project (“Carbon Dioxide Sequestration through Reforestation with Small-Scale Farmers”), with the objective of developing agroforestry systems that ensure sustainable cocoa cultivation. Pur Projet mainly develops activities, like reforestation, aimed at offsetting the socioenvironmental impacts of various large companies such as Vittel and Hugo Boss. Its aim is to integrate social and environmental innovations into business and corporate activities in order to regenerate, revitalize and preserve the ecosystem.⁹¹ Pur Projet focuses on agroforestry and sustainable forest management to offer the co-benefits necessary for farmers to address climate change.

91 <http://www.purprojet.com/en/project/alto-huayabamba/>.

Approximately 800 small-scale farmers are involved in this 2300-ha reforestation project in which an average of 450 trees have been planted per hectare. The lands for reforestation are former cocoa plantations (64%), unproductive lands (33%) and other plantations (3%). Approximately 97% of the parcels were deforested more than 10 years earlier. The aim is to plant 2 million native trees (*capirona*, *bolaina*, *tornillo*, etc.) over a period of six years for a total of 1.15 million tons of additional CO₂ equivalent. Although this project is not yet considered a REDD+ project, it is aimed at reducing greenhouse gas emissions and establishes a crediting period from April 2008 to April 2048, with the possibility of extension for another 40 years. The long-term average emission removal is 998,698 tCO₂e calculated with respect to a project length of 80 years.

Pur Projet provides farmers with the trees for reforestation and pays them one Peruvian sol (USD 0.33) for each tree planted. Farmers receive this payment after the first monitoring period to ensure their commitment several months after planting the trees. All the plantations are regularly monitored by a team of ACOPAGRO's field staff, who focus on the number and species of surviving trees and the incidence of pests and disease. Within three years of planting, the parcels are registered with the regional forest authority responsible for controlling forest activities in order to authorize them as legal forest activities and control illegal harvesting. Local participants refer to this project as "my retirement" (*mi jubilación* in Spanish) and see it as an investment for their children, who they expect to benefit from the future timber harvest.

The project establishes multiple contracts between ACOPAGRO and each participant, specifying that the farmers own the timber and all timber products, while transferring all carbon rights to ACOPAGRO. For timber and related sales, 80% of the income will go to the farmer and 20% to ACOPAGRO for management activities. Another contract, between ACOPAGRO and Pur Projet commits the company to pay the cooperative for the tree plantations. In exchange, ACOPAGRO commits to transfer the carbon credits to Pur Projet.⁹²

According to the project's 2011 PDD, the proposed benefits for ACOPAGRO's members include: (1) reforestation that will provide added value to their production and thus socioeconomic gains; (2) a reduction in deforestation and its consequences, such as soil erosion, decreasing water availability, natural disasters, landscape degradation and reduced biodiversity; and (3) the promotion of agroforestry systems that reduce risks associated with the effects of global climate change. The project also hopes to obtain land titles for its members from the regional government.⁹³ The main benefit for Pur Projet is the generation of carbon credits that contribute to climate change mitigation.

92 In the contract between ACOPAGRO and Pur Projet, ACOPAGRO transfers all the emission rights and verified emissions reductions (VERs) to Pur Projet. The VERs generated by the project's greenhouse gas emission reductions will be sold exclusively on the voluntary market to private or public organizations seeking voluntary offsets.

93 ACOPAGRO has been working with the regional government to secure land titles for its members since 2012.

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