



# The context of REDD+ in Peru

Drivers, agents and institutions

Hugo Che Piu

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Law, Environment and Natural Resources (Derecho, Ambiente y Recursos Naturales)

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Center for International Forestry Research

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Walking in the forest, UNAMAD forest, Puerto Maldonado, Madre de Dios, Peru.

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# Contents

<b>Acronyms</b>	<b>v</b>
<b>Acknowledgements</b>	<b>vii</b>
<b>Executive summary</b>	<b>viii</b>
<b>1 Introduction</b>	<b>1</b>
<b>2 Analysis of the main drivers of deforestation and degradation</b>	<b>4</b>
2.1 Forest cover	4
2.2 Deforestation	6
2.3 The main drivers of forest cover change	9
2.4 Mitigation potential	17
<b>3 Institutional environment and distributional aspects</b>	<b>21</b>
3.1 Governance in the forest margins	21
3.2 Decentralization and benefit sharing	26
3.3 Indigenous rights and forest and carbon rights	28
3.4 Forest governance in Peru	32
<b>4 Political–economic context of the causes of deforestation and degradation</b>	<b>34</b>
4.1 Deforestation and development policies	34
4.2 Deforestation and lack of political leadership	37
4.3 Deforestation and external factors	39
<b>5 The REDD+ political environment: Events, stakeholders and political processes</b>	<b>41</b>
5.1 Policies to address climate change	41
5.2 REDD+ processes, events and stakeholders	42
5.3 Participation and REDD groups	48
5.4 Financing REDD+	50
5.5 Towards a national MRV system	51
5.6 Political options and future REDD+ processes	52
<b>6 Implications for the 3 Es: Effectiveness, efficiency and equity</b>	<b>55</b>
6.1 National policies and policy options	55
6.2 Can REDD+ achieve the 3 Es in Peru?	59
<b>7 Conclusions</b>	<b>63</b>
<b>8 References</b>	<b>64</b>

# List of boxes, figures, and tables

## Boxes

1	Proposed development projects in the Peruvian Amazon for the period 2009–2021	12
2	Major environmental agreements signed by Peru	21
3	Forest duties transferred to regional governments	27
4	Excerpt from the opinion article “ <i>El síndrome del perro del hortelano</i> ” (“Dog-in-the-manger syndrome”) by former President Alan García	30
5	Policy gaps that contribute to deforestation	37
6	Main agreements between MINAM and AIDSEP on the Readiness Preparation Proposal	48
7	The ‘Baguazo’ and the new Forestry and Wildlife Law	60

## Figures

1	National forest heritage map, 2010	4
2	Exports of forest products (timber and non-timber products)	6
3a	Deforestation map in 2009	7
3b	Deforestation in the Peruvian Amazon until 2011	7
4	Deforestation index by district	9
5	Forest degradation subindex	15
6	Roundwood production in the Amazon departments, 2000–2011	16
7	Evolution of hot spots in Peru, 2001–2012	17
8	Percentage of GHG emissions by category, 2000	20
9	Projected emissions for the LULUCF category	20
10	Peru’s exports by sector, 2005	35
11	Main events related to REDD	43
12	National Carbon MRV System	53
13	Proposed institutional arrangements for the Peruvian R-PP	54

## Tables

1	Forest area by forest type	4
2	Forests concessions in Peru 2011	5
3	Area of natural or tropical forest by land use of deforested land in 2000 and cumulative reforestation by 2010	8
4	Deforestation rate in the Peruvian Amazon 2009–2011	9
5	Indirect drivers of deforestation and degradation in Peru and their contributing factors	10
6	Migration between the highlands and the rainforest	11
7	Major crops in the Amazon	13
8	Estimated carbon stocks in forest vegetation and soils	19
9	Progress on implementation of the Conventions on Climate Change, Biological Diversity, and Desertification and Drought	22
10	Types of rights granted by agent, use and granting body	29
11	Major events related to REDD	44
12	Sources of funding for REDD in Peru	51

# Acronyms

AIDER	Asociación para la Investigación y el Desarrollo Integral (Association for Integrated Research and Development)
AIDSESP	Asociación Interétnica de Desarrollo de la Amazonía Peruana (Interethnic Association for the Development of the Peruvian Rainforest)
ATFFS	Administración Técnica Forestal y de Fauna Silvestre (Forest and Wildlife Technical Administration)
CAF	Corporación Andina de Fomento (Andean Development Corporation)
CDM	Clean Development Mechanism
CEPLAN	Centro Nacional de Planeamiento Estratégico (National Strategic Planning Center)
CFM	Community forest management
CIAM	Consejo Interregional Amazónico (Interregional Council Amazon)
CIFOR	Center for International Forestry Research
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CMLTI	Comisión Multisectorial de Lucha Contra la Tala Ilegal (Multisectoral Commission against Illegal Logging )
COFOPRI	Organismo de Formalización de la Propiedad Informal (Commission for the Formalization of Informal Properties)
CONAP	Confederación de Nacionalidades Amazónicas del Perú (Confederation of Amazonian Nationalities of Peru)
COP	Conference of the Parties to the UNFCCC
DAR	Derecho, Ambiente y Recursos Naturales (Law, Environment and Natural Resources)
DEVIDA	National Commission for Development and Life without Drugs
DGFFS	Dirección General Forestal y de Fauna Silvestre (General Directorate of Forestry and Wildlife)
EIA	Environmental Investigation Agency
ENCC	Estrategia Nacional de Cambio Climático (National Strategy on Climate Change)
ENMDL	Estrategia Nacional para el Mecanismo de Desarrollo Limpio (National Strategy for a Clean Development Mechanism)
FAO	Food and Agriculture Organization of the United Nations
FCPF	Forest Carbon Partnership Facility
FIP	Forest Investment Program
FONDAM	Fondo de las Américas (Fund of the Americas)
GDP	Gross domestic product
GHG	Greenhouse gas
GTREDD	Grupo Técnico de REDD de la Comisión Nacional de Cambio Climático (REDD Technical Group of the National Commission on Climate Change)
IADB	Inter-American Development Bank
IIRSA	Initiative for the Integration of the Regional Infrastructure of South America
ILO	International Labour Organization
INEI	Instituto Nacional de Estadística e Información (National Institute of Statistics and Information)
INRENA	Instituto Nacional de Recursos Naturales (National Institute of Natural Resources)
LULUCF	Land Use, Land-Use Change and Forestry
MEF	Ministerio de Economía y Finanzas (Ministry of Economy and Finance)
MINAG	Ministerio de Agricultura (Ministry of Agriculture)
MINAM	Ministerio del Ambiente (Ministry of Environment)
MINEM	Ministerio de Energía y Minas (Ministry of Energy and Mines)
MRV	Monitoring, reporting and verification



NAMA	Nationally Appropriate Mitigation Action
NGO	nongovernmental organization
OCBR	Oficina de Coordinación de Bosques y de REDD (Office for the Coordination of Forests and REDD)
OSINFOR	Organismo de Supervisión de los Recursos Forestales y de Fauna Silvestre (Monitoring Agency for Forest Resources and Wildlife)
PEN	Nuevo sol (Peruvian currency)
PLAAMCC	Plan de Acción de Adaptación y Mitigación frente al Cambio Climático (Action Plan on Climate Change Adaptation and Mitigation)
PNCB	Programa Nacional de Conservación de Bosques para la Mitigación del Cambio Climático (National Program on Forest Conservation for Climate Change Mitigation)
PROFONANPE	Fondo de Promoción de las Áreas Naturales Protegidas del Perú (National Fund for Natural Protected Areas)
REDD	Reducing Emissions from Deforestation and Forest Degradation
REDD+	Reducing Emissions from Deforestation and Forest Degradation, and enhancing carbon stocks in developing countries
RPIN	Readiness Plan Idea Note
R-PP	Readiness Preparation Proposal
SERFOR	Servicio Nacional Forestal y de Fauna Silvestre (National Forestry and Wildlife Service)
SERNANP	Servicio Nacional de Áreas Naturales Protegidas (National Service of Protected Natural Areas)
TPA	trade promotion agreement
UNFCCC	United Nations Framework Convention on Climate Change
UN-REDD	United Nations REDD+ Programme



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# Executive summary

Peru's total forest area is approximately 73 million hectares, almost 60 % of national territory. During the past few years, the government has cited deforestation rates of 150 000 ha per year. In June 2013, the Ministry of Environment (MINAM) published a deforestation analysis for the years 2009–2011 which indicates that deforestation has dropped to 106,000 ha per year. The Government's goal is to reduce to zero the deforestation rate in an area of 54 million hectares of primary forest by 2021, and has initiated the preparation process for REDD+ (Reducing Emissions from Deforestation and Forest Degradation Plus) at a national and subnational level.

Peru has a large forest area. Nevertheless, the forestry sector only contributes 1.1 % of GDP (Gross Domestic Product). While degradation due to logging is an important factor in certain regions, the sectors that hold greater economic power and which are the principal motors of deforestation, are agriculture, mining and energy (hydrocarbons and hydroelectric power stations). During the last decade, the indicators of macroeconomic performance of the Peruvian economy have showed positive signs, sustained by extractive activities like mining and hydrocarbons and the exports of the agro-industry. To facilitate the transport of these products and the access to new regions, the Government has invested in infrastructure, expanding the transportation network in rural areas, which has resulted in the current deforestation rate in the Amazon. This is driving the migration of the Andean population towards this area; the motive to migrate is the search for new lands for cultivation and agricultural activities.

While the deforestation rate has decreased during the past few years, there is pressure from some sectors to continue with deforestation in the Amazon. The business-as-usual scenario estimates that an additional 7.3 million hectares will be deforested by 2050, while the governance scenarios estimate 5.3 million hectares. However, the combined effect of roads, agriculture, cattle ranching, mining, hydroelectric power stations and

the projected urban growth, could result in the deforestation of 19.6 million more hectares.

At the same time, the country has been advancing REDD+ preparations, with 41 pilot projects being developed by July 2012. While the pilot projects are already on their way, with international and national funding, and even certification according to international standards, the national Government is still in the process of developing REDD+ and MRV strategies under the leadership of MINAM.

For the implementation of REDD to be successful, the resolution of legal challenges and clarity in territorial organization and tenure rights are required. Even though the approval of the Prior Consultation Law represents an advance in the protection of indigenous peoples' rights and equity, there is still a lack of consolidation of the FPIC implementation in the country. AIDSEP continues to demand the protection of the right to consultation and tenure as a prerequisite for REDD. The incomplete territorial and forest organization and the absence of a land registry provoke conflict situations, particularly when titles of diverse nature are granted for the same natural resource, or when granting titles for different natural resources located in the same environment. The processes of the forest legislation reform and preparation for REDD+ initiated in 2008 have prompted processes that more participatory than ever in the history of the forestry sector. It is expected that the new Forestry and Wildlife Law from 2011 and the Draft Ecosystem Services and Promotion Compensation Law will reduce the uncertainty concerning the ownership of carbon rights. However, the lack of organization and a registry of forest rights might represent significant difficulties for the promotion of REDD projects.

Even if REDD has solid support within certain sectors of the government and civil society, it will face big challenges during the implementation phase if there is no legal clarity and intersectoral integration and coordination. Though there is a proposal of intersectoral coordination in the preparation of the national REDD strategy, there

is a gap between the goals of cooperation and collaboration, and the current reality. The lack of intersectoral support for socioeconomic development that would stimulate conservation, and stop deforestation and degradation is considered one of the biggest challenges facing REDD in Peru. The future projections indicate a rise in national deforestation due to the growth of the extractive and agricultural sectors. Being a country with large forest areas but relatively low

deforestation rates, the potential of REDD+ for Peru is concentrated in the current tendency of legal and institutional support to the development of the Amazon, which is focused on the expansion of activities that promote the extraction of resources (mining, hydrocarbons, etc.) without concern for the ecological footprint. The search for equilibrium between the demand for growth and forest conservation will be central in any REDD strategy.

# 1 Introduction

To mitigate global warming, greenhouse gas (GHG) emissions from deforestation and forest degradation should be reduced (IPCC 2007; Cordero 2008; De la Torre et al. 2009; Parker et al. 2009). These reductions are not only necessary but also highly cost effective (Stern 2006). Therefore, in the last five years there have been various global initiatives promoting compensation for countries that cooperate by reducing GHG emissions from deforestation and forest degradation. Although the basic idea of REDD+ (reducing emissions from deforestation and forest degradation and enhancing carbon stocks in developing countries) seems simple, it involves a broad set of approaches, activities and actions needed to reduce, measure and compensate for emissions.

There are a number of initiatives intended to support future implementation of REDD+ mechanisms, that is, to support positive incentives and policy approaches to issues relating to the reduction of emissions from deforestation and forest degradation in developing countries, and the role of conservation, sustainable forest management and increased forest carbon stocks in developing countries. These initiatives include the institutional changes needed to ensure their effectiveness, which are promoted at project, subnational, national, bilateral and multilateral levels.

Peru has 73 million ha of forest (MINAM 2013), which represents nearly 60% of the country's territory. Despite the relatively low annual deforestation rate (0.2%), deforestation is the largest source of Peru's GHG emissions (MINAM 2011a). This is due to the high carbon stocks in Peruvian forests, along with relatively low emissions from the energy and industrial sectors. For this reason, Peru has agreed to join several REDD+ initiatives. It is now part of the Forest

Carbon Partnership Facility (FCPF) and the Forest Investment Program (FIP), and has joined the United Nations REDD+ Programme (UN-REDD) as an observer.

This report is part of the Global Comparative Study on REDD+ (GCS-REDD+), led by the Center for International Forestry Research (CIFOR), with the objective of providing strategic information on REDD+ through one of the first comparative studies on REDD+ implementation in the world. Component 1 (policies and actors) of the study is intended to present the national contexts in which REDD+ policies and processes emerge (Brockhaus and Di Gregorio 2012; Brockhaus et al. 2012). These policy studies are being conducted in 13 countries: Bolivia, Brazil, Cameroon, Democratic Republic of the Congo, Indonesia, Nepal, Peru, Tanzania and Vietnam and, partially, in Burkina Faso, Laos, Mozambique, and Papua New Guinea.

The REDD+ Country Profile for Peru aims to inform policy makers, practitioners and donors about the opportunities and challenges in the implementation of a REDD+ mechanism, in order to support evidence-based decision making. This can be a substantial contribution to countries like Peru, which has set ambitious goals for reducing deforestation. At the 14th Conference of the Parties to the United Nations Framework Convention on Climate Change (COP 14), Peru's Minister of Environment announced that Peru aimed to conserve 54 million ha of forest. This figure was increased the following year at COP 15, with a commitment to reducing the net deforestation rate for tropical forests to zero by 2021; in 2000, this represented 47.5% of Peru's GHG emissions. Achieving this goal requires understanding the implications of the implementation of public policies to stop

deforestation and forest degradation in a country that is in a stage of growth and economic development based on the exploitation of its natural resources.

This document has five sections. The first section analyzes the drivers of deforestation and degradation, contrasting data on forest cover in view of the growing deforestation trend in Peru. It identifies the main indirect deforestation drivers such as settlement policies, Andean migration, the growth of the economy and increased demand for resources. It also identifies the direct causes of deforestation such as road construction, agriculture, illicit crops, mining, extraction of hydrocarbons and hydroelectric dams. Finally, it identifies the direct causes of degradation such as illegal logging, firewood and fire, and it evaluates Peru's mitigation potential.

The following section on the institutional environment and distribution aspects of Peru's forests analyzes forest governance, especially in areas with increased deforestation. It discusses the implementation and effects of multilateral environmental agreements and recent free trade agreements, and the impacts of corruption and economic crime in the Peruvian forest sector. This section also reviews the current situation of decentralization, participation and allocation of rights to the forest. It then describes the political and economic context of the causes of deforestation and forest degradation, focusing on tensions between REDD+ and development policies and the role of external factors. This section describes major development policies that have affected forests, as well as the impact of the absence of policies on sustainable development and forest conservation. It shows how international factors and stakeholders have contributed to the current situation Peru's forests are in.

The section on the political environment of REDD+ examines the stakeholders, policies and processes of REDD+ in Peru, while exploring participation, financing and policy options that are being considered. It reviews climate change policies and the main events in the history of REDD+ implementation in Peru. In addition, it describes national progress towards a monitoring, reporting and verification system for REDD+.

The last section explores REDD+ issues from the perspective of the 3 Es (effectiveness, efficiency and equity). It evaluates the impact of REDD+ on governance and the institutional context in Peru, rights over forests, REDD+ implementation financing, as well as other aspects of vertical and horizontal coordination between public institutions. It describes the context for the emergence of REDD+ in Peru by examining current relevant processes, such as the discussion (or lack thereof) of funding mechanisms, cost and benefits, carbon stocks, the MRV system, the coordination of policies and actions, political reforms and other issues. This report also seeks to evaluate the contextual conditions of the potential of the REDD+ mechanism using the 3-E criteria, discussed in the last section.

This study followed the Guide for Country Profiles (Brockhaus et al. 2012). Information was collected mainly from specialized literature, official documents, and interviews with experts on REDD and forest issues in general. Researchers also drew on their own experience with: (1) the REDD National Round Table, which since 2008 has been the main space for dialog on REDD+ in Peru; and (2) the development of the Readiness Preparation Proposal (R-PP) within the framework of the FCPF, which has been the main process led by the government for REDD+ readiness preparation. Information collection, management and analysis were based on the items listed in the Guide for Component 1, disaggregated into approximately 360 specific questions.

We believe that this study is of great importance to determining the future of REDD+ initiatives in Peru. The study was undertaken when the FCPF decided to allocate USD 3.6 million to Peru at the Eighth Participants Committee Meeting in Da Lat, Vietnam, in March 2011, in order to contribute to the start of the REDD+ readiness phase. However, only in early 2013 did Peru undertake the revision and update of its R-PP to realize this support. In addition, in the course of the study preparation, in May 2011 the FIP approved a readiness grant for the development of the Investment Plan, which would provide Peru with up to USD 50 million for the REDD+ implementation phase. Peru began to use these funds in the first half of 2012 and expected to complete the plan in October 2013.

Peru also joined UN-REDD as an observer in June 2011.

During the preparation of the study there was a change of government in Peru. While the outgoing administration approved a new Forestry and Wildlife Law, the incoming government approved the Law of Free, Prior and Informed Consent with Indigenous Peoples in September 2011, trying to

establish a contrast with the previous government in terms of environmental and social issues. Still, the new government has kept the economic and development policies of its predecessors, so the deforestation trends are likely to continue. This context, in which the new government is trying to reorient the REDD+ process toward its new priorities, provides an opportunity for this country profile to contribute to decision making.

# 2 Analysis of the main drivers of deforestation and degradation

## 2.1 Forest cover

There is much variation between the data offered by different publications and documents on the forest cover in Peru. At one extreme, the Ministry of Agriculture (Ministerio de Agricultura, MINAG) referred to 78.8 million ha of forest in 2011 (MINAG, 2011) while the UN Food and Agriculture Organization's (FAO) Global Forest Resources Assessment (FRA) referred to 67,992 million ha in 2010 (FAO 2011). The national report (FAO 2010) that provided the data for the FRA estimated the forest cover in 2010 on the basis of a 2000 forest map (MINAG 2000–LANDSAT, 1/250,000 scale) reduced by the estimated annual deforestation rate of 150,000 ha. Likewise, the 78.8 ha estimate was derived from the results of a 2003 FAO project that supported the national forest strategy in Peru and that is still referred to in several publications by MINAG and other institutions, although it was not possible to find documentation on the methodology used. The most recent official figure is one jointly issued by the Ministries of Environment and Agriculture, which point out that according to 2011 figures, Peru has a total forest area of 73,294,958 ha, accounting for 57% of the national territory, without taking into account 7.9 million ha of primary Amazon forest lost as a result of deforestation (MINAM 2011a). This estimate is derived from the National Forest Heritage Map (Figure 1), which used Landsat 2009 images, at a 1/100,000 scale and a 25-hectare minimum mapping area.

According to the same source, highland and lowland Amazon forests (*selva alta* and *selva baja*) account for about 94% of the total forest area (see Table 1). The remaining 6% is made up of northwestern mountain forest, Andean forest, northern dry forest and Marañón forest in the Andean and coastal areas of the country. These classifications include wetlands



**Figure 1. National forest heritage map, 2010.**

Source: MINAM 2010c. Mapa del Patrimonio Forestal Nacional. Lima, Peru.

**Table 1. Forest area by forest type.**

Forest type	Area (ha)	%
Lowland forest	53,432,618	73.41%
Highland forest	15,736,030	20.96%
Northwestern mountain forest	133,378	0.18%
Andean forest	385,005	0.53%
Marañón dry forest	372,915	0.51%
Northern dry forest	3,235,012	4.41%
<b>Total</b>	<b>73,294,958</b>	<b>100%</b>

Source: MINAM 2011a



(both wetlands or *aguajales* and swamps) that cover 6 million ha (MINAM 2010b) and mangrove forests that are concentrated in approximately 28,000 ha on the north coast (INRENA 2007). Peruvian forests are mainly subtropical and tropical wet forests, and as such are very complex with a broad diversity of species (FAO 2010). A high percentage of them (81%) have a canopy cover greater than 60% (Blaser et al. 2011). The Peruvian National Report for the Global Forest Resources Assessment (FAO 2010) stated that in 2010 Peru had 60,178,000 ha of primary forest, 6,821,000 ha of naturally regenerated forest and 993,000 ha of planted forest.

Two-thirds of this area is under forest management (MINAM 2011a): forests in permanent production (concessions and reserves) amount to around 20 million ha (24.5%); protected areas amount to approximately 16.3 million ha (22.2%); areas of rainforest titled to native communities cover approximately 10.9 million ha (14.5%) and there are over 6 million ha of forest in other categories (8.2%). Almost one-third of the forests (30.4%) do not fall into any category and over 22 million ha have no category of forest use. Forests with no classification of use are mainly located in the remotest areas of the country, particularly in the Department of Loreto (Malleux 2009). There is little information on the *de facto* use of unclassified forests. Alluvial forests, which cover more than 15 million ha (FAO 2010) are important for rural people in the Amazon, but usually do not have land-use classifications (Nebel and Baluarte 2001)

Regarding access to lands, Dourojeanni et al. (2010) stated that there is overlapping of the original rights (mainly those of indigenous peoples, then rights established in the colonial era or after the inception of the Republic) with other legally acquired rights (for example, by means of titles via colonization projects) and illegally acquired rights (through old and recent invasions), as well as with other types of occupation and rights. Access to forests has not been less conflicting: occupation of forests has been hindered by current policies conditioned by social pressures and a lack of necessary planning. This has made sectors compete to occupy territories and exploit natural resources. During such competition, the forestry sector has clearly had less political and economic clout than sectors like mining, oil and agriculture (Malleux 2009).

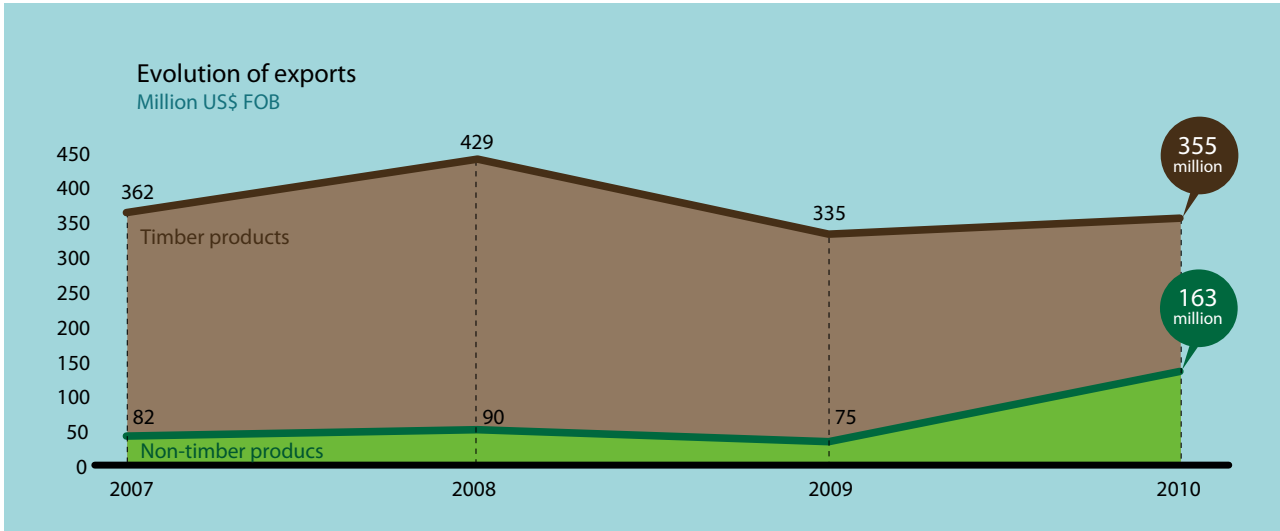
**Table 2. Forests concessions in Peru 2011.**

Use	Number of concessions	Total area (ha)
Timber	588	7,553,649
Non-timber (total)	1352	1,747,932
Brazil nut	983	863,778
Conservation	22	666,285
Reforestation	293	135,143
Ecotourism	28	61,981
Rubber	24	16,155
Wildlife management	2	4590
<b>Total</b>	<b>1940</b>	<b>9,301,581</b>

Source: MINAG 2011

Exploitation of forest resources in public lands is authorized through concessions (Table 2). A total of 588 concession contracts have been awarded for timber exploitation, amounting to an overall figure of 7.55 million ha (MINAG 2011). For products other than timber such as Brazil nuts (*Bertholletia excelsa*), ecotourism, conservation and reforestation, 1352 concessions have been awarded amounting to 1,747,932 ha of forest (MINAG 2011). Even though the forestry sector's contribution to the gross domestic product (GDP) has increased from USD 0.94 billion in 2006 to USD 1.7 billion in 2010, its share of GDP (1.1% in both years) still remains lower than in Chile (2.6%), Bolivia (2.7%) and Ecuador (2.3%) (MINAM 2013). The forestry sector provides 31,000 direct jobs, that is, 0.3% of the national total (FAO 2011). However, these data do not include the thousands of people living in forest-dependent rural areas. While there is data on the rural population in the country (for example, according to a 2007 census rural people make up 29% of the national population and 44% of the Amazon region population), how much these people depend on forest resources is unknown.

In 2010, forest sector exports of timber and non-timber products were USD 518 million (MINAG 2011). Management of this forest use is under the wing of MINAG and the regional governments, except in protected natural areas, which are under the wings of the National Service of Protected Natural Areas in the MINAM. A total of 16.9% or 22,134,485 ha of the national territory is under some form of natural protection. There are 74 protected natural areas under national



**Figure 2. Exports of forest products (timber and non-timber products).**

Source: MINAG 2011

administration (19,559,626 ha), 15 regional conservation areas (2,405,559 ha) and 42 private conservation areas (194,308 ha).

## 2.2 Deforestation

Deforestation data are also uncertain and depend on the methodology and technology used to produce them. The Peru Forest Map (INRENA 1995), developed with Landsat Multispectral Scanner images at a 1/1,000,000 scale, indicates that the deforested area in Peru covered approximately 6,948,237 ha (5.4% of the national territory). It estimated the annual deforestation rate at 261,158 ha/year (MINAM 2009). The Program for the Strengthening of National Capacities to Manage the Impact of Climate Change and Air Pollution, developed by the National Institute of Natural Resources (Instituto Nacional de Recursos Naturales, INRENA) and the National Environment Council (Consejo Nacional del Ambiente), designed a deforestation map of the Peruvian Amazon for 2000 with Landsat Thematic Mapper and Enhanced Thematic Mapper Plus images at a 1/100,000 scale. The study estimated the deforested area in the Peruvian Amazon for 2000 at 7,172,553 ha and the annual deforestation rates between 1990 and 2000 at 149,631 ha/year (Armas et al. 2009). By the end of 2012, MINAM's National Directorate for Territorial Planning had designed a deforestation map (see Figure 3a) that indicated deforestation had

reached 8,033,216 ha by 2009, suggesting that the deforestation rate had been 91,100 ha/year between 2000 and 2005, and had increased to 163,300 ha/year between 2005 and 2009 (MINAM 2013), amounting to a 123,000 ha/year rate for 2000–2009.

MINAM recently published an analysis of deforestation in the Amazon to 2011 with Landsat 5 and Landsat 7 images at a 30 × 30 m resolution (see Figure 3b, MINAM 2012). The results from the analysis show deforestation amounts of 108,571 ha in 2009–2010 and 103,380 ha in 2010–2011.

There are few studies on deforestation and the potential of the Andean forest ecosystems and coastal dry forests for REDD+.

Even though there are no to-scale maps to clearly define the areas available for reforestation (INRENA 2007), it has been reported that there are 10 million ha of deforested land with the potential for reforestation (MINAM 2010a). However, it is not true that those 10 million ha have no forest cover at present, since the percentage of abandoned land is very high (Gómez et al. 2008). Most land deforested before 2000 is currently covered by secondary forest (73% or 5,236,491 ha), 3,168,727 ha of which combine secondary forest with agricultural activities (see Figure 3). Only 27% of deforested land has no forest cover and is being used for agriculture

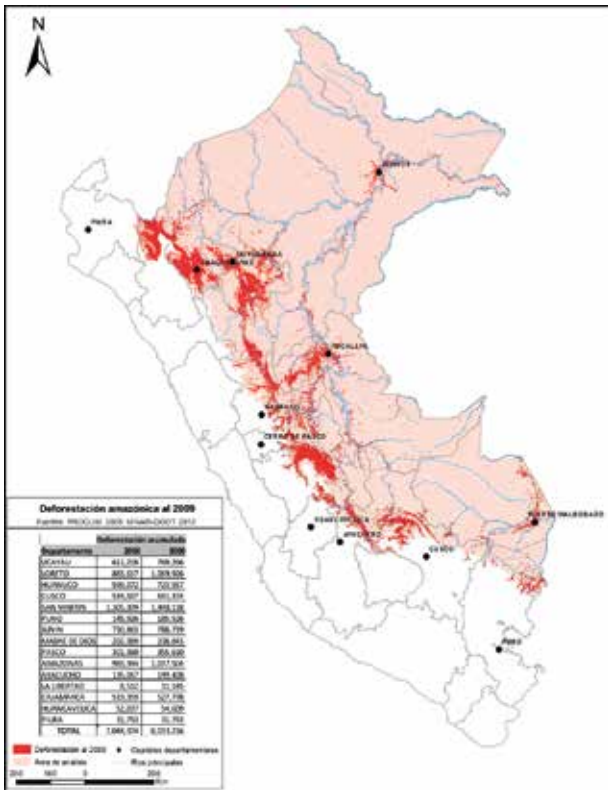


Figure 3a. Deforestation map in 2009.

Source: MINAM 2013

(690,515 ha), is now grasslands (1,179,981 ha) or has no vegetation (64,566 ha). This is mainly due to the fact that these soils are not suitable for agriculture and there is a low level of adoption of agricultural technologies, which results in the erosion of soils in the Amazon, which accounts for 60% of the overall eroded area in the country (Gómez et al. 2008).

The main deforestation spots are located in the lower and mid-altitude parts of the mountainous forests in the departments of Cajamarca, Amazonas, San Martín, Huánuco, Pasco and Junín (higher forest), and in the terraces and low hills of the Departments of Loreto and Ucayali (lowland forest). The departments with the highest deforestation rates, according to a 1995 forest map, are San Martín (57,521 ha/year), Loreto (54,712 ha/year) and Amazonas (37,812 ha/year) (MINAM 2009). Nevertheless, the 2009 deforestation map suggests that for the 2000–2009 period, regional deforestation rates decreased to 17,395 ha/year in San Martín, 23,454 ha/year in Loreto and only 6270 ha/year in Amazonas. Loreto deforestation accounts for almost 20% of the overall deforestation for this

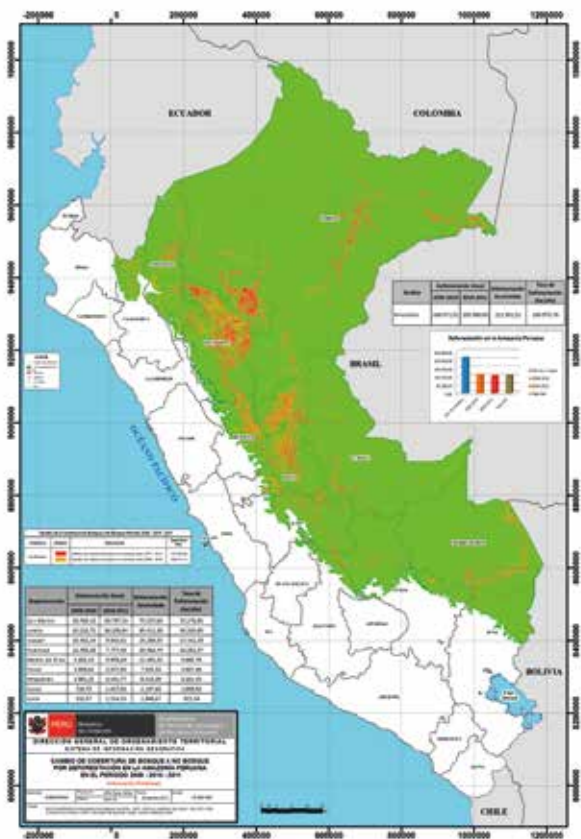


Figure 3b. Deforestation in the Peruvian Amazon until 2011.

Source: MINAM 2012

period. In addition, the 2009 deforestation map also shows that deforestation rates for Ucayali and Cuzco for the same period amounted to 19,068 and 17,407 ha/year respectively. From 2009 to 2011, the highest rates were found in San Martín, Loreto and Ucayali (Table 4).

In order to identify priority areas for FIP intervention, the Technical Working Group of the National Executive Committee designed sub-indices, one of which was based on deforestation data to identify the districts with the highest deforestation (Figure 4), which were found in San Martín, Loreto and Huánuco, and Ucayali. These high deforestation levels have been attributed to the presence of the North Interoceanic and the Jorge Basadre highways, respectively (CDI and INDUFOR, 2012).

According to Oliveira et al. (2007), from 1999 to 2005, 64% of deforestation and degradation in the Peruvian Amazon took place in the Ucayali

Table 3. Area of natural or tropical forest by land use of deforested land in 2000 and cumulative reforestation by 2010.

Department	Area of natural or tropical forest in 2000 (ha) <sup>a</sup>	Type of land cover of deforested land, 2000 (ha) <sup>b</sup>						Cumulative area of reforestation, 2010 (ha) <sup>c</sup>
		Agriculture	Grasslands	Secondary forest	Secondary forest and agriculture	No vegetation	Total, 2000	
San Martín	3,206,763	136,927	73,695	390,384	718,522	8141	1,327,669	18,177.65
Amazonas	2,721,999	172,471	364,750	192,009	246,142	26,095	1,001,467	17,277.10
Loreto	34,896,163	130,634	25,298	355,898	420,223	13,538	945,591	23,479.87
Junín	1,718,361	24,589	59,688	116,825	531,658	1514	734,273	71,255.42
Ucayali	9,160,726	25,356	117,811	213,223	265,194	5480	627,064	31,889.99
Huánuco	1,564,407	69,458	78,095	184,029	267,860	1178	600,620	45,860.82
Cusco	3,170,025	13,938	161,713	246,736	114,620	594	537,601	122,831.72
Cajamarca	409,491	69,353	103,697	84,291	262,042	647	520,030	110,526.43
Pasco	1,418,506	2824	38,874	81,422	178,408	480	302,008	19,621.86
Madre de Dios	8,102,917	21,861	60,101	71,432	42,885	7600	203,879	8467.01
Puno	1,406,400	2166	45,091	55,467	43,206	103	146,033	44,218.38
Ayacucho	251,350	5942	18,727	44,387	66,127	183	135,366	68,807.95
Huancavelica	18,738	7511	24,850	17,164	2461	0	51,987	50,079.46
Piura	74,262	7374	5222	10,804	8322	13	31,735	46,387.61
La Libertad	96,335	112	2369	3693	1057	0	7231	58,383.18
Ancash								87,867.21
Apurímac								78,117.29
Other	60,671							66,667.77
<b>Total</b>	<b>68,277,114</b>	<b>690,516</b>	<b>1,179,981</b>	<b>2,067,764</b>	<b>3,168,727</b>	<b>65,566</b>	<b>7,172,554</b>	<b>969,916.72</b>

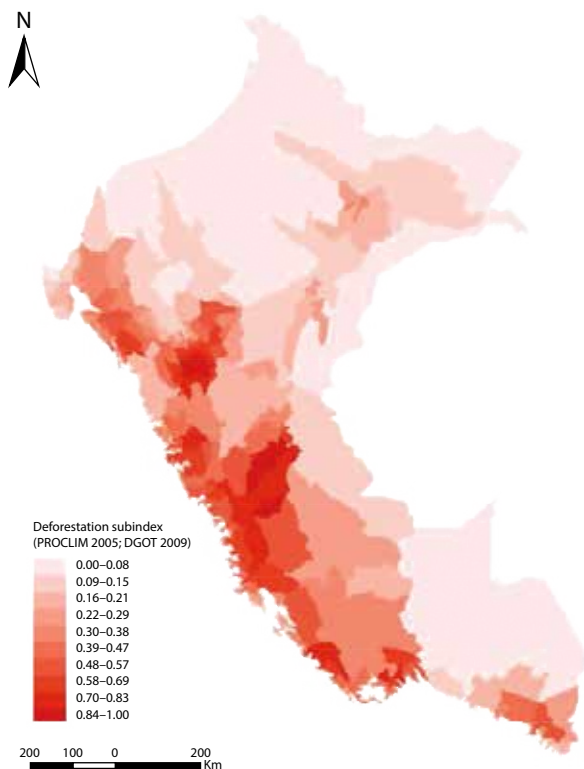
Source: <sup>a</sup> INEI 2010; <sup>b</sup> MINAM 2009; <sup>c</sup> MINAG 2011



**Table 4. Deforestation rate in the Peruvian Amazon 2009–2011.**

Department	Deforestation rate 2009–2010 (ha/year)	Deforestation rate 2010–2011 (ha/year)
San Martín	39,760	30,798
Loreto	24,211	36,200
Ucayali	16,342	9942
Huánuco	12,785	7778
Madre de Dios	5402	5959
Pasco	3998	3938
Amazonas	3981	4542
Cusco	740	1458
Junín	333	1847

Source: MINAM 2012

**Figure 4. Deforestation index by district.**

Source: MINAM 2013

department and 23% in Madre de Dios along the Interoceanic Highway. Projected deforestation scenarios (Armas et al. 2009) suggest that 41,000 ha would be affected by deforestation per year within the protected natural areas and

their buffer zones, that is to say, one third of the annual deforestation in the Peruvian Amazon. These situations are projected to be concentrated in the central rainforest and isolated areas in the southern Peruvian Amazon. Still, Oliveira et al. (2007) indicate that only 1–2% of the 1999–2005 degradation and deforestation was found in protected areas, whereas 9–11% took place in indigenous lands, thus having a positive impact on conservation.

There are important differences in the projections of future deforestation. Dourojeanni et al. (2010) forecast that in the best-case scenario for 2041, the combined action of roads, agriculture, livestock production, mining, hydroelectricity, hydrocarbons and urban expansion could give rise to the deforestation of 19.6 million ha, and in the worst-case scenario, up to 31.1 million ha. Other projections for the 2009–2050 period (Armas et al. 2009), based on modeling by Soares-Filho et al. (2006), concluded that in a business-as-usual scenario the annual deforestation rate for the Peruvian Amazon would be 177,078 ha (7.3 million ha deforested by 2050), whereas in a governance scenario the annual deforestation rate would amount to 129,985 ha (5.3 million ha deforested by 2050). In addition, it must be considered that historical projected scenarios showed lower deforestation rates, since in the past there were fewer projects to expand road infrastructure (Armas et al. 2009).

### 2.3 The main drivers of forest cover change

In the past decade, the Peruvian economy has shown positive indices of macroeconomic performance, supported by extractive activities, such as mining and hydrocarbons, and export agribusiness. In order to facilitate transport for these products and access to new regions, the government has invested in infrastructure, expanding the transport network in rural areas. This initiated the current wave of deforestation in the Amazon, which is currently driven by these extractive activities and the migration of Andean people towards the Amazon looking for new lands for cultivation and agricultural activities. Several factors — including infrastructure, investment, prices, technology and political support — come together in this context, increasing pressure on

forests through exploitation of their resources, occupation of their space or construction of infrastructure for roads and hydropower.

Furthermore, deforestation and degradation in Peru result from a set of indirect and direct forces. The indirect drivers, listed in Table 5, create a socioeconomic and political environment that fosters and/or facilitates deforestation and degradation, while direct drivers are new land uses, which replace forest cover. The main indirect drivers can be classified as demographic, economic, political and institutional/legal. Demographic changes, specifically population growth and migration into forest areas, are discussed below. The institutional and legal environment, with its weak enforcement and implementation of existing laws, and the unregulated tenure and utilization rights, will be discussed in section 3. Peru's economic policy, discussed in section 4, can be seen as another indirect driver since the country's national development plans promote economic growth and expansion without allocating the necessary funds or designing policies aimed at sustainable development that values forests and environmental services.

In the context of the indirect forces of deforestation and degradation, direct drivers cause land-use change that results in removal of forest cover. Direct causes include the development of new infrastructure (roads), new settlements (expansion of urban centers), expansion of the agricultural frontier (cash crops, shifting cultivation), hydrocarbon exploitation and mining, as well as some illegal activities such as mining, logging and coca leaf cultivation (MINAM 2010a; Blaser et al. 2011). Throughout history, pressure has often been exerted on the Amazon for settlement, occupation and exploitation (Naughton-Treves 2004). These times of pressure, which will be discussed in the following sections, have provided the main drivers of deforestation in the Peruvian Amazon.

### 2.3.1 Demographic changes, population growth in the Amazon

The national growth rate in Peru was estimated at 1% for 2011 (INEI 2012a). Based on the average annual growth rate between 1993 and 2007, the departments of Madre de Dios, Ucayali,

**Table 5. Indirect drivers of deforestation and degradation in Peru and their contributing factors.**

Driver category	Driver and its contributing factors
Demographic	Population growth in forested regions <ul style="list-style-type: none"> <li>• Births</li> <li>• Migration from the highlands               <ul style="list-style-type: none"> <li>- 'push' = poverty and instability in the highlands</li> <li>- 'pull' = incentives/credits and settlement policies, gold prices</li> </ul> </li> </ul>
Economic	Increasing demand for agricultural and extractive products <ul style="list-style-type: none"> <li>• Increase in GDP and domestic purchasing power</li> <li>• International demand for coffee, gold, timber, palm oil and cocaine</li> </ul>
Political	National policy on economic growth and expansion <ul style="list-style-type: none"> <li>• Credit for agricultural expansion</li> <li>• Investment in road infrastructure and integration</li> <li>• Support for mining or oil companies</li> </ul>
Institutional	Weak institutions without adequate enforcement capacity and implementation <ul style="list-style-type: none"> <li>• Financial/human resources</li> <li>• Corruption and prevalence of informal markets</li> <li>• Overlapping duties</li> <li>• Incomplete decentralization</li> </ul>
Legal	Unclear laws and legal system for land-use and exploitation rights <ul style="list-style-type: none"> <li>• Lack of demarcation and official recognition of indigenous lands</li> <li>• Overlapping land-use rights</li> <li>• Unclear regulations (e.g. on forestry, ecosystem services, carbon rights)</li> </ul>

San Martín and Loreto have experienced the greatest growth. However, the Amazon region still has the lowest population density in the country and continues to be a center of attraction for migration (Dourojeanni et al 2010). The National Institute of Statistics and Information (Instituto Nacional de Estadística e Información, INEI) estimates that between 2000 and 2015 the population of Madre de Dios will increase by 52%, the greatest percentage growth nationally (INEI 2010). Population is expected to increase in the other Amazon departments as well (27% in San Martín and Ucayali, and 23% in Loreto) (INEI 2010). “Puerto Maldonado (Madre de Dios) is growing at annual rates above 5%; and between 1961 and 1993 the population of Iquitos (Loreto) increased more than four fold, and that of Pucallpa (Ucayali), six times fold” (Armenteras and Morales 2009). According to the 2007 national census, 3,675,292 people live in the Peruvian Amazon (13.4% of Peru’s total population).

An important factor that must be taken into account is the migration of Andean peoples, partly driven by lack of economic opportunities in the Andean region. In 2010, poverty indices were 49% in the highlands and 37% in the Amazon. In rural highland areas, 61% of the population lived in poverty and 29% in extreme poverty whereas in

the rural Amazon, 46% lived in poverty and 18% in extreme poverty (INEI 2011).

In the years of terrorism, many people were displaced, mainly from the highlands to the coast and to the Amazon (Berganza-Setién and Purizaga-Ganados 2011). The Program to Support Repopulation (PAR) estimated that 600,000 people were displaced by 1993 but that by 1998, 52% of them had returned to their place of origin (INEI 2009). According to INEI statistics, between 1988 and 1993, 175,000 people migrated to departments in the Amazon, 27% from other departments in the Amazon and 40% from the highlands. At the same time, however, 155,000 people emigrated from the Amazon for a net increase in the population amounting to 20,303 people (Table 6). From 2002 to 2007, 162,000 people migrated to the Amazon, 40% from the highlands, but 190,000 people emigrated from the Amazon, which resulted in a net migration rate of -27,600 people. These tendencies may have changed again since 2007, especially taking into consideration migration to Madre de Dios driven by gold and other more recent phenomena. While the discourse on deforestation in the Amazon refers to migrants as major deforestation agents, it is important to assess

**Table 6. Migration between the highlands and the rainforest.**

		Amazonas	Loreto	Madre de Dios	San Martín	Ucayali	Amazon Total
1988–1993	Net (immigration - emigration)	-8213	-9040	+4934	+16,114	+16,510	+20,303
	Emigration	30,534	37,623	7413	53,598	25,750	154,918
	to Amazon	38%	39%	3%	30%	31%	32%
	to Highlands	15%	7%	71%	18%	22%	18%
	to Lima	27%	44%	19%	31%	39%	34%
	Immigration	22,321	28,583	12,347	69,712	42,260	175,223
	from Amazon	14%	52%	2%	24%	29%	27%
from Highlands	49%	9%	83%	40%	43%	40%	
2002–2007	Net (immigration - emigration)	-25,831	-19,163	+14,377	+1113	+1883	-27,621
	Emigration	45,166	42,088	6060	66,286	30,467	190,067
	Immigration	19,335	22,925	20,437	67,395	32,350	162,442
	to Amazon	18%	42%	7%	26%	33%	26%
	to Highlands	42%	12%	74%	40%	38%	40%



their true role if official data indicate that the net migration rate is not so high. It is also important to understand cultural differences in land use by Amazonian and highland people — a net emigration rate does not necessarily imply a reduction in deforestation drivers if the people that stay use more extensive agricultural systems, as is often the case with migrants in Peru (Meyerson et al. 2007).

### 2.3.2 Direct drivers

#### Roads and infrastructure

In the Amazon, 75% of deforestation and degradation in 1999–2005 was located within 20 km of a road (Oliveira et al. 2007). In this sense, a driving force and a precursor to deforestation has been the opening of roads or access into the Amazon region, since roads increase migration, human settlements, shifting cultivation (MINAM 2009) and land trafficking. The dominance of a system of large and small landholdings (*latifundios* and *minifundios*) was erroneously considered the result of difficulties in access to markets (Barclay and Santos 1991), so one of the most important social demands has been that more roads should be built. Peruvian Amazon infrastructure is insufficient (Peru is estimated to have a USD 23 billion deficit in infrastructure), and that which exists is inadequate. Infrastructure availability is limited by geography, such that the most adverse terrains have the least access to infrastructure (Escobal and Torero 2000). A large portion of the infrastructure that has been built since the 1940s has been abandoned and rebuilt several times. According to the Ministry of Transport and Communication, there are 7900 km of roads inside the Amazon, out of which, just 1940 km are paved and most of which are located in the Upland Amazon. These statistics do not include the secondary road network, which could represent thousands of kilometers of logging roads or paths, built by local authorities, farmers, miners, and oil and timber workers (Dourojeanni et al. 2010). Unofficial roads, built by the private sector to access natural resources, tend to grow faster than official roads (Perz et al. 2008). Although there are no studies on the Peruvian case, Brandão and Souza (2006) showed that the unofficial roads accounted for up to 80% of the road network in one region of the Brazilian Amazon.

#### Box 1. Proposed development projects in the Peruvian Amazon for the period 2009–2021

The following projects have been proposed for the period 2009–2021:

- 52 hydroelectric plants in the Amazon basin, 26 of which would be in the forest, that would produce a total of 24,500 megawatts of electric power, and an indefinite but considerable number of kilometers of power transmission lines
- 53 oil concessions granted over 35.3 million ha, seven of which are in operation, as well as other types of assignments that will cover 55 million ha (70% of the forest), and an indefinite number of kilometers of oil and gas pipelines
- 24,81 mining rights over 10.4 million ha and 7002 pending in the Amazon basin (there are 1566 entitled rights and 983 pending rights in Madre de Dios alone)
- 4486 km of improved roads, including 880 km of new roads and 2089 km of paved roads
- about 2000 km of railways, assuming that only some of the proposals will be built
- 4213 km of waterways
- 483,581 ha of new plantations for biofuels
- 7.7 million ha (current) up to 23.8 million hectares under forest management, and other types of concessions and licenses, excluding illegal exploitation.

Source: Dourojeanni et al. 2010

The intensity and density of deforestation are directly related to the density of roads and the proximity to populated centers. Deforestation analyses show that deforested areas are located along the road network, at zones that access the Lowland Amazon from the eastern part of the Andes range. An increase in deforestation is expected as more investment is made on roads and migration to the Amazon continues (MINAM 2013). For the 2000–2009 period, the highest deforestation density is concentrated within 9 to 11.6 ha/km<sup>2</sup> from the towns of Picota, Bellavista, El Sauce in San Martín, and Yurimaguas (CDI and INDUFOR 2012). The second deforestation focus is along the Federico Basadre Highway, on the Aguaytía, Tingo María and Puerto Bermúdez

axis. In this respect, these road axes are extremely important for future strategic options for REDD+. Nevertheless, future infrastructure developments that could expand this situation into other areas in the Amazon should also be taken into account.

### Agriculture

The agricultural sector represented 7.4% of domestic GDP in 2011 (INEI 2012b). Around 3 million ha were under agricultural management in 2010 (INEI 2011). According to national statistics, the most important agricultural products in the forest departments are rice, coffee, banana, corn, cassava, common beans, cocoa and coca (legal and illegal) (see Table 7). It is estimated that out of the nearly 700,000 ha used for agriculture, only 300,000 ha are under intensive agriculture systems, including shade-grown areas with crops such as organic coffee and cocoa. For the lowland Amazon, where 286,434 head of cattle were recorded in 2010, pastures can be estimated at 143,000–286,000 ha, based on the density of cattle per hectare in the Amazon, as indicated by FAO.

### Migratory agriculture vs. agriculture by migrants

Until recently there was no quantitative information regarding the contribution of migrants' agriculture to deforestation in Peru. A study by CDI and INDUFOR (2012) for the development of the FIP Investment Program identified that most of the deforestation that took place between 2000 and 2009 occurred

in small areas. The opening of areas equivalent to approximately half a hectare accounted for 75% of the national deforestation. These areas were spatially discrete, which is consistent with small-scale agricultural activities, mainly conducted by migrants. Only 1% of deforestation took place as a result of activities that deforest areas equal to or larger than 10 ha. However, this proportion may have changed due to the increase in oil plant plantations in recent years (Gutiérrez-Vélez et al. 2011).

Some studies have argued that shifting cultivation is a cause of forest degradation but not so much of permanent deforestation (Brown and Schreckenber 1998). The growing cycle includes periods of fallows and secondary forest growth, and primary forests are not often cut for family agriculture. If deforestation is defined as cover change in a 10-year period, then clearing for shifting cultivation is not deforestation but forest degradation. However, many of the discussions in Peru refer to "migratory agriculture" and focus more on expansion of the agricultural frontier by migrants rather than shifting cultivation via slash and burn, as the term is understood in other contexts. As discussed above, migration in the Amazon is a key factor in the expansion of the agricultural frontier, and migrant activities are still an important cause of deforestation at the regional level.

### Biofuels

According to Pacheco (2012), although there is still no evidence of soybean crops at a large scale in Peru and there are few areas suitable for cultivation, large areas of the Peruvian Amazon are suitable for oil palm, especially in western Loreto. Biofuel crops (primarily oil palm) are limited to approximately 30,000 ha, half of which are relatively newly cultivated (Dourojeanni et al. 2010). Oil palm cultivation has increased almost exponentially, from 5000 ha in 1995 to 20,000 ha in 2010, with 98% being grown in San Martín and Ucayali regions (Gutiérrez-Vélez et al. 2011). In 2000, MINGAG developed the 2000–2010 National Plan for Oil Palm Promotion, with a market-based approach. The plan intended to promote production nuclei or clusters in the departments of San Martín and Loreto, consolidating 50,000 ha. Several initiatives to develop oil palm plantations have been advancing in Puerto Inca and Yurimaguas (Dourojeanni et

**Table 7. Major crops in the Amazon.**

Product	Total area (ha)	Lowland forest (ha)	Lowland and highland forest (ha) <sup>a</sup>
Rice	388,532	85,403	135,608
Coffee	349,354	73,445	253,066
Banana	156,114	78,934	123,186
Corn	542,657	62,621	149,387
Cassava	105,063	54,181	86,014
Common bean	81,219	9320	26,555
Cocoa	77,147	36,800	52,118
Coca (legal and illegal)	61,200	6558	44,708
Oil palm	19,055	19,055	19,055

a Includes departments with large non-forest areas.

al. 2010). Technological development, demand and good prices for products derived from biofuel crops, together with incentive policies, foster replacement of forests by monoculture, even though there are around 825,000 ha immediately available for forest plantations (INRENA 2007). The Peruvian government has provided for the gradual application of biodiesel blends in diesel and of ethanol blends in gasoline, which has given an incentive to increase the areas of cultivation of biofuel crops such as oil palm, jatropha or pine nut, canola, sugar cane and wild cane (Velarde et al. 2010b), although only oil palm cultivation has expanded significantly.

### Illegal crops

Coca cultivation is an ancestral practice developed in the areas of the upland Amazon and rainforest–highland transition zone (*ceja de selva*) (Gómez et al. 2008), but since 1980, due to its high profitability, coca growing to meet the global demand for cocaine has been a promising activity for farmers and settlers. Coca growing by indigenous peoples is a traditional practice and is strictly used with a ceremonial and symbolic meaning that should not be confused with illegal cultivation for commercial scale (Salazar and Benites 2006). Still, in 2010 legal coca production covered 17,915 ha in forest regions (INEI 2010), and Peru's total coca-growing area was larger than that in Colombia (UNODC 2011). Official data from 2011 are expected to show that Peru has become the world's leading pure cocaine producer (Bajak 2012). The coca-growing area has even extended to non-traditional areas (UNODC 2010).

A case study by the United Nations Office on Drugs and Crime (UNODC 2010) showed that in Caballococha, the deforestation rate between 2006 and 2009 was 157.8 ha/year, while the rate caused by coca cultivation in the same area was 42.3 ha/year (UNODC 2010). National Commission for Development and Life without Drugs (DEVIDA 2001) estimated that coca growing was responsible for 24% of the country's deforestation in 2000. Around 88% of 50,300 ha of coca crops in 2005 were in Alto Huallaga, Apurímac-Ene and La Convención-Lares valleys (UNODC 2005); there are information gaps on other areas of the Amazon (Salisbury and Fagan 2013). Coca is also grown in protected natural areas (MINAM and UNODC 2011), and in 2009 it already affected the buffer

zones of Bahuaja-Sonene and Manu National Parks, San Matías-San Carlos Protection Forest, and Güeppi Preserved Area (UNODC 2010).

### Hydroelectric dams and hydrocarbons

The current Amazon infrastructure includes areas established for oil exploitation in Loreto and gas exploitation in Cusco, as well as hydroelectric power plants such as Macchu Pichu and San Gabán, and thermal power plants (Dourojeanni et al. 2010). Since the mid-2000s, the Ministry of Energy and Mines (Ministerio de Energía y Minas, MINEM) has implemented an aggressive policy of allocation of hydrocarbon concession lots in the Amazon, in some cases overlapping with indigenous peoples' territories and protected natural areas. According to Gamboa (2009), between 2003 and 2009, hydrocarbon exploration and exploitation lots increased from 15% to over 70% of the Amazon area (55 million ha), including "technical evaluation" agreements with the multinational oil corporation Petrobras as well as lots that were abandoned or in conflict. In addition, there are now 15 hydroelectric dam projects in the pipeline with a potential for export to Brazil, some of which will be executed in the framework of an Electricity Supply Agreement signed between the governments of Peru and Brazil in June 2010.

The use of best practices to develop the energy infrastructure can be considered a REDD+ strategy. Even though hydrocarbon exploration activities are performed in vast areas, they can be done with techniques that reduce forest impacts. Likewise, the construction of wells and fields as well as other extraction activities, can minimize road construction to reduce direct deforestation. Dam construction in the Amazon may be a significant source of GHG emissions (Serra 2010) as a result of the methane emissions caused by forest flooding. In this sense, an energy agreement may provide an opportunity to implement REDD+ strategy options aimed at reducing emissions. These could consist of reducing the number and changing the designs of these megaprojects, establishing schemes for sustainable exploitation of forests in their areas of influence, and considering decommissioning them when they do not have a positive balance in emission reduction. To compensate for their impacts, these projects could also contribute funds that could be used to finance REDD+ programs or projects in

the Amazon, including within the project's own area of influence. The Peruvian government has been evaluating the potential and implementation of a regulatory framework to establish this type of compensation mechanism for impacts on ecosystems.

### Mining

Artisanal mining began expanding in the late 1960s. In the Peruvian Amazon, there are 245,435 ha (6.25% of the territory) with mining rights in the Department of Amazonas. In Madre de Dios, 1566 mining rights have been issued and 983 are pending (Dourojeanni et al. 2010). In the case of gold, the steady price increase has generated a rise in the number of informal miners and serious environmental damage. These problems have been augmented by the lack of state presence in mining areas and by the concomitant presence of megaprojects implemented without appropriate planning and impact mitigation processes. The clearest example of this situation is in the Madre de Dios region in southeastern Peru, which has the most illegal gold mining around which the most serious social impacts (overcrowding, child exploitation and human trafficking) and environmental impacts (deforestation and river contamination with mercury) can be seen (Brack et al. 2011). Mosquera et al. (2009) estimated that the total area of deforestation through mining in Madre de Dios amounted to 17,837 ha by 2009. Swenson et al. (2011) reported an annual deforestation rate of 1915 ha, and a total of 15,500 ha of deforestation by 2009.

It is estimated that since then, these mining activities have degraded another 150,000 ha more (Brack et al. 2011).

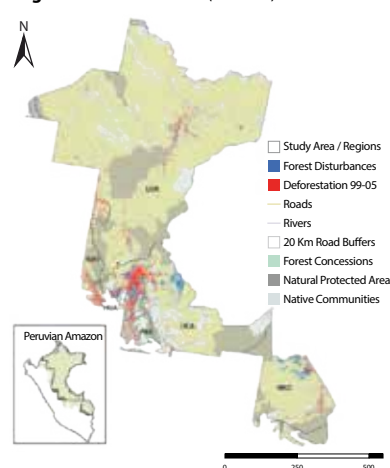
### Degradation

One of the subindices elaborated by the Technical Working Group of the FIP National Executive Committee is forest degradation (Figure 5). Oliveira et al. (2007) stated that between 1999 and 2005, forest degradation (measured by the perception of disturbed vegetation) in the Peruvian Amazon reached 63,200 ha/year on average, out of which only 2% occurred in protected areas and 11% in indigenous lands. They concluded that these two land categories can provide effective protection against forest degradation (MINAM 2013).

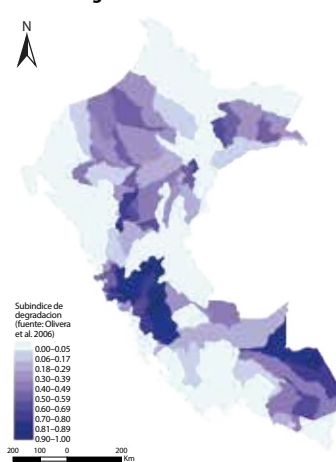
### Logging

Peru's forest sector produces around 1% of the country's GDP. Official statistics report that 700,000 m<sup>3</sup> of sawn timber was produced in 2010 (MINAG 2011). According to MINAM (2013), there are 39 million ha of forest suitable for timber extraction; however, the area granted for resource utilization under forest concessions amounts to 7.4 million ha. Between 2000 and 2010, some 307 species were managed for timber, producing 7,576,495 m<sup>3</sup> of sawn wood (MINAG 2012). However, 50% of this corresponds to only nine of the most exploited species (*cedrorana*, *cumala*, cedar, eucalyptus, *capirona*, mahogany, *catabua* and *moena*). In this period production

Degradation as at 2005 (Oliveira, Asner et al. 2006)



Degradation subindex



#### Methodology:

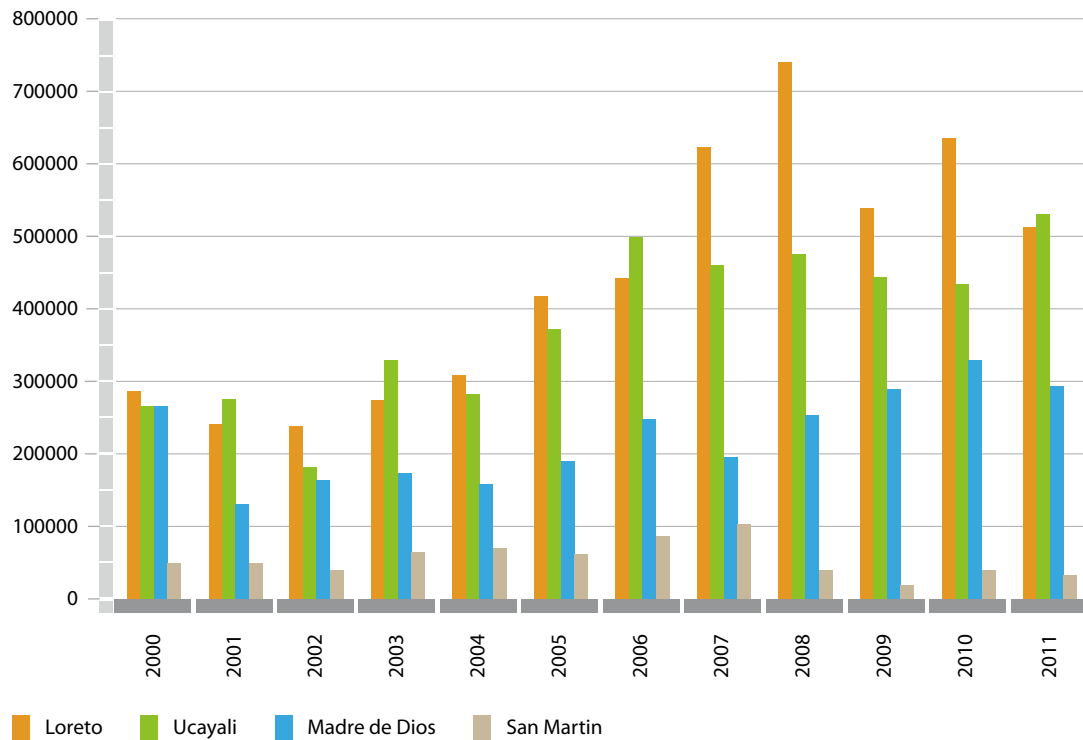
There were six degradation layers (1999–2005), which were added to obtain the total degradation by district for the period under consideration. Then the degradation percentage by district was estimated, and district were ordered from the most affected to the least affected ones, with values ranging from 1 to 0, respectively.

#### Limitations of the analysis:

Data from Oliveira et al. do not cover an important part of the Amazonas and San Marti regions (to the North), and Cusco and Madre de Dios (to the south). The latest data available are from the year 2005.

Figure 5. Forest degradation subindex.

Source: MINAM 2013



Source: Ministry of Agriculture (MINAG) - National Institute of Natural Resources (Inrena)

**Figure 6. Roundwood production in the Amazon departments, 2000–2011.**

Source: Ministry of Agriculture (MINAG), National Institute of Natural Resources (INRENA)

was relatively stable (the annual average was 700,000 m<sup>3</sup> of sawn timber), showing a significant increase only between 2006 and 2008. More than two-thirds of national production of processed wood is concentrated in the Departments of Ucayali, Loreto, Madre de Dios and Junín (MINAM 2013). In particular, Loreto and Ucayali have maintained high levels of roundwood production since the general rise in 2006 (Figure 6).

However, official figures are likely underestimated due to the sector's high rate of illegal logging. For instance, it is estimated that 70–90% of mahogany exports come from illegal logging (Wikileaks 2011). Illegal logging has increased; official figures report that Peru's illegal timber harvest in 2005 was more than 221,000 m<sup>3</sup>, i.e. 15% of national production, which amounts to USD 44.5 million (Gómez et al. 2008).

### Firewood and charcoal production

According to official statistics, 7.1 million m<sup>3</sup> of wood, or 90% of the wood harvested from Peruvian forests, is intended for firewood and

charcoal production (MINAG 2011). Firewood and charcoal are important sources of fuel for rural people in Peru (Coomes and Burt 2001; Ektvedt 2011). However, most of the demand for charcoal comes from Lima and other urban centers (Bennett-Curry et al. 2013). According to Barrena et al. (2010), 60% of the vegetable charcoal sold in Lima comes from coastal dry forests, and most of the remaining 40% comes from the city of Pucallpa. Having acknowledged the role of firewood and charcoal production in the degradation of the northern dry forests, nongovernmental organizations (NGOs) and the government have promoted interventions to reduce degradation and foster reforestation of dry carob forests (La Torre Cuadros 2012). At the same time, charcoal production in the region of Pucallpa has been increasing (Bennett-Curry et al. 2013).

### Forest fires

Data collected by Brazil's National Institute for Space Research (*Instituto Nacional de Pesquisas Espaciais*) shows an increase in the number of hot spots produced by fires in Peru (Figure 7). Between 2001 and 2006, the



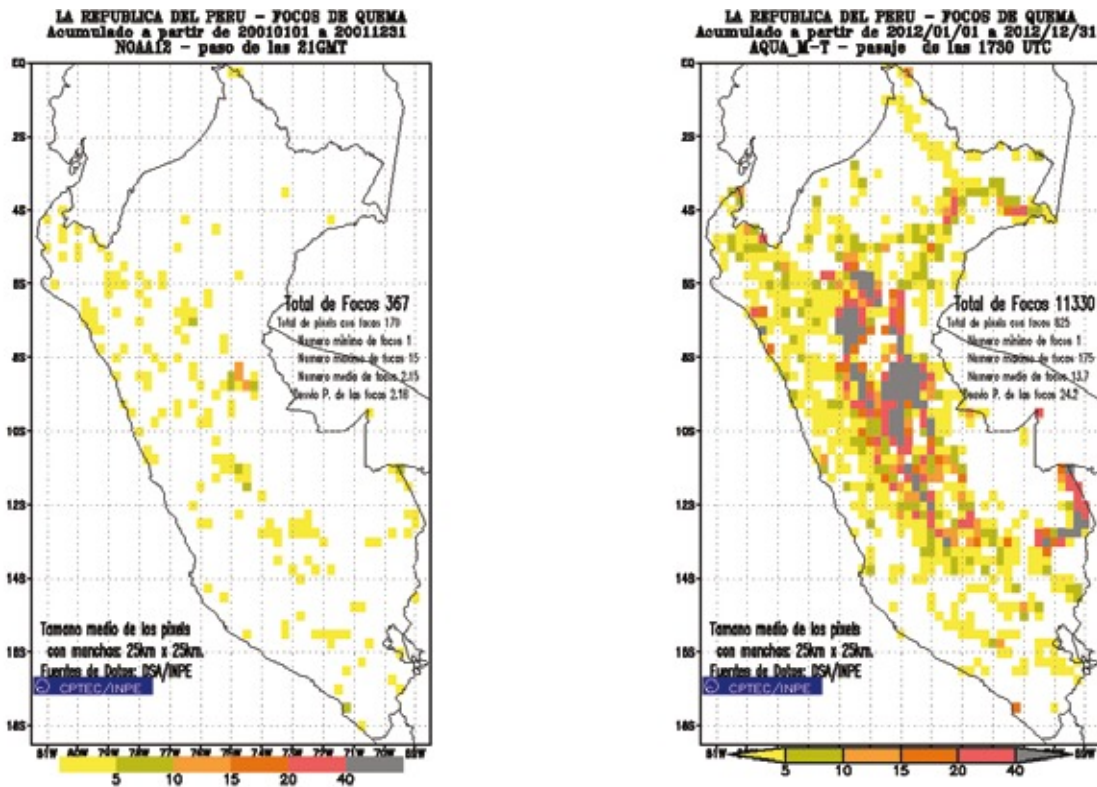


Figure 7. Evolution of hot spots in Peru, 2001–2012.

Source: CPTec INPE <http://sigma.cptec.inpe.br/queimadas/queimamensaltotal1.html?id=ma>

annual number of burning areas did not exceed 2000 per year; however, between 2007 and 2012 the annual number of burning areas was over 6000 per year, even reaching 11,330 in 2012. The rise in hot spots is significant in the Amazon departments, for example, San Martín had 595 hot spots in 2009 and over 1600 in 2010 (AMPA 2010a, b, c, d, 2011). However, there is little quantitative information on fires invading forests. Data on forest fires reveal that between 2004 and 2008, an average of 118,518 ha of forests caught fire, which accounts for 0.016% of the total forest area (FAO 2010). Other sources of information indicate that more than 10,000 ha of forest were burned during the 2005 Amazon drought (Brown et al. 2006), and that the land area may have been up to 20,000 ha (personal communication from F. Brown) without taking into account forests in other regions in the same year.

The rise in the incidence of forest fires is relevant to identifying national REDD+ strategies in two ways. First, it shows that fires are a real deforestation threat and that deforestation has changed dramatically since 2007. Second, it

raises doubt about Peru's capacity to address this challenge. The only team of specialists to face forest fires in Peru is working at the Historic Sanctuary of Machu Picchu in the Department of Cusco. A national REDD+ strategy will not be effective if it does not build capacity to address forest fires.

## 2.4 Mitigation potential

According to FAO (2010), there are not enough data to assess forest stocks ( $m^3/ha$ ) by type of forest, although inventories do include average volumes of the most common species at an exploratory or scoping level. With the support of FAO, and thanks to funding from the Finnish Government, MINAG and MINAM in 2012 started the implementation of a National Forest Inventory and Sustainable Forest Management for Climate Change Mitigation in Peru, with three components (interview of Jorge Malleux by Tania García, 11 July 2011):

One is the forest inventory itself, which covers all of Peru, coast, highlands and Amazon, as well as forest plantations and lands suitable for forestry, everything related to quantitative and

qualitative assessment of forest resources; the second component is the forest development policy, with support being given to the new forest administration, especially with the new law [...] so that the country can develop its national forest program, which is now missing, [...] and finally, the third component of the project is sustainable forest management, best management practices, training of human resources, development of methodological designs for forest management, general guidelines, criteria, indicators, etc.

Nevertheless, according to a report on progress toward sustainable forest management, carbon sequestration for the 2002–2008 evaluation period was estimated at 3,778,374,547 tons of carbon stored in vegetation and 3,950,109,250 stored in soils (FAO 2010).

There is still no official accounting system at the national or subnational level that measures the carbon impact generated by land-use changes (aboveground and underground biomass). A study on gross annual emissions in Madre de Dios for the 1999–2009 period showed a baseline emission rate of  $0.26 \pm 0.08 \text{ Tg C year}^{-1}$  for deforestation and  $0.11 \pm 0.02 \text{ Tg C year}^{-1}$  for degradation, for a sum of  $0.37 \text{ Tg C year}^{-1}$  (Asner et al. 2010). The study also reveals that paving of the South Interoceanic road in 2006, along with timber forest concessions and gold mining, led to an increase in deforestation and emissions of over 61% to  $0.42 \pm 0.21 \text{ Tg C year}^{-1}$ , while emissions from degradation rose two-fold from  $0.21 \pm 0.11 \text{ Tg C year}^{-1}$  to a total of 4529 Tg C for the 1999–2009 period, i.e. approximately 1.1% of forest carbon stocks in the region.

MINAM intends to create a national system to generate data for the National Greenhouse Gas Inventory and is taking preparatory steps to establish the System of Georeferenced Information to Monitor the Dynamics of Land Use Changes. Regarding REDD, the project Strengthening of Technical Capacities for the Implementation of a REDD+ Program in Peru, implemented with the support of the Gordon and Betty Moore Foundation, contributes to defining the criteria for the development of the inventory, assessment and monitoring of forests and carbon stocks at national and subnational levels, and subsequent validation in two regions of the country (MINAM 2011b).

These efforts are expected to come together with the National Forest Inventory and Sustainable Forest Management for Climate Change Mitigation in Peru. In 2012 MINAM had seven projects underway and three more were about to start, which would contribute to implementation of the instruments for the analysis of land cover and deforestation.

Due to the lack of a national system to generate GHG data, the inventories are made based on national communications to the United Nations Framework Convention on Climate Change (UNFCCC). Information gathering faces several difficulties, such as the presence of more than one source of information for the same level of activity and, in certain cases, estimates need to be made using national baseline data (MINAM 2010a). Formally, the Data Generation Network for the Greenhouse Gas Inventory (INFORMAGEI) is intended to promote and articulate efforts to generate, systematize and spread information on GHG emissions, which is part of the National System for Environmental Information.

The National Comprehensive Inventory of Greenhouse Effect Gas Emissions of Peru in the year 2000, developed by the Second National Communication of Peru to the UNFCCC, states that the main source of GHG emissions at the national level is forest and pasture conversion. According to this document, 110,368 Gg of CO<sub>2</sub>eq are accounted for by Amazon deforestation as a result of land-use change to agriculture. The forest sector is also the only source of GHG removal. Changes in forest biomass and other wood stocks account for  $-53,541 \text{ Gg of CO}_2\text{eq}$ , so net emissions from land use, land-use change and forestry (LULUCF) were 56,827 Gg of CO<sub>2</sub> for 2000, accounting for 47.5% of the country's net emissions (MINAM 2010a). These carbon removals are mainly due to fallows or secondary forests, which are extremely important for quantification of forest carbon and REDD in Peru (interview of Jorge Malleux by Tania García, July 11, 2011).

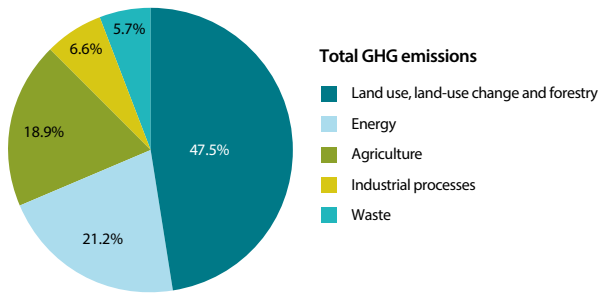
Land-use change represents 47.5% of domestic GHG emissions, thus is the most important sector (see Figure 8). In this sense, the country's REDD approach is essential in the fight to reduce national GHG emissions.



Table 8. Estimated carbon stocks in forest vegetation and soils.

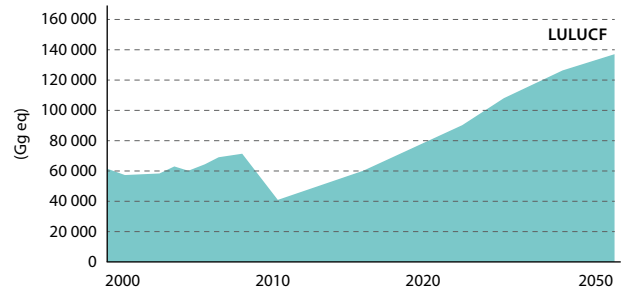
Forest type	Total area (ha)	Volume of stock (m <sup>3</sup> /ha)						VEGETATION					SOIL	
		%	Volume > 10 cm DBH <sup>a</sup>	Business inventories > 20 cm DBH <sup>a</sup>	Volume expansion factor	Volume > 10 cm DBH <sup>a</sup> 7=(5*6)	Basic timber density (kg/m <sup>3</sup> )	Trunk biomass (kg)	Biomass expansion factor	Total aboveground biomass (1000 kg) = ton/ha	Carbon conversion factor	Carbon stored in vegetation (1000 kg/ha)	Carbon stored in forest type (1000 kg)	Soil carbon (1000 kg/ha)
1	2	3	4	5	6	7=(5*6)	8	9	10	11	12	13	14	15
<b>SEMI-ARID AREAS</b>	<b>7,079,850</b>	<b>5.51</b>												
Forest and shrublands	6,747,700	5.25										110,109,390		28,810,800
Dry forest savanna	2,430,700	1.89	25				800	20,000	3.0	600	0.5	72,921,000	4	9,722,800
Dry forest hills	1,514,400	0.12	20				700	14,000	2.5	350	0.5	2,649,500	4	605,600
Dry forest mountains	1,052,400	0.82	25				600	15,000	2.0	300	0.5	15,786,000	4	4,209,600
Dry forest valleys	310,600	0.24	15				600	9,000	2.0	180	0.5	2,795,400	4	1,242,400
Dry shrublands	2,802,600	2.18	10				600	6,000	1.8	108	0.5	15,134,040	4	11,210,400
Special forms of life	332,150	0.26										823,450		1,820,000
Mangroves	4,550	0.00	50				700	35,000	2.0	700	0.5	159,250	40	182,000
Dune shrublands	136,000	0.11	2				600	1,200	1.8	2.2	0.5	146,880	5	680,000
Hills	191,600	0.15	5				600	3,000	1.8	5.4	0.5	517,320	5	958,000
<b>SUB-HUMID AREAS</b>	<b>4,144,800</b>	<b>3.22</b>												
Forest and shrublands	4,144,800	3.22										50,672,880		43,483,000
Subhumid forest mountain	22,500	0.02	20				550	11,000	3.0	330	0.5	371,250	15	337,500
Subhumid forest inter-Andean valleys	384,500	0.30		50	1.5		500	37,500	2.0	750	0.5	14,418,750	15	5,767,500
Sub-humid shrublands	3,737,800	2.91	30				400	12,000	1.6	192	0.5	35,882,880	10	37,378,000
<b>ALLUVIAL WETLANDS</b>	<b>93,634,963</b>	<b>72.86</b>												
Forest	56,865,163	44.17										3,162,514,587		2,839,978,650
Moist forest, meandering plains	3,690,200	2.87		80	1.3	104	600	62,400	3.0	187.2	0.5	345,402,720	50	184,510,000
Moist forest, low terraces	1,754,900	1.37		100	1.2	120	550	66,000	2.5	165.0	0.5	144,779,250	50	87,745,000
Moist forest, medium terraces	4,567,200	3.55		150	1.2	180	550	99,000	2.0	198.0	0.5	452,152,800	50	228,360,000
Moist forest, high terraces	1,297,700	1.01	147				500	73,500	2.0	147.0	0.5	95,380,950	50	64,885,000
Moist forest, low hills	28,558,200	22.22		105	1.1	115.5	500	57,750	2.0	115.5	0.5	1,649,236,050	50	1,427,910,000
Moist forest, high hills	1,851,500	1.44		95	1.1	104.5	450	47,025	1.5	70.5	0.5	65,300,091	50	92,575,000
Moist forest, mountains	15,051,763	11.71		80	1.0	80	450	36,000	1.5	54.0	0.5	406,397,601	50	752,588,150
Queñual forest	93,700	0.07	60				550	33,000	2.5	82.5	0.5	3,865,125	15	1,405,500
<b>SPECIAL FORMS OF LIFE</b>	<b>10,464,100</b>	<b>8.14</b>												
Swamps	5,043,400	3.92								5	0.5	12,608,500	20	100,868,000
Wetlands (aguajal)	1,415,100	1.10								207.0	0.5	146,462,850	100	141,510,000
Hydromorphic savanna	7,800	0.01	5				400	2,000	1.5	3.0	0.5	11,700	50	390,000
Bamboo forest	3,997,800	3.11					0			15.0	0.5	29,983,500	50	199,890,000
<b>SHRUBLANDS AND GRASSLANDS (HIGH ANDEAN)</b>	<b>26,305,700</b>	<b>20.54</b>												
Moist shrublands	4,077,700	3.17								5.0	0.5	10,194,250	40	163,108,000
Scrublands	19,711,400	15.34								3.0	0.5	29,567,100	15	295,671,000
Puna grassland	2,424,900	1.89								2.0	0.5	2,424,900	15	36,373,500
Wetland	91,700	0.07								2.0	0.5	91,700	30	2,751,000
<b>OTHER FORMATIONS</b>	<b>23,661,947</b>	<b>18.41</b>												
Deforested areas	6,948,237	5.41								9.6		223,733,190	20	97,275,300
Secondary forest	4,863,765													
Cultivated areas in the coastal region	942,500	0.73												
Coastal desert	12,857,500	10.00												
Rivers, lakes, ponds, snowfields and island areas	2,913,710	2.27												
<b>TOTAL</b>	<b>128,521,560</b>	<b>100.00</b>												
a	DBH = diameter at breast height													

Source: FAO 2010 from Report on Peru's progress in Achieving ITTO Objective 2000 and Sustainable Forest Management (Evaluation Period 2002–2008)



**Figure 8. Percentage of GHG emissions by category, 2000.**

Source: MINAM 2010a



**Figure 9. Projected emissions for the LULUCF category.**

Source: MINAM 2010a

For LULUCF, the national inventory developed for the second national communication projected emissions at 43,116 Gg of CO<sub>2</sub>eq by 2010, which represents a 24% reduction in 10 years; however, it estimated 2020 emissions at 58,377 Gg, a

35% increase in the following 10 years (MINAM 2010a). Finally, it projected 2050 emissions at 138,074 Gg, a 137% increase over 30 years (Figure 9).

# 3 Institutional environment and distributional aspects

## 3.1 Governance in the forest margins

### 3.1.1 Forests and major multilateral environmental agreements

According to the study Identification of Synergies for Capacity Building between the Conventions on Climate Change, Biological Diversity, and Desertification and Drought (CONAM 2006), in Peru, international conventions about environmental issues are seen as a merely environmental issue managed by a small group of practitioners who generally work on environmental matters. The degree of implementation of each convention is limited, and coordination and harmonization of national objectives, strategies and plans are weak or nonexistent (MINAM 2010a), although there have been important advances such as the National Strategy on Climate Change, the National Strategy on Biological Diversity and the National Program to Combat Desertification. For example, for intersectoral coordination tasks, national commissions have been formed on three issues: climate change, biological diversity, and desertification and drought. However, despite having worked for so many years, capacity-building is not permanent or homogeneous, and it is more individual than institutional. The focal points of the conventions lack the basic resources for adequate follow-up. Implementation of the conventions and definition of national legal and strategic frameworks are still at an early stage (MINAM 2010a). Box 2 lists environmental agreements to which Peru is a party. Table 9 summarizes Peru's progress on implementation of three major environmental conventions.

The government of Peru has stated that it aims to reduce the deforestation rate for 54 million ha of forests to zero by 2021 (MINAM 2011d), which should represent a 47.5% reduction in national

#### Box 2. Major environmental agreements signed by Peru

- Convention on Wetlands of International Importance especially as Waterfowl Habitat, Ramsar, 2 February 1971. It entered into force in 1975.
- Convention on International Trade in Endangered Species of Wild Fauna and Flora. Washington, D.C., 3 March 1973. It entered into force on 25 May 1975.
- United Nations Convention on Biological Diversity. Rio de Janeiro, 5 June 1992. It entered into force on 7 September 1993.
- United Nations Framework Convention on Climate Change, New York, 9 May 1992. It entered into force on 21 March 1994.
- International Tropical Timber Agreement. Geneva, 26 January 1994. It entered into force on 1 February 1996.
- United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification. Paris, 17 June 1994. It entered into force on 26 December 1996.
- Andean Community, Decision 391. Common Regime on Access to Genetic Resources. Caracas, 2 July 1996. It entered into force on 17 July 1996.
- Kyoto Protocol to the United Nations Framework Convention on Climate Change. Kyoto, 11 December 1997. It entered into force on 11 September 2002.

GHG emissions compared to 2000. This goal was announced by the Minister of Environment in Poznan and Copenhagen at the Conference of the Parties to the UNFCCC and repeated in 2010 by the president in New York at the 65<sup>th</sup> General Assembly of the United Nations.

**Table 9. Progress on implementation of the Conventions on Climate Change, Biological Diversity, and Desertification and Drought.**

Convention	Strategies and plans	National commissions
United Nations Framework Convention on Climate Change	National Strategy on Climate Change (Supreme Decree No. 086-2003-PCM)	National Commission on Climate Change (Decree No. 007-99-CD/CONAM and Supreme Decree No. 006-2009-MINAM)
United Nations Convention on Biological Diversity	National Strategy on Biological Diversity (Supreme Decree No.102-2001-PCM) Regional Strategy on Biodiversity for Tropical Andean Countries (Decision No. 523, 2002)	National Commission on Biological Diversity ((Comisión Nacional sobre Diversidad Biológica)) (Supreme Resolution No. 227-93)
United Nations Convention to Combat Desertification	National Program to Combat Desertification and Drought (Ministerial Resolution-AG 0620-2001)	National Commission on Desertification and Drought (Supreme Decree No. 022-2006-AG)

In addition, this goal was incorporated into the National Environmental Action Plan 2011–2021 (MINAM 2011d) and the Bicentennial Plan Peru towards 2021 (CEPLAN 2011). Although there is not an explicit plan on how to achieve this goal, the National Program of Forest Conservation for Climate Change Mitigation (Programa Nacional de Conservación de Bosques para la Mitigación del Cambio Climático, PNCB) seeks to coordinate efforts to preserve 54 million ha of forests through the following objectives: (1) demarcation, mapping and monitoring of forests for conservation, (2) promotion of the development of production systems, based on sustainable natural resource use and conservation of forest biodiversity, which contribute to conservation and income generation, and (3) support for forest management and training of local stakeholders for sustainable resource use. However, the Action Plan on Climate Change Adaptation and Mitigation (MINAM 2011c) and the Second National Communication of Peru to the UN Framework Convention on Climate Change (MINAM 2010a) do not refer to this goal.

### 3.1.2 Forests and free trade agreements

The relation between trade and forests has gained prominence on the forest agenda in the last decade. Starting with the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and then moving to bilateral trade agreements, forests have become the subject of negotiation in major trade agreements that Peru

has signed in recent years. In this sense, many of the processes and changes that have occurred in the Peruvian forest sector have been closely associated with the implementation of international or bilateral trade agreements (Che Piu and Martínez 2011).

Compliance with CITES in regard to mahogany is a controversial issue in the Peruvian forest sector (EIA 2010; Che Piu and Martínez 2011) due to reports of non-compliance by the Government of Peru. Since 2002, when mahogany was listed in Appendix II of CITES, Peru has had difficulties in complying with the agreement, including conflict between national authorities in determining the national export quota for mahogany. In order to manage the implementation of CITES, Peru has approved a Strategic Action Plan for the Implementation of Appendix II of CITES for Mahogany in Peru 2008–2012, to which it assigned about PEN 2 million (approximately USD 600,000) for 2010. However, this progress did not put an end to the distrust of the CITES Secretariat (CITES 2011), which in 2011 demanded further signs of compliance with the convention from the Peruvian government. A recent complaint (Urrunaga et al. 2012) has again called into question the truth of field verifications by national CITES authorities when contrasting them subsequently to checks by the forest monitoring authority. The study identified more than 100 shipments of illegally sourced timber, possibly exported from Peru to the United States between January 2008 and May 2010, which would represent over 35% of

all Peru CITES permits for exports to the United States for this period. However, the Governments of Peru and the United States have denied that those shipments contained timber protected by CITES. On the contrary, Peru is considered one of the countries with type 1 legislation for the implementation of CITES (the highest level of compliance). At the meetings of the CITES Standing Committee, it was agreed that Peru had reached the three convention compliance indicators for mahogany and that it was not required to submit additional reports on mahogany management.

In 2007, Peru signed a Trade Promotion Agreement (TPA) with the United States that includes an annex on forest sector management, which suggests that good forest sector management is crucial to promote the economic value and sustainable management of forest resources. In order to combat trade associated with illegal logging and illegal trade in wildlife, the annex includes a number of activities to be carried out, mainly by the Government of Peru, to strengthen forest sector management. These include increasing the number of staff, improving native communities' capacity to manage their land for forest production, improving CITES implementation and amending the Criminal Code to raise penalties against illegal logging. The annex also establishes a number of measures such as audits of forest producers and exporters, and verifications of compliance with regulations and other enforcement measures.

The TPA has played an important role in many recent events in the Peruvian forest sector. Peru has justified the need to pass a new Forestry and Wildlife Law to prevent non-compliance. Therefore, it made great efforts to speed up the approval of the law through a legislative decree made without transparency or participation, which generated social conflicts that forced the law's repeal and the development of a new law through processes of citizen participation and indigenous peoples' consent. However, neither the TPA nor the forestry annex has explicitly established an obligation to pass a new law (Che Piu and Martínez 2011). The new Forestry and Wildlife Law has already been passed, but it is not yet in force, as its regulation needs to be approved. However, the Interethnic Association for the Development of the Peruvian Rainforest

(Asociación Interétnica de Desarrollo de la Amazonía Peruana, AIDESEP), the leading Amazon indigenous organization, questions this law as not being based on free, prior and informed consent. The Ombudsman Office considers that they have met the minimum free, prior and informed consent requirements; still, it warns that the process cannot be used as a model.

In 2009, Peru signed a Free Trade Agreement with China, which includes cooperation on forestry and environmental protection. The agreement not only calls for bilateral cooperation in the forest sector on sustainable management of forests, plantations and timber processing, and a training and study program, but it also sets out to improve the rehabilitation and sustainable management of forests in order to increase carbon sinks and reduce the impact of climate change in the Asia-Pacific region, for which both countries have agreed to negotiate a bilateral agreement on forest cooperation. Although negotiations on the agreement have not started yet, it is important because China is the destination for nearly one-third of Peruvian forest product exports.

A Trade Agreement between Peru and the European Union came into force in March 2013, and its section on trade and sustainable development addresses forest products and climate change. Bilateral cooperation issues include activities related to climate change adaptation and mitigation, including REDD activities, verification of the legal origin of forest products, voluntary forest certification and traceability of forest products, and best practices for sustainable forest management.

Significantly, in the last two trade agreements signed by Peru, the relationship between forests and climate change is expressly mentioned, and the last agreement even refers to REDD+. In view of a potential delay in the definition and start of an international REDD+ scheme, the existence of other agreements, although bilateral and trade related, contributes to a cooperation framework facilitating future agreements on REDD+ between states. Nevertheless, one critique of REDD+ argues against its strong commercial and market focus. Thus, although these references to forests are still framed within bilateral cooperation, stakeholders are concerned that they have been discussed in the context of trade negotiations.

### Illegal logging

It is estimated that a high percentage of forest products come from illegal activities. The highest figures estimate that 80–90% of the timber extracted from the Peruvian Amazon is illegal (SENECA 2004; Salazar and Benites 2006; Cueto and Enrique 2010), while the lowest figures estimate 15–45% (Pautrat and Lucich 2006). Illegal logging often violates the human rights of indigenous populations, especially their right to property, prior consent, livelihood and cultural integrity (Salazar and Benites 2006), and affects at least 31% of the native communities, who consider illegal logging the main source of their problems with the outside world (CEPLAN 2011).

A report published by the Environmental Investigation Agency (EIA) on illegalities in the sector discusses various types of illegal activities that range from inventories with fake volumes to logging in protected areas and the fabrication of managements plans (Urrunaga et al. 2012). Illegal logging in Peru is fostered by the existence of markets for these products, the low risk of being punished and the low cost compared to legal operations, on which most control activities are usually focused. Ambiguous legislation and a weak state presence hinder control activities in most parts of the Amazon. They also contribute to illegal extraction, corruption and negligence in compliance with duties, not only by government officers but also by forestry consultants.

Concession agreements in production forests and permits on native community lands are often used as an instrument to legalize ('launder') the illegally harvested timber (Dourojeanni et al. 2010). This problem extends even to protected natural areas, as in the area of Alto Purus, where there is evidence of incursions by illegal loggers when it was a reserved area and even after its classification as a national park (Pautrat and Lucich 2006). The systematic 'laundering' of illegal timber has been documented in a report by EIA (Urrunaga et al. 2012).

For approximately 10 years, efforts have been made to face and stop illegal harvesting and trade in forest resources. In 2002 the Multisectoral Commission against Illegal Logging (Comisión Multisectorial de Lucha Contra la Tala Ilegal, CMLTI) was created to design and conduct a National Multisectoral Strategy in the Fight

Against Illegal Logging (Estrategia Nacional Multisectorial de Lucha Contra la Tala Ilegal) and organize the removal of the illegal loggers from reserved areas, forest concessions and native community lands. However, the following year, INRENA, then the national forest authority, created the Special Commission against Illegal Logging (Comisión Especial de Lucha contra la Tala Ilegal), which was dismantled in 2004 and recreated as the Commission to Support Actions against Illegal Logging and Timber Trade (Comisión de Apoyo a las Acciones de Lucha contra la Tala y Comercio Ilegal de Maderas), which developed its own strategy to fight illegal logging and implemented actions and operations supported by Peru's Navy. Then, the National Multisectoral Strategy in the Fight Against Illegal Logging was approved and declared of national interest, and CMLTI was formed three years after its official creation. CMLTI operated only two years. Although it still exists formally, during supervision by the Ombudsman Office in 2010, it was not possible to access up-to-date information about the actions carried out by this commission (Defensoría del Pueblo 2010).

### Corruption in the forest sector

According to the Sixth National Survey on Corruption (PROETICA 2010), corruption is the main problem faced by the country in terms of development, poverty, unemployment and inflation. There is a high level of tolerance for corruption, and the forest sector is one of the most tolerant of illegal activities. Peru has a wide range of public institutions, plans and regulations to combat corruption, but they have had little or no effect. Thus, the survey also shows that people have very low expectations of success in the fight against corruption. The study *Peru without Corruption: Corruption Diagnosis and Vulnerable Areas* reveals that there have been corruption cases in all areas of social, economic and political organization. It mentions vulnerable areas including environmental entities that develop mining and logging projects — for example, the cases of the Regional Bureau of Agriculture of Junín and the illegal exploitation of forest resources in the Loreto region (MINAG 2010). In compliance with the Forest Annex of the TPA, Peru approved, through Decree No. 09-2011-AG, a National Anti-Corruption Plan for the Forest and Wildlife Sectors, which was made public at the end of 2011 and included a 2012 plan of activities and



priorities, having held training workshops on the anti-corruption plan, but only in coastal regions.

At present there are no systematic studies characterizing specific forms, incidence, critical areas and impacts of corruption in the management of forest resources, wildlife, biodiversity and environmental services in Peru. Illegal activities in the forestry sector show patterns similar to those of informal or underground economies, and they are associated with illegal practices that occur across the rulemaking process, organization, access, management, administration, and use of forest resources and wildlife, during transport, primary processing, storage, secondary processing, domestic trade and export (MINAG 2010).

Corruption risks for REDD+ are of interest not only to NGOs such as Transparency International but also to UN-REDD. A Latin American workshop organized by the program in January 2013 identified more than 20 factors that could contribute to corrupt practices during REDD+ readiness and implementation, including lack of information access, lack of transparency, lack of safeguard mechanisms, bias in stakeholder inclusion and influence peddling. Six major corruption risks were identified for REDD+ readiness for Peru:

1. deliberately weak designs that allow for illicit movements of funds
2. corruption of the justice system or of the informal conflict resolution system
3. lack of transparency leading to cronyism when appointing new staff to guide the readiness process
4. undue influence on determining who can carry out REDD+ activities
5. creation of fraudulent licenses, property titles and carbon rights
6. fraud to prevent recognition of informal and customary tenure rights.

### **Forest planning and management**

With regard to territorial planning, forests in Peru have not undergone a comprehensive process of zoning, management, inventory and valuation, although territorial planning is supported and inspired by national legislation and a set of international agreements and declarations (Malleux 2009). Economic and ecological zoning was incorporated into the Peruvian legal

framework in 1997 to prevent problems such as title overlapping and inappropriate use. But it was only in 2004 that it was regulated by Supreme Decree No. 087-2004-PCM, the Regulation on Economic–Ecological Zoning. Today its implementation is the responsibility of MINAM, while regional and local governments are in charge of enforcement in the political administrative areas under their remit (MINAM 2010b). There are no effective mechanisms to enforce compliance by the authorities with economic and ecological zoning and territorial planning.

Official data on forest types, conservation and use are out of date leading to a lack of forest heritage management and of an effective registry of forest land uses and rights (Capella and Sandoval 2010). According to MINAM (2013), it is not known how much of the forests and forest lands have no designation or any type of granted forest rights, and it is estimated that they represent 20% of the Amazon. Forest area planning needs to be completed and improved, with identification of forest types as well as those areas in which deforestation and degradation threaten the sustainability of ecosystems (Capella and Sandoval 2010). It is especially necessary to develop a registry of assigned uses and granted rights on forest lands, since the regime of access to natural resources must be coordinated with the territorial planning process (Pulgar-Vidal 2011).

Participatory forest management and public policy implementation are limited by the lack of state capacity. The National System of Protected Natural Areas also has committees for the management of protected natural areas, of which 80 are national areas; one of its roles is to participate in the approval of the management plan, the main instrument for the management of protected natural areas. The forestry sector introduced it, and the current legislation established forest management committees formed by all forest users in a unit of forest planning (Forest Management Unit) in order to contribute to the planning and management of forest resources and wildlife. However, the operation and effectiveness of these management committees have been weak and ineffective, and few are now operational.

REDD implementation requires clear forest planning with forest governance capable of



controlling and focusing its goals on sustainable development. But without the necessary management tools or suitable human and financial capacities, and with corruption in monitoring institutions, it will be very difficult to implement this mechanism successfully. The lack of transparency, participation and accountability in the Peruvian forestry sector causes challenges to the legitimacy of public policy making and implementation processes. REDD implementation in Peru will require strengthening these elements in order to contribute to legitimacy and sustainability. Furthermore, weaknesses in forest planning, coordination and management capacities, although not exclusive to the forestry sector, will require attention in the REDD readiness process (Che Piu and García 2011). REDD readiness actors will need to see and act beyond the forest and environmental sector. Peruvian legislation has strategic environmental assessments to identify cumulative impacts over time, which are synergistic with other policies, plans and public programs (Che Piu and Martínez 2011).

### 3.2 Decentralization and benefit sharing

In the 2000s a new decentralization scheme started in Peru, with the distribution of responsibilities among the three government levels, national, regional and local. The implementation of the decentralization process is planned in stages to ensure continuity and quality improvement in the provision of services to the population. However, these stages have responded primarily to the visions of the governments in power. The decentralization process formally started in 2002, during the administration of President Alejandro Toledo (2002–2006). It was characterized by: approval of the initial legal framework; election and installation of regional governments; initiation of reform via the transfer of responsibilities and duties to regional governments; and a failed process to integrate departments to create regions. In the second stage, during the government of President Alan García (2006–2011), milestones included: refocusing the decentralizing strategy; the replacement of the National Council of Decentralization with the Decentralization Secretariat; the acceleration of the transfer of functions; the relative consolidation of regional governments; and the

emergence of new stakeholders in the regional and municipal scene, including the National Assembly of Regional Governments, municipal associations and intergovernmental coordination boards (PRODECENTRALIZATION 2011). Some responsibilities are shared among different levels of government, so it was established that each ministry should develop a mix of shared responsibilities and duties, clarifying what corresponds to each government level but also allowing a review of consistency in the allocation of responsibilities and definition of duties to be transferred (Congreso de la República 2011).

Although 4342 of the 4810 duties (90%) that are planned to be transferred from the national government to regional governments have already been transferred (PRODECENTRALIZATION 2011), one of the weakest elements in the transfer process has been the lack of transfer of financial resources to carry out the transferred duties (Defensoría del Pueblo 2009). In some cases, the government transferred duties that it had not been able to control (such as artisanal and small-scale mining, where there is great informality) to regional governments, retaining for itself medium- and large-scale mining, which are much more formal. This has made it difficult for regional governments to comply with their duties due to lack of capacity.

Another important issue has been the formulation and validation of the matrices of allocation of responsibilities among the three levels of government (PRODECENTRALIZATION 2009). Especially in the case of shared duties, it remains a challenge to adjust the institutional and regulatory design of the national, regional and local governments to the decentralization process, in order to facilitate operationalization of a unitary and decentralized State (PRODECENTRALIZATION 2011; Congreso de la República 2011). This is the main challenge now, together with the need for sufficient resources and institutional strength.

For 2011, the Law on Public Sector Budget allocated only 30% of the country's general budget to decentralized institutions. According to the Political Constitution of Peru, the divisions are entitled to receive a proper share of the total income and revenue obtained by the State from the exploitation of natural resources. In addition,

the Organic Law on Sustainable Natural Resource Use establishes that all natural resource use by individuals results in an economic compensation, which is determined by economic, social and environmental criteria. Thus, the Fee Law and its regulation determine the natural resources whose exploitation generate fees (mining, oil, gas, hydropower, fishing and forestry), and regulate their distribution in favor of regional and local governments in areas where natural resources are exploited.

In the case of economic compensation, this is established in each special law on natural resource use; in the case of forest resources, the compensation is called ‘use rights’, and is calculated based on area and/or quantity, volume or value of the species. These two are the main natural resource transfers allocated by the national government to regional and local governments, but not the only ones (Pulgar-Vidal 2011). For most natural resources, the fee is equivalent to 50% of the income tax; but for the forestry sector, the fee consists of 50% of the payments for the right to use forest resources and wildlife. The website of the Ministry of Economy and Finance (Ministerio de Economía y Finanzas, MEF)<sup>1</sup> states that the largest transfer of resources for forestry fees was recorded in 2007 (PEN 7,297,723). However, in 2011 only PEN 129,886 were transferred, an insignificant amount compared to PEN 4,262,774,686 of mining fees in the same year.

In the case of forestry decentralization, the process is ongoing and currently, both models are used simultaneously (Box 3). In some parts of the country, a decentralized model has been implemented, in which granting of rights and forest control, and monitoring actions are the responsibility of regional governments. Others temporarily continue to follow a decentralized model through the Forest and Wildlife Technical Administrations (Administraciones Forestales y de Fauna Silvestre, ATFFS), which are dependent on MINAG’s General Directorate of Forestry and Wildlife (Dirección General Forestal y de Fauna Silvestre, DGFFS) while the transfer of forest duties to regional governments is completed. The decentralization system was introduced in 1999 after the National Institute of Natural

### Box 3. Forest duties transferred to regional governments

- Specific duty “e”: to perform monitoring and control activities to ensure the sustainable use of natural resources in their jurisdiction.
- Specific function “q”: to grant permits, authorizations and forest concessions in areas in the region, as well as to conduct promotion and control activities in strict compliance with national forest policy.

Source: Article 51 of the Organic Law of Regional Governments, Law No. 27867.

Resources assumed forestry responsibilities and replaced the centralized system that had been in place for almost 40 years. However, in the 10 years that the decentralized system has been implemented, it has highlighted the difficulties of centralism in terms of delays and difficulties in understanding and adapting to the specific characteristics of each geographical area.

The eight regional governments to which forest duties have already been transferred (Amazonas, Ayacucho, La Libertad, Loreto, Madre de Dios, San Martín, Tumbes and Ucayali) together represent more than 50% of the national territory, 78% of the Amazon and 90% of permanent production forests in the country (Che Piu and Martínez 2011). Although these regional governments have become relevant stakeholders in the implementation of national policies and in the enforcement of legislation, they are not yet relevant to policy making or the development of regulations. Some progress has been made in the transfer of duties related to the powers of control, monitoring, auditing and granting of rights, but the transfer of duties has not necessarily meant that the personnel capacities, infrastructure and financial resources necessary to fulfill those duties have been passed on (Che Piu and Martínez 2011).

The first emerging difficulties are related to the capacities and autonomy of regional governments. Although the responsibility for administration and management of most of the forests in Peru has been transferred to five regional governments, they have still not been given the necessary resources to build capacity and to fulfill those responsibilities.

1 <http://ofi.mef.gob.pe/transferencias/gl/default.aspx>

If the regional governments do not have the necessary capacities and resources, they are unlikely to exercise their duties effectively. In contrast, the National Forest Authority's budget increased from PEN 15,180,145 in 2009 to PEN 41,937,605 in 2011 (Compliance Matrix of the Forest Annex in the Trade Promotion Agreement with the United States)<sup>2</sup>. In 2011, while an official from the national authority was in charge of managing and administering a forest area of 12,723 ha, one from the regional government of Loreto was in charge of 413,807 ha (DAR 2012). As such, while the national authority had PEN 3.73 per ha of forest under their responsibility, the regional forest authority of Loreto only had PEN 0.10 per ha.

The duties in forestry that were initially transferred to regional governments were then passed on to Regional Bureaus of Agriculture through Regional Offices of Economic Development, on which they depend. But later, under the principle of autonomy (Che Piu and Martínez 2011), each regional government implemented its own organizational structures for the execution of forest duties. Thus, Loreto has a Forestry and Wildlife Regional Program, Ucayali has an Executive Directorate of Forestry and Wildlife, and San Martín has a Regional Environmental Authority.

In respect to REDD, Peru has supported the tiered or nested approach since 2008 (Che Piu and García 2011). In this approach, subnational spaces play a central role from which the national system is built. Regional governments manage most of the Amazon forests and face significant challenges in fulfilling their duties. In this sense, the existing REDD capacities at the subnational level are found mainly in civil society institutions and private-sector organizations that have REDD projects underway (Che Piu and García 2011). Subnational-level implications and bottom-up national-level development have not been studied thoroughly; it is not even clear how early initiatives and projects are coordinated with this approach. This situation may create uncertainty about the suitability of the measures taken to date. A project funded by the German Development Bank expects to address these issues and to contribute

to MINAM's design of this multi-level approach model (Che Piu and García 2011).

### 3.3 Indigenous rights and forest and carbon rights

According to the Peruvian National Report for the Global Forest Resources Assessment 2010, 18.68% of forests (12,786,480 ha) are in the private domain (such as native and rural communities and private farms) and 81.32% of forests (55,660,330 ha) are public domain lands (such as protected natural areas, production forests, state territorial reserves and forest concessions). But the Political Constitution of Peru states that all natural resources are part of the national heritage. That is, the state has domain over all natural resources, including forests, resources and services, regardless of whether they are under public or private domain. Although the Political Constitution of Peru does not allow this natural heritage to be granted as property, property rights have been granted to a small percentage of natural forests, mostly due to "inappropriate procedures" (Capella and Sandoval 2010). In addition, the constitutional and legal framework allows individuals to use natural resources through concessions, licenses, permits, and other arrangements (Law No. 27308, Forestry and Wildlife Law, see Table 10).

There is a significant imbalance between the broad progress of legislation to promote private investment in the extractive and infrastructure sectors, and the scarcity of legislation on environmental and social issues. Thus, environmental management instruments have become a formal requirement for obtaining licenses and permits, in which citizen participation has become just a legitimating process (Dourojeanni et al. 2010). Dourojeanni argued that first the mining sector and later the hydrocarbons and agricultural export sectors were reestablished with investment-friendly legal frameworks, while forest use regulations still have a significant biodiversity or control focus, which limits their advocacy role. This results in two disincentives. First, it is feared that REDD+ could negatively impact on the rights of indigenous peoples and local residents due to insufficient effective social and environmental safeguards, so many social actors object to the advance of REDD+. Second, more promotion

2 [http://www.acuerdoscomerciales.gob.pe/images/stories/eeuu/matriz\\_de\\_cumplimiento\\_anexo\\_Forestal\\_TLCEEUU\\_Marzo2012.pdf](http://www.acuerdoscomerciales.gob.pe/images/stories/eeuu/matriz_de_cumplimiento_anexo_Forestal_TLCEEUU_Marzo2012.pdf)

regimes are required for production activities based on sustainable use of forest resources and wildlife, so REDD+ does not attract enough interest from the private sector. These are two extremes of the current legal framework that should be considered in a REDD+ readiness process.

Forestry legislation allows for authorization of the sustainable use of timber and non-timber forest resources by individuals. When forest lands are of public domain, they are granted through forest concessions for timber management, reforestation concessions and non-timber concessions for rubber, Brazil nut, etc. When forest lands are private domain, rights are granted through permits, such as for rural and native communities. In the old Forestry and Wildlife Law, still in force, forest environmental services have been considered among non-timber forest resources, but specific regulations for the granting of rights on these services were not approved.

In the case of indigenous peoples, the Constitution of 1993 recognizes as *campesino* communities those living on the coast and in the highlands of the country, and as native communities those living in the Amazon. It recognizes that land ownership is imprescriptible, it has removed the inalienability and immunity from seizure of communal lands. In Peru, the titling of indigenous land takes the form of settlements recognized with the title of communities—with legal person status—which differs from the concept of territory (Pulgar-Vidal 2011). In this context, it is important to consider that the right to territory is the basis of other collective rights of indigenous peoples (Ramos 2010), such as the right to prior consent or natural resource use. This regulatory framework reflects the position of political and economic powers, which were exposed in an article by former President Alan García suggesting that national interest in the natural resource utilization can conflict with indigenous peoples and their rights (see Table 10).

**Table 10. Types of rights granted by agent, use and granting body.**

Actor	Type of right granted	Land suitability	Granting body
Native communities	Ownership	Crops and pastures	COFOPRI and regional governments
	Model used in forest production potential or protected areas	Forestry	Legal gap
	Forest permit in areas transferred for use by native communities	Forestry or protection	MINAG-DGFFS and regional governments
<i>Campesino</i> communities (coastal and highland)	Ownership	All the lands where they are settled and conduct their activities (agriculture, pastures, etc.).	COFOPRI and Regional Agrarian Directorate
<i>Campesino</i> communities (Amazon)	Ownership	Portion where they are settled (crops and pastures)	COFOPRI and Regional Agrarian Directorate
	Transferred for use, possibly with forest permits	Forestry	COFOPRI and Regional Agrarian Directorate
Natural or legal person in general	Ownership only of lands suitable for agriculture	Crops and pastures	COFOPRI and Regional Agrarian Directorate
	Forest concessions in permanent production forests: timber, non-timber products, protection, ecotourism, conservation, non-forest (until 2006) and reforestation	Forestry	MINAG-DGFFS and regional governments
	Plantations on private or communal lands	Agriculture or forestry	MINAG-DGFFS

Source: Adapted from R-PP-Peru, July 2011

Thus, the government suggested the existence of a necessarily conflicting relation between indigenous peoples' development and rights, since they oppose the country's economic progress. As a result, efforts were made in 2008 to change the legal framework for indigenous lands, decision making and access to natural resources to facilitate investment.

### 3.3.1 Rights of indigenous peoples in the national and international context

Peru ratified Convention No. 169 concerning Indigenous and Tribal Peoples in Independent Countries of the International Labor Organization (ILO) through Legislative Resolution No. 26253 of 1993. It also signed and voted for the United Nations Declaration on the Rights of Indigenous Peoples (Ramos 2010). Peru's environmental legislation of Peru tangentially recognizes the rights of indigenous peoples, an example of which is the prioritization of the logics of use and extraction of natural resources over indigenous peoples' rights to lands and territories (Ramos 2010). After the long conflict between indigenous peoples and the then government, the new government passed the Law of Free Prior and Informed Consent with Indigenous Peoples and concluded its regulation in the first quarter of 2012.

Indigenous peoples have occupied their territories for generations, and exploit forest resources and services in a traditional manner. In order to integrate them into the market economy, different community forest management (CFM) initiatives have been put in place. The first effort to create a CFM-friendly legal framework was made in 2005. It was driven by the government and international cooperation and involved indigenous and civil society organizations. The result was the approval of Chief Resolution 232-2006-INRENA, which approved the terms of reference for the design of forest management plans in native community forests and established a scheme with differentiated management for native communities of up to three levels of intensity. During the process of approval of the new Forestry and Wildlife Law, organizations demanded continued enforcement of this resolution, a milestone in the process. It is still too early to assess the success of CFM projects. However, the first forest management certification in Peru was for native community forests managed under the stewardship of the NGO Association for

Integrated Research and Development (AIDER), which is currently implementing a relatively successful tender system for growing stock by communities in the area of San Martín.

The main national organization of Amazon indigenous peoples is the Interethnic Association for the Development of the Peruvian Rainforest (AIDSESEP), consisting of nine regional organizations, and more than 57 federations and territorial organizations. In 2008, AIDSESEP became the main opponent of the government of former president Alan García's proposals for investments in the Amazon (Box 4). This opposition was effective, as AIDSESEP was the only political actor that managed to bend the government and achieved the repeal of four legislative decrees to promote investments and make Amazonian environmental and social protection legislation more flexible. Another important indigenous organization is the Confederation of Amazonian Nationalities of Peru (Confederación de Nacionalidades Amazónicas del Perú, CONAP), initially consisting of 25 federations, but so far it has not made an official statement on REDD.

#### **Box 4. Excerpt from the opinion article "El síndrome del perro del hortelano" ("Dog-in-the-manger syndrome") by former President Alan García**

There are millions of hectares of timber lying idle, other millions of hectares that communities and associations have not and will not cultivate, hundreds of mineral deposits that are not dug up [...]. And all for the taboo of ideologies overcome by laziness, by sloth, or the dog-in-the-manger law — "If I don't do it myself, may nobody do it at all." Investment requires secure ownership, but we have been misled into handing over small land lots to poor families who do not have a penny to invest... This happens across Peru, idle land because the owner has no training or resources, so your ownership is apparent. This same earth sold in great lots would bring technology that could benefit community members, or comuneros, but the ideological spiderweb of the 19<sup>th</sup> century is still a barrier. The dog in the manger.

Translated from: García, 2007a



AIDSESEP has repeatedly stated that REDD is a threat to indigenous peoples, although in 2011 the organization decided to also consider it an opportunity under certain conditions (AIDSESEP and FPP 2011). This refocusing resulted from finding that some native communities were already participating in REDD+ projects, so it was no longer feasible to simply reject it. There was also a need to advocate setting conditions both for private projects and national programs. It therefore promoted the creation of Indigenous REDD roundtables in San Martín, Ucayali and Madre de Dios, which MINAM claims to support (MINAM 2011b), and the development of an alternative proposal to REDD called Indigenous REDD. This proposal was developed by the Coordinator of the Indigenous Organizations of the Amazon Basin (Coordinadora de las Organizaciones Indígenas de la Cuenca Amazónica), who presented it at COP 17 in Durban (COICA 2011). However, AIDSESEP has repeatedly expressed concern about the progress of REDD+ without the presence of a regulatory framework, effective institutionality and stronger indigenous communities. They have also reported the existence of ‘carbon cowboys’ who were promoting abusive agreements with some native communities such as the case of Matsés and the company Sustainable Carbon Resources Limited in Loreto (AIDSESEP and FPP 2011).

In the context of the process of the elaboration of the R-PP for the FCPF, MINAM reached 14 agreements with AIDSESEP. According to declarations from those institutions, they have been incorporated into the proposal document. Similarly, after the second national workshop of the Peru REDD Group, it proposed a set of commitments to MINAM, which were accepted. These agreements built a favorable context for the approval of the R-PP at the eighth FCPF Participants Committee held in Da Lat, Vietnam, in 2011. Through Resolution PC/8/2011/7 R-PP Peru, the Participants Committee approved the allocation of USD 3.6 million to Peru for the development phase of the National REDD Strategy (Santillán 2011). However, in 2011 and 2012 there was no progress in the compliance with requirements and the “key issues” listed in the resolution. The lack of a legal framework to regulate carbon rights has been one of the barriers to REDD projects. There is now in Congress a draft Law on Promotion of Compensation

Mechanisms for Ecosystem Services, pending in the Commission of Andean, Amazonian, and Afro-Peruvian Peoples, Environment and Ecology in the 2011–2012 legislative term. However, the Ministry of Environment has continued to improve that draft and expects to submit it in the 2012–2013 term. Both texts recognize that forest right holders (such as indigenous peoples, forest concessionaires, protected areas managers and the government) have the right of access to the economic benefits from the activities that contribute to forest ecosystem service restoration, maintenance or increase.

### 3.3.2 Carbon ownership in the national context

The new legal framework due to be enforced (new Forestry and Wildlife Law of 2011) and approved (Draft Law on Rewards for Ecosystem Services) is expected to facilitate the process reducing uncertainty about carbon right ownership. However, the lack of a planning system and a forest rights registry can pose significant difficulties in promoting REDD projects. There are more than 30 regulations on agricultural land and forest tenure, and the definition of the nature of the law is still a pending issue (Capella and Sandoval 2010). There is no established procedure for the use of benefits from environmental services provided by forest resources, i.e. there is no explicit indication of how rights are granted by the Peruvian State to individuals, along with the capacity to negotiate and benefit from environmental services from national forest heritage (Capella and Sandoval 2010; Weiland 2012). The new Forestry and Wildlife Law, Law No. 29763, not yet in force, establishes that the use of forest ecosystem services corresponds to those who hold the right to use natural resources. There is also a draft Law of Provision of Environmental Services (now called draft Law on Rewards for Ecosystem Services), which goes in the same direction. It is very likely that the natural resource license holders will be confirmed as rights holders on reduced emissions from these resources. A rule regulating REDD+ project registration in Peru is being developed by MINAM. Initially, this register would be merely informative, and later it would be used for the reduced emission registration.



### Land and tree tenure

A scheme has been in place since the 1990s in Peru, which is fairly liberal in terms of land ownership, starting with the titling of tenure areas, as an incentive to promote agriculture at the national level. With this policy of titling illegally occupied state lands, economic benefits are given to the actors who are directly responsible for deforestation (Killeen 2007). This caused the opening of new agricultural areas, although forest and environmental legislation prohibits change in forest land use. These land occupation processes have been influenced by state policies based on uninformed decisions and economic policies conditioned by social pressures (Malleux 2009).

Incomplete territorial and forest planning and the absence of a land registry cause conflict (Capella and Sandoval 2010), particularly when different types of titles are granted on the same natural resource, or when titles are granted on different natural resources located in the same environment. Although Law No. 26821, the Organic Law on Sustainable Natural Resource Use, addresses both situations, the lack of intersectoral coordination increases conflicts. For example, in Madre de Dios there are 381,000 ha of oil concessions overlapping with a protected natural area (SPDA 2011) and agricultural properties allocated in areas overlapping with forest concessions (Chávez et al. 2012). This will make it difficult to implement REDD+ in Peru, due to the difficulty in allocating not only carbon rights but also responsibilities for ecosystem conservation.

The Ombudsman Office reported 223 conflicts by December 2011, 56.5% of which were socio-environmental issues revolving around natural resource control, use and/or access. Access to land; access, use and disposal of water and natural resources; loss of soil and biodiversity; overlapping of rights; benefits and distribution; and deterioration of basic resources for the development of commercial or subsistence production activities, are among the most common issues (Pulgar-Vidal 2011). In this context, there are no effective mechanisms for resolving conflicts over natural resource uses. For example, forest management committees whose duties include helping resolve conflicts (Malleux 2009) are an almost inoperative mechanism to date. Originally, in the framework of the Forestry and Wildlife Law, about 24.5 million ha of permanent production

forests were created in the Peruvian Amazon. However, due to the problem of overlapping rights, the permanent production forest area now covers only 18.7 million ha (Malleux 2009).

### 3.4 Forest governance in Peru

Although information is an essential condition for actual participation in forestry sector governance processes, figures show low levels of transparency and access to information. In 2012, the average rate of compliance with the legislation on transparency and access to public information by government organizations with responsibilities in forest management and conservation was 72%. In addition, their rate of response to requests for access to information was 85%, and the availability of relevant information about the forestry sector via webpages or requests for access to information for that year was 82% (DAR 2013), higher than in 2011. However, they are still below the national averages, which are 86% for compliance with public information dissemination through Standard Transparency Portals (Defensoría del Pueblo 2013) and 98% for response to requests for access to information (PCM 2012).

The reform of forestry legislation and development for REDD+ since 2008 have triggered the most participatory processes in the history of forestry in Peru. In this forestry legislation reform process, a law was first repealed due to lack of participation and consent, which forced the government to organize a process with more than 200 contributions and dozens of workshops. However, this process was mainly focused on receiving feedback. Three days were devoted to consensus reaching at the end of the process. Then indigenous organizations managed to make Congress undertake a process of prior consent of indigenous peoples before passing the new law. But approval of its regulation will also require prior consent, followed by a citizen participation process. Something similar has happened with participation in national REDD+ readiness processes. Here the government has shifted from the development of national documents without participation, such as the development of a Readiness Plan Idea Note (RPIN) for FCPF in 2008, to organizing more extensive participation processes, like the development of the FIP Investment Plan in 2013.

However, a major challenge facing forest governance is the limited existing capacities in the sector. In the Report No. 151, the Ombudsman Office on Forest Policy and Peruvian Amazon concluded that the available resources and capacities are not sufficient, an issue which is more serious in the case of regional governments, which are in charge of forest resource management in their jurisdictions. However, an important step in strengthening forest institutionality was the creation of the Monitoring Agency for Forest Resources and Wildlife (Organismo de Supervisión de los Recursos Forestales y de Fauna Silvestre, OSINFOR) as a body attached to the Presidency of the Council of Ministers and responsible for the supervision of titles granted for the use of forest resources and wildlife. After evaluating forest authorities, the Ombudsman Office (2010) identified weaknesses in operational capacity, which limits the proper exercise of duties. Despite the limitations, the Headquarters of Protected Natural Areas show considerable improvement which is consistent with the budget increase of this institution, which went from PEN 13.2 million in 2009 to PEN 40.8 million in 2010.

Another important challenge for REDD+ governance in Peru will be interagency

coordination. The absence of a comprehensive view of the state has resulted in a consistent practice of limited communication and coordination within the public administration. Furthermore, there is no national development policy. The existing coordination between government levels and sectors is circumscribed to merely formal aspects (Dourojeanni et al. 2010). Dourojeanni et al. (2010) suggest there is a tendency among government officials toward lack of coordination with other authorities, especially when it comes to “granting rights to private actors in the development of extractive and infrastructure projects, as well as territorial planning, which has led to overlapping of rights” (p.132). This is a sensitive aspect, because, as mentioned above, it may be a factor in corruption in the processes of REDD+ readiness and implementation. The national REDD+ strategy and strategic options in Peru need to address this lack of coordination. Otherwise, more than 40 public programs and projects related to forests and climate change may not only waste synergies but may even hinder each other.

# 4 Political–economic context of the causes of deforestation and degradation

## 4.1 Deforestation and development policies

According to FAO (2011), annual forest cover variation rates in South America have remained the same (–0.5%) between the 1990s and the 2000s, but in Peru, the rate doubled, moving from –0.1% to –0.2%. Peru is the only country in the region to have shown such a remarkable increase, which indicates that deforestation responds more to internal than to external factors. In this sense, forest deforestation and forest degradation in Peru are a consequence of the country's development policies, especially in the last four decades. Weak institutionality in forest issues means that these policies are not framed within any national development plan or sustainability criteria and are not supported by any interinstitutional coordination mechanism. Development policies fostered Amazon settlement and natural resource exploitation and have sought to respond mainly to exogenous needs. This happened in the time of Amazon rubber tapping at the beginning of the 20<sup>th</sup> century, and still occurs with the current foreign investments in hydrocarbons (Hausman and Klinger 2008).

Although development policies promoting forest use change have generally been national in scope, they were influenced by regional and local contexts as well. Deforestation and regeneration patterns show the sensitivity of land use to macroeconomic policies, land policy, credit programs, and forest use control (Naughton-Treves 2004). However, studies like that of Almeyda et al. (2010) reveal that deforestation around small villages, such as Iñapari (Madre de Dios), can only be explained in terms of an interaction between national and regional policies, where local variables and transitory factors have special relevance. For instance, although to a lesser degree, regional development programs also encourage migration

flows and economic activities (Malleux 2009) that cause deforestation.

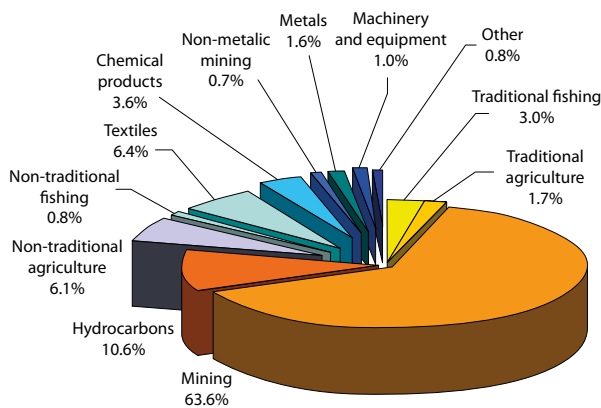
The current and mid-term growth process poses political dilemmas for forest conservation (MINAM 2010a). Peru's economic growth has been mainly due to the process of structural and stabilization reforms that were started in the 1990s (Loayza, 2008). In this decade, Peru's development of a legal framework began, seeking to promote private investment, especially foreign investment, across the country's economy (Dourojeanni et al. 2010) through stability in the tax regime, free availability of foreign currency, free foreign transfer of capital, and construction of road and port infrastructure, among others. These reforms have enabled steady growth of GDP in the past 15 years. GDP in 2012 was PEN 238 billion<sup>3</sup>, and total exports reached PEN 45 billion<sup>4</sup> (Figure 10). From 2001 to 2010, GDP increased by 73%, and the poverty rate fell from 55% in 2001 to 31% in 2010. Along with an increase in the purchasing power of the country and of a high percentage of the population, the demand for resources increased. This can be seen in the 4.6% increase in the agricultural sector from 1991 to 2010 (Apoyo Consultoría 2012). Agricultural growth is concentrated in increased exports of products such as asparagus, mango and avocado, but there is also an increase in production for the domestic market (BCRP 2010).

In the second round of elections, the then candidate Ollanta Humala committed himself to a road map that included sustaining the macroeconomic guidelines and economic model of previous administrations. Since coming into office,

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3 At 1994 prices

4 <http://www.bcrp.gob.pe/estadisticas/cuadros-anuales-historicos.html>



**Figure 10. Peru's exports by sector, 2005.**

Source: Hausman and Klinger 2008

he has not only kept this commitment but also kept key government officials in the MEF and the Central Reserve Bank. Consequently, no radical changes are expected in the near future to the main drivers of economic growth.

However, poverty reduction is still the main political goal of the country. In this sense, the conservation expectations need to be balanced with the search for local economic development (Naughton-Treves 2004). Poverty and extreme poverty in Peru are found mainly in rural areas: 60.3% of rural people are poor, and 21.1% live in extreme poverty (MINAM 2010a). A large number of people in the Amazon live in poverty and extreme poverty. In Peru, the percentage of people in poverty conditions in the Amazon was greater (48.4%) than in the country as a whole (39.3%) in 2007 (Gomez et al. 2008). Therefore, in order to bring "idle" areas (such as natural and secondary forests, deforested areas and floodplain forests) into production (García 2007b), investment projects in infrastructure, mining, oil and agribusiness are planned for coming years. Due to REDD+, these plans must be accompanied by a national strategy to address the deforestation they may cause or promote.

The first political cause of deforestation has been an increase in migration from the Andes to the Amazon and the subsequent agricultural expansion. This increase in migration has mainly been due to settlement of the Amazon (through tax and financial incentives, formalization of informal occupations and clearance of forests).

During colonial times (16<sup>th</sup> and 17<sup>th</sup> centuries), deforestation was associated with the establishment of bases for geographic exploration and evangelization of native people, so deforestation pressures were practically nonexistent. Large-scale natural resource exploitation in the Peruvian Amazon started in the late 19<sup>th</sup> century, with the rubber boom promoted by industrial development in Europe and North America (Toledo 1994). As a result, from 1890 to 1910 there was a peak in extraction of rubber, fur and wood, which had had practically no international demand until then. This period established and left behind a network of villages and small commercial towns, and caused the three biggest cities along the Amazon River — Iquitos, Manaus and Belem — to expand.

The rubber boom gave visibility to the Amazon, until then ignored and considered a no-man's land, placing it on the geopolitical agenda and generating pressure to occupy it (Toledo 1994), not only in the face of external threats but also as an opportunity to address domestic issues. In Peru, migration to the Amazon was promoted in order to address land scarcity problems, reduce migration to coastal cities and stop social conflict over large-landed properties in the highlands (Barclay and Santos 1991). Increased migration to the Amazon and agricultural expansion have been the main direct causes of deforestation in the Peruvian Amazon since 1940. Likewise, experience shows that deforestation has increased as a result of the opening of roads or access tracks into the Peruvian Amazon or on riverbanks, as a result of human settlements and shifting cultivation (Naughton-Treves 2004). These dynamics were supported by the subsequent construction of roads or access tracks, which fostered migration (MINAM 2010a). This has increased inappropriate land use, such as some agriculture by migrants in which lands are often degraded and then abandoned, and the few areas that still have a potential for agriculture are handed over to relatives or sold to third parties.

Promoting settlement in the Amazon is the development policy that has had the greatest impact on forests—and probably the oldest. Some of those incentives have consisted in providing an exceptional tax framework for the Amazon (Pautrat and Lucich 2006), which exempts the region from the sales tax, sets lower income tax rates and establishes a "special tax credit" of around 50%

for sales outside the region. In recent decades, settlement of the Amazon has expanded due to migrations that were not directly promoted by the state but rather were triggered by poverty in the regions of origin. This agricultural settlement of the Amazon entails converting forests into farming areas, since forests are considered a barrier to farm development (MINAM 2009). Between 1940 and 1970 (MINAM 2010a) migrations to the Amazon were promoted to expand the agricultural frontier. These policies continued in the 1970s and 1980s, with subsidies to agriculture and livestock production, focusing on promoting farmer migration to the Amazon and border areas, in order to occupy the national territory and protect the borders (Killeen 2007). These policies led to rapid growth of the Amazon population, which went up four-fold between 1940 and 1981 (from 414,452 to 1,796,283 people) (Gómez et al. 2008). According to the 2007 National Population Census, four of the seven regions with the highest average annual growth rate since the 1993 census were in the Amazon: Madre de Dios with a 3.0% increase in first place, Ucayali with 2.2% in second place, San Martín with 2.0% in sixth place and Loreto with 1.8% in seventh place.

Settlement policies were accompanied by policies to formalize the rural property. As an incentive to settlement in the Amazon region, lands deforested for the establishment of agricultural activities are titled, which worsened issues including land grabbing, opening of areas for agricultural activities, land trafficking, and the resulting deforestation (Pautrat and Lucich 2006). Although contrary to the legal framework in force, which establishes that the lands that are part of the forest heritage cannot be subject to change in use, particularly farming, the state itself through other regulations, still requires “economic improvements to land” as a condition for titling, which almost always means a land-use change from forest to agriculture (Malleux 2009).

A second group of policies has been aimed at promoting investment in road infrastructure, initially in the form of access highways. Numerous documents have documented the social and environmental impacts of roads, especially the positive correlation between roads and deforestation (De Luca 2007; Enrique and Cueto 2010). In the case of Peru, road interconnection in the Amazon began after 1940; access roads into Pucallpa and the Central Amazon (Selva Central) connected with neighboring Andean zones,

and through them, with the Peruvian coastline. This led to an increase in the number of settlers coming from Andean mountains, opening logging roads and the vast plains to human settlements (MINAM 2009). These policies continued in the 1960s and 1970s, and like in other Amazon countries, important road projects were fostered so as to promote migration of small- and large-scale farmers by means of a variety of subsidies. That was the case with the Jorge Basadre road to Pucallpa and the Fernando Belaúnde Terry road (or Marginal Road to the Amazon), construction of which was started in the early 1960s, leading to high deforestation rates (even today) in the San Martín region, resulting from the construction itself and the consequent migration of settlers (Gómez et al. 2008).

Investment in the transport sector in Peru has shown weak capacity to plan and manage the direct impacts of deforestation and forest degradation, or even to guarantee a better distribution of the benefits associated with road construction (BICECA 2010). In the last decade, road construction has reached a continental scale with the launch of the Initiative for the Integration of the Regional Infrastructure of South America (IIRSA) in 2000, which is intended to promote sustainable development in South America through infrastructure development. Several infrastructure projects have been developed in Peru in the framework of IIRSA. IIRSA's iconic project in Peru has been the South Interoceanic road. This project consists of building and rehabilitating 2603 km of roads to link the South Peruvian macroregion with Acre state in Brazil (BICECA 2010). However, after five years of work, the environmental and social impacts of road construction can be seen in an increase in population settlements along the road axis and an increase in deforestation rates in Madre de Dios (Southworth et al. 2011). The Program for Environmental and Social Management for Mitigation of the Indirect Impacts of the Southern Interoceanic Road, a program of the Andean Development Program (Corporación Andina de Fomento, CAF) and INRENA, worked to avoid these impacts. Nevertheless, institutional weakness and poor planning have hindered the capacity to prevent the negative effects of the road project and to boost positive impacts (Enrique and Cueto 2010).

The third set of policies increasing deforestation, although to a lesser degree (MINAM 2010a), have



focused on promotion of investments in energy infrastructure, and hydrocarbon and biofuel exploitation. Several energy projects have been implemented in the Peruvian Amazon at the same time: oil, gas, biofuels and dams. This investment boom has been a pillar of the process of private investment promotion started in the 1990s, through a legal framework that encourages private investment, mainly foreign investment, in which the state undertook to promote the development of activities across the country's economy (including foreign and domestic trade, road infrastructure, telecommunications, ports, airports and warehouses), ensuring free participation of the private sector in service provision (Dourojeanni et al. 2010). Policies supporting biofuels resulted in the devotion of 19,900 ha to oil palm cultivation by 2010 (Gutiérrez-Vélez et al. 2011). Hydrocarbon exploitation has become one of the main economic activities in the Amazon in terms of income. In the case of Loreto, oil fees and overriding fees represented 94% of all the financial transfers made by MEF in 2011, and in the case of Ucayali the oil fee and overriding fee and the funding for gas exploitation amounted to 76% of transfers for 2011<sup>5</sup>. According to Finer and Orta-Martínez (2010), in 2009 there were 52 active concessions covering 41.2% of the Peruvian Amazon: active and proposed concessions together amounted to 70% of that area. Of the active concessions, 88% overlap with indigenous lands, and 81.5% of the wetlands in Abanico del río Pastaza are also under concessions. The authors estimate that over 100,000 km of the seismic testing lines have been cut by activities in the forests in this area. The hydrocarbon and mining sectors are facing social and government demands for an end to the vicious circle of low tax rates and royalties established by previous governments to compensate foreign investors for the perceived risk of expropriation (Hausman and Klinger 2008).

## 4.2 Deforestation and lack of political leadership

The lack of decisions on public policies has also fostered deforestation. This is made clear by the lack of a national development plan and, especially for the Amazon area, the lack of a policy to strengthen forestry institutions and governability, and the lack of mechanisms for inter-institutional

### Box 5. Policy gaps that contribute to deforestation

Political decisions that contribute to deforestation include the absence of:

- a sustainable energy policy
- a sustainable transport policy
- recognition of indigenous peoples' rights
- policies to fight poverty and on rural development
- a national land-management and planning policy
- policies on sustainable development at regional and local level
- a national forest and forest management policy
- a biodiversity conservation policy
- a national policy on sustainable development for the Peruvian Amazon.

communication and coordination. Although Peru's institutional and legal capacities have improved, they can still be considered insufficient (Dourojeanni et al. 2010). Regarding the Amazon, this lack of proper policies and regulations to promote their sustainable development imply a violation of a mandate set forth in the Political Constitution. As a result of the lack of mechanisms for inter-institutional coordination and communication in forest management, the lack of a state vision or policy and weak institutions, agricultural and transport policies have jeopardized sustainable forest resource management (Box 5).

Setting up extractive and infrastructure investment projects without the framework of a national development plan or policy will give rise to random interventions within the Amazon territory, which in turn will have numerous environmental and social impacts and will be a source of conflict due to overlaps with indigenous territories and protected natural areas. There are no clear, comprehensive and cross-cutting development policies setting out a vision of the country in the short, medium and long term. It is partly for this reason that the legal and institutional framework contains several contradictions between the objectives and goals of the national government and those of regional and local governments. There is a sharp difference between the level of progress of the legislation to promote private investment in the extractive and infrastructure sector and laws on environmental and social matters, thus generating a clear imbalance that

5 <http://ofi.mef.gob.pe/transferencias/gr/default.aspx>



brings about a large number of conflicts in relation to these projects (Dourojeanni et al. 2010).

The National Strategic Planning Center (Centro Nacional de Planeamiento Estratégico, CEPLAN) needs to prepare a comprehensive development plan at a national level or in the Amazon, in the framework of an official consultation and participation process, in line with sectorial, regional and local interests and needs. In this respect, Action Plan on Climate Change Adaptation and Mitigation (Plan de Acción de Adaptación y Mitigación frente al Cambio Climático, PLAAMCC) seeks to align with Goal 4 on Forests and Climate Change of the Bicentennial Plan: Peru toward 2021 drawn up by CEPLAN, repeating the goal of reducing to zero the deforestation rate in 54 million ha of primary forests, which should lead to a 47.5% reduction in national GHG emissions through PNCB (CEPLAN 2011; MINAM 2011c).

This action plan, however, has not yet been adopted by the state as guidance for public development policies, so a plan that can incorporate national development (or at least that of the Amazon) is needed. After nearly three decades without planning, all levels of government have incorporated documents of plans and strategies which are not very useful. As a result, the National Forest Strategy 2002–2021, approved through Supreme Decree No. 031-2004-AG, is rarely taken into account, and although the process to develop a National Forest Policy started at the end of 2009, by June the following year there was only a draft for discussion, because all the attention was given to the elaboration of the new Forestry and Wildlife Law. A similar situation takes place in regions with regional development plans that are hardly considered in decision making. At the Amazon level, the Interregional Amazon Council (Consejo Interregional Amazónico, CIAM) has developed a proposal called Amazonía Vale un Perú with four pillars: (1) a strategy on forests and climate change for the Amazon based on forest enhancement through sustainable exploitation of services and natural resources, (2) promoting competitiveness and sustainable investment by strengthening the Amazon Development Fund and the Private Investment Fund for the Amazon, (3) positioning of the Amazonía Vale un Perú trademark, and (4) institutional strengthening by improving regional institutional design with a territory management approach and funding.

Weak institutionality leads to poor governance in management and administration of the forest heritage, particularly in the face of deforestation. There is no leadership by a fully autonomous institution with a strong political presence within the state apparatus that considers reduced deforestation and forest degradation rates to be a public policy objective. The forestry sector is part of the agricultural sector, where it occupies a third or fourth level within MINAG. INRENA had been wholly in charge of managing protected natural areas and forest and wildlife resources since 1992, but it was questioned over its lack of institutional capacity and allegations of corruption (Enrique and Cueto 2010). In 2008 the protected areas became the responsibility of the National Service of National Protected Areas (Servicio Nacional de Áreas Naturales Protegidas, SERNANP), a MINAM autonomous technical agency, while forest and wildlife resources were allocated to a MINAG general directorate. The DGFFS serves under the minister, the general secretary and the vice-minister of agriculture. The oversight role was assigned to OSINFOR, an autonomous agency reporting to the Presidency of the Council of Ministers. And as part of the decentralization process, the forest management and control duties are to be transferred to regional governments as new regional forest authorities. In the future, the national forest authority will be in charge of the National Forestry and Wildlife Service (Servicio Nacional Forestal y de Fauna Silvestre, SERFOR), which will be a specialized autonomous technical body reporting to MINAG. Thus, forest management in the future will be the responsibility of at least four authorities that will need to coordinate their different duties and powers in the field: SERNANP, OSINFOR, SERFOR and regional governments. These four institutions will have to coordinate sustainable forest management to address deforestation.

The lack of a comprehensive state vision to identify and coordinate the investment required to meet basic needs and productive development has resulted in limited communication and coordination within the public administration. In this sense, instead of benefitting from commonalities and synergies amongst projects, serious inconsistencies emerge between the policies and objectives of different government sectors and levels. “They do not provide a coherent explanation of their needs and priorities not even about their correlations, interferences and positive

or negative synergies with the plans or actions of other sectors or regions. Besides, the priority given to these projects in each sector seems to be arbitrarily decided and changes with each government and sometimes with each new minister or regional authority. This gives rise to inefficient, counterproductive use of public resources and national natural heritage, and clearly, the future is at stake” (Dourojeanni et al. 2010). Without clear, effective policies, coordination and communication between competent public institutions are indispensable to implement complex approaches like REDD+. Efforts have been made to develop inter-institutional coordination schemes to address problems or promote development schemes. In the case of the fight against illegal mining, the Ombudsman Office has documented the effort made by 27 public institutions to coordinate activities to stop illegal mining and support formalization of informal small-scale miners. An Intergovernmental Coordination Committee was created to manage the impacts of the Camisea megaproject and promote development in the area. However, the few successes achieved by these efforts to address illegal mining, as well as the continued low levels of development in relation to the Camisea project, forecast the difficulties that REDD+ implementation will face in the absence of adequate coordination.

### 4.3 Deforestation and external factors

Several international factors affect the definition and non-definition of public policies causing deforestation in Peru, particularly international markets that offer incentives and disincentives by promoting activities that cause deforestation and discouraging activities that foster sustainable forest use. As a consequence, market forces constitute one of the most important factors that cause deforestation in the tropics in general. Current levels of global market linkage with agriculture encourage farmers to maximize their investment returns (Killeen 2007). The growing global demand and increase in prices for agroindustrial products (Martino 2007) put serious external pressures on forests. The connection between agriculture and international markets is growing stronger and may become one of the most important factors in deforestation. In the Second National Communication of Peru to the UNFCCC, MINAM stated that “deforestation

of the Amazon may be accelerated by increasing global demand for soybeans, biofuels and meat. The profitability of agricultural and livestock production in the Amazon is increasing, while also encouraging farmers to convert their forest reserves to agricultural lots and pastures” (MINAM 2009). That can be seen in the case of oil palm in the province of Alto Amazonas (Loreto), where there are allegations that oil palm growers are buying forest land from small-forest owners. Although these sales are illegal, since lands cannot be sold with tenure certificates, in practice a change of ownership is taking place, thus exacerbating social conflicts.

Another important factor is the presence of international stakeholders — such as governments, financial institutions, bilateral banks and consulting and civil construction companies — which also have a key role in forest ecosystem conservation and degradation. The performance of governments and public institutions in developed countries is often ambiguous, supporting conservation with technical and financial cooperation and calls for protection of the Amazon forests, while encouraging exploitation by private companies. This also happens with multilateral financial organizations, such as the Inter-American Development Bank (IADB) and CAF, which oversimplify procedures for allocating funds (Dourojeanni et al. 2010). International financial institutions often appear to be fostering sustainable development in the region, but their investments do not respect social and environmental safeguards. This is worsened by the fact that institutions like IADB, and the World Bank in particular, which have recently had very limited influence on Peru’s forestry sector, have had to give way to other institutions with significantly lower transparency and environmental standards, like CAF, which has a loan with the Government of Peru in its portfolio aimed at promoting competitiveness in Peru’s forestry sector. Nevertheless, the World Bank and IADB currently play a key role in the national REDD+ readiness process in Peru due to their roles in management and as partners in FCPF and FIP implementation.

Brazil in particular plays a menacing role in the Peruvian Amazon, since it expects the region to be a source of energy and cheap raw materials, while providing access to ports on the Pacific coast and to infrastructure construction projects. Brazil is

Peru's third biggest trade partner, after the United States and China, and it is the fifth most common country of origin for foreign direct investment in Peru, after Spain, the United States, South Africa and Chile. However, unlike these countries, an important part of the investments from Brazil directly affect the Peruvian Amazon. The Brazilian Development Bank plays a key role in financing Brazilian companies investing in Peru.

The political and economic conditions in Peru are conducive to an increase in deforestation. These conditions are characterized by development

policies based on increased public and private investment in transport infrastructure and lack of effective policies for prevention and mitigation of environmental impacts on forests, especially those caused by agriculture. This is worsened by the expansion of Brazilian and Chinese investment in the region, which is focused on natural resource extraction and infrastructure construction. Furthermore, if development policies are to be shifted to a low-carbon, low-deforestation model, the state's poor planning capacity needs to be addressed.

# 5 The REDD+ political environment

## Events, stakeholders and political processes

### 5.1 Policies to address climate change

Peru is highly vulnerable to climate change, due to increasing threats, its weakness and high level of exposure, and its incipient adaptability (MINAM 2010a). This is why different initiatives to address climate change two decades ago. In 1993 Peru already had a National Commission on Climate Change (Comisión Nacional de Cambio Climático). In 2003, a National Strategy on Climate Change (Estrategia Nacional de Cambio Climático, ENCC) was adopted, and now this strategy is being updated. ENCC set out to reduce climate change impact through vulnerability and adaptation studies, and to control air pollution, including GHG emissions, through energy efficiency and renewable energy programs. One of its strategic areas of focus is the management of forestry and agroforestry ecosystems to reduce climate change vulnerability and to improve carbon sequestration capacity. This update process provides an opportunity to incorporate a guidance policy on the reduction of emissions from deforestation and degradation focused beyond just reforestation, as has been the case so far. In this strategy, forestry efforts such as forest plantations have been established, especially those aimed at mitigation. For example, from 2000 to 2006, the amount of land devoted to forest plantations increased by 82,786 ha or 11.58% (MINAM 2010a).

Public policies for climate change adaptation and mitigation have not been given high priority by the state. According to an assessment conducted by MINAM, around 12% of the 108 goals set in ENCC have been met, 49% have been partially met, and 38% have not been met (Rivera 2009). Regarding adaptation, the lack of a specific national strategy or plan has made it difficult to reduce vulnerability. From 1999 to 2009, 63 projects and initiatives on vulnerability and

adaptation were developed, but they lacked a shared vision and homogeneous concepts, as well as a structure to guide them (MINAM 2010a). This situation is even worse in the Amazon region, where projects and initiatives on climate change adaptation and vulnerability are fewer (Loreto) or do not exist (Ucayali and Madre de Dios) (MINAM 2010a). Generally, the lack of sufficient financial resources, the lack of understanding of climate change during implementation phases, and the strength of sectoral and macroeconomic policies have hindered the implementation of adaptation and mitigation policies. This is coupled with ENCC's own issues, like not having mechanisms in place to monitor compliance and results, and not being designed to facilitate the participation of a wide range of stakeholders during the implementation phase.

In respect to mitigation, more progress has been recorded since 2003, when a National Strategy for a Clean Development Mechanism (Estrategia Nacional para el Mecanismo de Desarrollo Limpio, ENMDL) was implemented. ENMDL has focused on gathering and disseminating information on the Clean Development Mechanism (CDM), building local capacity to reduce transaction costs, improving access to resources, and promoting regulations to facilitate the transfer of capital and technology. MINAM is the designated national authority for CDM. Mitigation actions, such as CDM projects, have focused on the energy sector. The CDM executive board had registered 53 projects since 2001. However, by October 2010, only six of them were benefiting from revenues derived from certified emission reductions. Of the registered projects, 70% involve hydroelectric power stations and only one involves the forestry sector. In addition, the project portfolio of the National Environment Fund (FONAM) mentions 58 forestry projects (40 CDM afforestation and reforestation projects, and 18 REDD initiatives), with a potential for

reducing the equivalent of 62 million tons of CO<sub>2</sub> in 20 years (FONAM 2012).

Peru's PLAAMCC action plan, in place since July 2011, provides for an investment of over PEN 3 billion in public projects, out of which only 37% are currently ongoing and 63% are at different negotiation and formulation phases.

In addition, the PNCB has been created to help preserve 54 million ha of forest (80% of the country's forest cover) through conservation and sustainable use. The PNCB hopes to establish a system of incentives for conservation, compensation for environmental services and promotion of sustainable forestry activities (MINAM 2010a). Currently, it implements an incentive payment scheme for native communities through direct transfers of PEN 10 (about USD 3.80) a year, conditional on the number of hectares that these communities conserve<sup>6</sup>. PNCB now works with 48 native communities through these transfers; it expects the incentive system to eventually reach at least 10.5 million ha of Amazon forest under native communities' tenure. In order to achieve this, PNCB will allocate PEN 520 million. While these incentives are still at an early stage, their effectiveness as a mechanism to reduce deforestation, share benefits and promote sustainable use, as well as their long-term sustainability, should be analyzed and the results applied to future national REDD+ programs.

The status of Nationally Appropriate Mitigation Actions (NAMAs) is slightly more uncertain. Although the Second National Communication of Peru to the UNFCCC took NAMAs into consideration through national mitigation programs, the National Environmental Action Plan (Plan Nacional de Acción Ambiental) makes no reference to them. In this sense, the proposal for five sectoral programs (energy, transport, industry, waste management, and forestry and land use) (MINAM 2010a) is questionable — in particular, the Program of the Forestry and Land Use Sector, which would include forest conservation in protected natural areas, integrated soil management, policies on social development and prevention of illegal deforestation activities, information and forestry control systems, CDM reforestation projects, international financial

instruments to increase the value of standing forests, and REDD+ (MINAM 2010a).

## 5.2 REDD+ processes, events and stakeholders

Peru participates in all global REDD processes (see Figure 11 and Table 11 for key events and processes). In addition to UNFCCC negotiations, it has participated in FCPF since 2008, it has been an FIP pilot country since 2010; and it has been a Member of UN-REDD and of the REDD+ Partnership Agreement since 2011. MINAM, as UNFCCC focal point, is responsible for coordinating ENCC implementation, as well as coordinating REDD+ readiness. Besides PNCB, which pursues broader goals, no new organization for the REDD readiness phase has been created to date. However, the government is considering the creation of an Office for the Coordination of Forests and REDD (Oficina de Coordinación de Bosques y de REDD, OCBR) or a National REDD+ Commission. Either of the latter could be attached to MINAM, a specialized technical organization, or the Presidency of the Council of Ministers (Presidencia del Consejo de Ministros). In addition, and although its elimination is currently under consideration, the R-PP identifies the need for a board of directors involving different ministries, such as MINAM, MEF, the Ministry of Foreign Relations, MINEM, the Ministry of Transport and Communication and regional governments. Organizations representing indigenous peoples and civil society have demanded to take part in the Council. This was agreed with MINAM in March 2011. Peru's involvement with REDD+-related issues and organizations is summarized in Table 11.

MINAM is the main REDD stakeholder in Peru (Capella and Sandoval 2010; Che Piu and Garcia 2011). Through the General Directorate of Climate Change, Desertification and Water Resources, MINAM has led all processes; in particular, the development of the R-PP for FCPF, but also the negotiation and the beginning of the project called Strengthening of Technical Capacities for the Implementation of a REDD+ Program in Peru. MINAM has articulated private, binational and multilateral REDD initiatives and has assisted in their coordination with other government bodies. Within MINAM, besides the General Directorate of Climate

<sup>6</sup> <http://bosques.minam.gob.pe/>



Figure 11. Main events related to REDD.



**Table 11. Major events related to REDD.**

Date	Key event	Description
February 2008	The Peru REDD Group was created.	After a meeting to consider the performance of a baseline study on emissions, a set of public, indigenous and civil society organizations agreed to create a discussion group on REDD.
April 2008	The Government of Peru supported the nested approach.	Peru supported the proposal submitted by Paraguay on 15 April 2008 at the UNFCCC Secretariat proposing a 'nested approach' to work at national and subnational levels to ensure environmental integrity.
October 2008	The regional government of San Martin and the Peru REDD Group organized the First Workshop on REDD.	The Tarapoto Declaration was signed. It was the first political statement signed by the central and regional governments, civil society, indigenous organizations, funders, research institutions, and companies interested in working on REDD. This was the first and greatest collective agreement on REDD in Peru.
October 2008	FCPF approved RPIN.	At the Assembly and FCPF Participants Committee Meeting, the Peruvian RPIN was approved and incorporated as a REDD Country Participant with the opportunity to apply for a grant of USD 3.6 million for the readiness phase.
December 2008	At COP 14, Peru submitted a proposal to preserve 54 million ha of forests.	At COP 14 held in Poznan, MINAM proposed that Peru would preserve 54 million ha of forest as a contribution to reducing GHG emissions from deforestation and forest degradation.
June 2009	The 'Baguazo' took place.	After several months of protests from indigenous peoples' organizations, there was a clash in Bagua (Amazonas) where 34 people died (police and indigenous people). Congress subsequently repealed Legislative Decree No. 1090 and restored the old forest law.
December 2009	MINAM confirmed the goal of reducing the net deforestation rate to zero by 2021.	At COP 15 in Copenhagen, the Ministry of Environment confirmed the position to reduce the net deforestation rate for tropical forests to zero by 2021. MINAM initiated a process of participation in order to receive feedback for a national forest policy and a new forest law.
February 2010	MINAM invites contributions to the R-PP.	MINAM convened the Peru REDD Group and the REDD Technical Group to organize the contributions to the R-PP preparation process.
March 2010	Peru was selected as a pilot country for FIP.	The Government of Peru applied to become one of the FIP pilot countries in February. It was selected in March 2010.
April 2010	The first R-PP draft was submitted to FCPF.	MINAM submitted the first R-PP draft to FCPF. It was considered by the Peru REDD Group members. The content of the document gave rise to criticism and comments. AIDSESEP made a public statement proposing REDD restructuring and readjustment to the condition of self-determination and indigenous rights for acceptance or rejection within communities.
June 2010	AIDSESEP complained at the Sixth FCPF Participants Committee Meeting.	At the Sixth FCPF Participants Committee Meeting in Georgetown, Guyana, AIDSESEP complained that Peru's R-PP had not met the indigenous peoples' participation or consultation commitment. It also objected to the president's comments on the consent law.
June 2010	The Peruvian Government informed the UNFCCC Secretariat about national mitigation actions.	Under the Copenhagen Agreement, the Government of Peru informed the UNFCCC Secretariat that a nationally appropriate mitigation action would be reduction of the net rate of deforestation of natural primary forests to zero by 2021.

continued on next page

Table 11. Continued

Date	Key event	Description
July 2010	Agreements were established between the Peru REDD Group and MINAM to prepare the final R-PP draft.	The Peru REDD Group and MINAM agreed that the process of preparing the final R-PP draft would consist of two phases: the first to develop a second draft and the second to produce the final R-PP draft for submission to FCPF the following year. For the first phase, the Peru REDD Group established technical committees and organized meetings to submit its recommendations in July and August.
July 2010	The National Program of Forest Conservation was created.	MEF and MINAM created the National Forest Conservation Program with the aim of preserving 54 million acres of tropical forest, as a contribution to climate change mitigation and sustainable development, within 10 years.
September 2010	The Peruvian government confirmed the goal of reducing the deforestation rate to zero by 2021.	At the 65 <sup>th</sup> General Assembly of the United Nations in New York, President Alan García reaffirmed the goal of reducing to zero the net deforestation rate of natural primary forests by 2021.
November 2010	The second R-PP draft was submitted to FCPF.	The second R-PP draft was submitted at the Seventh FCPF Participants Committee Meeting, in Washington, DC, where AIDSESEP and the Peruvian NGO Law, Environment and Natural Resources (Derecho, Ambiente y Recursos Naturales, DAR) informed the Technical Advisory Panel that, although participation had increased, the free, prior and informed consent commitment had not been met yet.
February 2011	Consultation were held for the FIP mechanism for Indigenous Peoples.	Consultations were held for the FIP Mechanism for Indigenous Peoples, which resulted in the Pachacamac Declaration.
March 2011	MINAM, AIDSESEP and the Peru REDD Group reached agreements.	In meetings held between MINAM and AIDSESEP and between MINAM and the Peru REDD Group, agreements were reached to adopt the R-PP.
March 2011	FCPF approved Peru's R-PP.	The Eighth FCPF Participants Committee Meeting in Da Lat, Vietnam, approved an allocation of USD 3.6 million for Peru for the REDD Readiness Fund.
June 2011	Peru was admitted as a UN-REDD Partner Country.	Peru joined the United Nations REDD Programme as a Partner Country (observer).
October 2011	The FIP National Executive Committee was created.	The National Executive Committee was created to lead the national process to develop the FIP Investment Plan. It is now made up of MINAM, MEF, MINAG and the National Assembly of Regional Governments represented by CIAM. The IADB and FONAM are observers
March 2012	A workshop on safeguards for REDD+ was held.	A workshop on safeguards for REDD+ brought together more than 150 people from different regions of the country.
May 2012	Start of a consultancy for feedback on the FIP Investment Plan.	The Indufor company and then the Nature Services Peru company were selected to provide the necessary feedback to develop the FIP Investment Plan.
December 2012	A technical group was entrusted with the preparation of the FIP Investment Plan.	The National Executive Committee entrusted a group of technical institutions with the preparation of the FIP Investment Plan. It expected to submit to the FIP Subcommittee in April 2013.
February 2013	The second FIP Joint Mission was held.	The National Executive Committee agreed to submit the Investment Plan to the FIP Subcommittee in October, so it had time to drive a wider participation process.

Change, Desertification and Water Resources, the Vice-ministry of Strategic Natural Resource Development, PNCRB and SERNANP have also played an important role.

Other important stakeholders are the MINAG's General Directorate of Forestry and Wildlife, which focuses mainly on forest resource utilization and on issues related to the National Forest Inventory and the Sustainable Forest Management for Climate Change Mitigation in Peru, and MEF's Climate Change Unit on issues related to the FIP, considering REDD as an additional source of funding.

Regional governments, which are the current forestry authorities, and OSINFOR, which is responsible for overseeing the exploitation of forest resources and forest environmental services, are among the public institutions that have not yet assumed an important role but will be key for the REDD readiness phase. The Ministry of Transport and Communication, MINEM, COFOPRI, MINAG and regional governments should also be involved, since REDD+ implementation would influence their policies and sectoral development programs. Special mention should also be made of the Ministry of Foreign Relations, which leads Peru's foreign policy and the country's participation in the UNFCCC.

The organizations administering environmental and conservation funds have played a supporting role, but in a future REDD+ implementation phase, they should play a more relevant role. These organizations are the National Fund for Protected Natural Areas (Fondo de Promoción de las Áreas Naturales Protegidas del Perú, PROFONANPE), FONAM, the Fund of the Americas (Fondo de las Américas, FONDAM) and, as long as it is not dissolved, the Fund for the Promotion of Forest Development (Fondo de Promoción del Desarrollo Forestal). CEPLAN should be included as well, since the fight against deforestation will require long-term planning that goes beyond the management of officials in office and will also involve several sectoral policies.

Among indigenous organizations, the main Amazon organization is AIDSESEP. It kept away from the REDD process until 2010, due to problems and processes related to the Forestry Law. Since then its involvement has been critical and purposeful, its main agenda items being the

assurance of indigenous peoples' autonomy and territories and the right to free, prior and informed consent. In April 2011, AIDSESEP promoted a meeting that culminated in the Declaration of Iquitos and the formation of the Indigenous Round Table. For indigenous organizations, one of the crucial issues has been their territory, since they consider that REDD projects are a threat to their integrity (AIDSESEP and FPP 2011). The question of consultation has also been very sensitive, due to its absence during the process of approval of Legislative Decree No. 1090 and the former government's refusal to enact the law approved by Congress, which has recently been enacted by the current government. AIDSESEP has promoted the creation of REDD Indigenous Round Tables in San Martín, Madre de Dios and Ucayali; the creation of the National REDD Indigenous Round Table and the REDD Table in Loreto is still pending.

Many actions by indigenous organizations are reinforced by regional international organizations, like the Coordinator of the Indigenous Organizations of the Amazon Basin (Coordinadora de las Organizaciones Indígenas de la Cuenca Amazónica), of which AIDSESEP is part. The Native Federation of the Madre de Dios River and Tributaries (Federación Nativa del Río Madre de Dios y Afluentes), which is a regional AIDSESEP organization, was one of the subnational indigenous organizations that adopted a critical position in relation to REDD+, since Madre de Dios is one of the areas with the largest number of REDD+ projects. CONAP, another national organization of Amazon indigenous peoples, has had a secondary role in REDD issues, since it has mainly focused on the elaboration of the new Forestry Law.

National NGOs include those working on issues related to forest resource conservation and management as well as the promotion of indigenous peoples' rights. Two groups of organizations can be distinguished: (1) those conducting REDD projects in the field and (2) those conducting other types of projects focused on the REDD mechanism. The first group includes the Association for the Conservation of the Amazon Basin, AIDER, Amazonians for the Amazon, the Center for the Development of the Amazonian Indigenous People (Centro para el Desarrollo del Indígena Amazónico), the Center

for Conservation, Research and Management of Natural Areas (Centro de Conservación, Investigación y Manejo de Áreas Naturales), Sustainable Rural Development (Desarrollo Rural Sustentable), Greenox and Ecosystem Services Peru. AIDER and the Association for the Conservation of the Amazon Basin each implement more than one REDD project.

The group of organizations carrying out other types of REDD-related projects includes the Peruvian Association for the Conservation of Nature (Asociación Peruana para la Conservación de la Naturaleza), the Center for Indigenous Cultures of Peru (Centro de Culturas Indígenas del Perú), the Center for Environmental Sustainability (Centro para la Sostenibilidad Ambiental), the NGO DAR, the Common Good Institute (Instituto del Bien Común), the Institute of Andean Research and Environmental Law (Instituto de Investigación Andino y de Derecho Ambiental), the Peruvian Foundation for Nature Conservation and the Peruvian Society for Environmental Law (Sociedad Peruana de Derecho Ambiental). DAR has coordinated the REDD Group in Peru since its creation.

There are a large number of international NGOs involved both in project implementation and policy design and in the assessment of the different REDD processes in Peru. Among these, it is worth highlighting the Amazon Environmental Research Institute (Instituto de Pesquisa Ambiental da Amazônia); Bank Information Center (Centro de Información Bancaria); Field Museum; Climate, Community & Biodiversity Alliance; Conservation International; EIA; Environmental Defense Fund; Forest Peoples Programme; Forest Trends; Frankfurt Zoological Society; Fundecor; Global Witness; Katoomba Group; Nature and Culture International; Nature Conservancy; Organization for Tropical Studies; Rainforest Alliance; Swiss Association for International Cooperation (Helvetas); Wildlife Conservation Society and World Wildlife Fund.

There are companies that develop REDD+ projects, such as Bosques Amazónicos, Ecosecurities and Ecosystem Services; and there are national and international companies that provide advice and consulting services, like Asesorandes, Carbon Decisions International, Libélula, Terra Carbon and Winrock International. One of the

areas on which many of the companies providing international advisory and consulting services have focused is the development of carbon inventories and reference levels for projects and subnational areas.

Research organizations working on REDD+ include, in Peru, the National Institute of Agricultural Research (Instituto Nacional de Investigación Agraria) and the Peruvian Amazon Research Institute (Instituto de Investigaciones sobre la Amazonía Peruana), and internationally, the Carnegie Institute, CIFOR, the German Development Institute and the World Agroforestry Centre. These research organizations often carry out case studies on REDD readiness and implementation as part of global studies.

Finally, there is a set of international stakeholders who provide financial resources for REDD+ readiness and implementation phases. The governments of Finland, Germany, Japan, Norway, Switzerland and the United States have been the main financial and technical contributors to Peru's REDD+ readiness. Many of their technical cooperation agencies, such as the German Development Bank, German International Cooperation, Initiative for Conservation in the Andean Amazon (Iniciativa para la Conservación de la Amazonía Andina), Japan International Cooperation Agency, Norwegian Agency for Development Cooperation, Swiss Agency for Development and Cooperation, United States Agency for International Development and United States Forest Service have supported public and private projects for capacity building and taking the first steps towards REDD+ readiness. The FAO and the United Nations Development Programme have made significant contributions. The World Bank and the Inter-American Development Bank are partners in the implementation of FCPF and FIP, which makes them the most influential international stakeholders in the Peruvian REDD+ process. Finally, the Gordon and Betty Moore Foundation is one of the private institutions providing the greatest direct support to the Peruvian government in the REDD+ readiness phase.

The main complaints against REDD+ in Peru have come from AIDESEP. These criticisms have been expressed more consistently since 2010, and have focused on the mechanism itself, but also

on how it has been applied, both at project and national level. AIDSESEP regards the REDD+ mechanism as a false solution, since developed countries do not commit themselves to reduction of their emissions and use of market tools to finance REDD+ implementation. It also notes the lack of actions against the speculative bubble and the existence of initiatives harming indigenous peoples. Regarding implementation at the project level, AIDSESEP has pointed out that the lack of state preventive and proactive measures exposes communities to fraud due to misinformation, and jeopardizes their rights due to the existing uncertainty about REDD+ regulatory frameworks at the national and international levels. At the national level, AIDSESEP criticizes the lack of prior consent in the R-PP and the lack of consideration of the communities' concerns regarding their rights to territory and autonomy. Other AIDSESEP proposals and claims include measures to recognize indigenous peoples' collective territories which address land titling and tenure issues.

However, after reaching an agreement with MINAM in March 2011 to incorporate several of these proposals into the R-PP (Box 6), AIDSESEP supported R-PP approval in the FCPF Participants Committee Meeting. At the local level, several cases have been reported, like an allegation of fraud against Sustainable Coal Resources Limited, which reportedly put pressure on the Matse community in Loreto to sign a contract in English, which was rejected due to that “the contract proposal is aberrant and affects the rights of the community. It constitutes a covert form of unlawful appropriation of the territory, the natural resources and the traditional knowledge of the community” (AIDSESEP and FPP 2011).

Despite these critical positions and tense situations, there is no anti-REDD coalition in Peru. Possibly because Peru is still at such an early stage of REDD+ readiness and the REDD+ process has a low political profile, sectors and enterprises that might be affected by policies to reduce deforestation have still not objected to the process, since they do not feel truly threatened by it.

### 5.3 Participation and REDD groups

The Peru REDD Group and the REDD Technical Group (Grupo Técnico de REDD, GTREDD) have been the main forums for civil society participation in the first stages of REDD+ readiness. The most important has been the Peru REDD Group, an informal initiative made up of public and private actors who have met almost monthly since 2008, focusing mainly on the strengthening of capacity, dissemination of information, and promotion of national REDD+ policies. The Peru REDD Group is the reference point for participation in processes such as FCPF and FIP.

GTREDD is one of the technical groups that advises the National Commission on Climate Change, but it is the only technical group specifically devoted to a REDD mechanism. Given the lack of procedural regulations, MINAM — technical secretariat of the group — has managed its agenda, which has focused on the validation of REDD processes led by MINAM, but it has not been able to replace the Peru REDD Group as the reference point for participation and technical analysis of the proposals.

#### Box 6. Main agreements between MINAM and AIDSESEP on the Readiness Preparation Proposal

1. To initiate actions aimed at reforming national land legislation to align with the international obligations assumed by Peru in terms of recognition and demarcation of indigenous ancestral territories.
2. To allocate USD 200,000 to the R-PP budget and obtain another USD 800,000 to initiate measures of demarcation of the territory in the region of Loreto.
3. To prioritize the use of funds from other REDD+ projects, such as FIP, for the recognition of indigenous peoples' territories.
4. To recognize the Indigenous REDD+ committees to be established at the national and regional levels and ensure their meaningful participation within the national REDD+ process.

Source: AIDSESEP and FPP 2011



The Peru REDD Group has promoted the creation of regional round tables to gather stakeholders' positions and become a forum for technical advice and consensus to REDD subnational processes. In all cases, the establishment of these round tables was put forward by REDD project developers, in order to create regional frameworks for the baselines of their projects. These regional round tables are composed of Peru REDD Group actors at the subnational level and other regional actors and coordinated by the regional governments. To date there are round tables in the departments of Cuzco, Loreto, Madre de Dios, Piura, San Martín and Ucayali. Some local actors have been promoting the creation of a round table for the central Amazon.

Despite the existence, continuity and relevance of these forums, some important decisions have been made by the government without any participation or transparency. The government decided unilaterally to participate in initiatives such as FCPF, FIP, REDD+ Partnership, and UN-REDD, and in some cases the relevant organizations were not even informed after the decisions were made — as in the case of FIP, when the request and acceptance of Peru as a pilot country was disseminated by the Peru REDD Group.

There have been different levels of participation in the process of FCPF. During the development and presentation of RPIN there was no participation or transparency. In 2010, Peru, through MINAM, sent the first drafts of the R-PP to the FCPF Participants Committee. They were developed with contributions from civil society, constituted by the Peru REDD Group and the input of indigenous organizations, notably AIDESEP. The Peru REDD Group organized five technical committees to revise the first R-PP draft and make proposals for the second draft. Immediately after the presentation of the second version, MINAM organized a meeting to review the proposal with staff from regional governments. After the presentation of the third draft of the R-PP, the Peru REDD Group organized a technical workshop that produced 52 proposals, only some of which were incorporated in the final version approved by FCPF.

During the process of development of the R-PP, AIDESEP made various statements. Its position was summarized in an open letter

dated 17 February 2011 and included: ensuring the right to community territories for indigenous peoples; including the right to non-exclusion of “Indigenous REDD” proposals; incorporating indigenous rights in the REDD regulatory framework: forestry, consent and environmental services; respecting prior consent; and stopping “REDD bubble” invasion in lands and communities.

In addition, AIDESEP reached an agreement with MINAM, which is part of Resolution PC/8/2011/7, issued by the FCPF Participants Committee in March 2011. This agreement consists of three commitments. The first is to take action on the formal recognition of indigenous peoples' lands, starting with Loreto, one of Peru's largest regions. To this end, an initial investment of USD 200,000 is expected to be made by FCPF. A second is to analyze and propose actions to align national legislation on land ownership and other rights of indigenous peoples with Convention No. 169 and other international instruments. The third is to recognize the creation and contributions of the indigenous REDD roundtables at the national and regional levels. Only this latter agreement has shown progress, since MINAM has accompanied AIDESEP in the creation of regional indigenous REDD roundtables.

For the REDD National Strategy development phase, the R-PP approved in March 2011 proposed to work within the framework of the National Commission on Climate Change and GTREDD, as the main platform of technical coordination and consultation for implementation of OCBR activities. The R-PP stated that the Peru REDD Group is a subsidiary body of GTREDD. It proposed that regional REDD round tables have a subsidiary role for regional REDD strategies and that they influence the National REDD Strategy through the Peru REDD Group and regional governments. Finally, for the process of information, participation and consultation, the R-PP proposed two target groups: indigenous organizations and other civil society groups. Both groups would be informed and would participate through the Peru REDD Group and specific workshops. But for indigenous peoples, a consultation plan also needs to be established according to the framework of Convention 169 of ILO, respecting free, prior and informed consent, considering their participation as an opportunity



for intercultural, inclusive dialogue between representatives of the state and indigenous peoples.

After a period of inaction on REDD+, the new government accepted invitations from the Peru REDD Group for joint work. In the first quarter of 2012, meetings were held in which MINAM provided information and developed a common agenda with the Peru REDD Group, even organizing joint activities with the First National Safeguards Workshop for REDD+.

Currently, the main process of REDD+ in Peru is FIP. Through the National Executive Committee, the government leads the development of the FIP investment plan by a technical group made up of practitioners from public institutions and external consultants. This process has attracted greater interest since May 2012 when plan development started. Peru is the only FIP pilot country that has not submitted its investment plan. Therefore, the government tried to complete the investment plan by April 2013. However, in February the government realized that progress was insufficient and that there would be no time for an appropriate, participatory process to achieve community support and allow for external expert review (both FIP requirements), and thus decided to postpone plan submission until October 2013.

AIDSESEP now demands that the agreements reached with consultants responsible for the development of inputs for the FIP Investment Plan be respected. These agreements allocated USD 12.5 million to three projects: regularization of indigenous territories (*saneamiento*), community forest management and community forest governance. According to the National Executive Committee, consultants had no authority to reach agreements, and their recommendations will be taken into account for the investment plan development but are not binding. Responding to AIDSESEP's expectations is one of the most delicate issues in the development of the FIP investment plan.

#### 5.4 Financing REDD+

There is no specific fund to manage financial resources for REDD. However, the R-PP has considered the possibility of having a fund available to manage and coordinate financial

resources from all sources (national and international). This would not be an independent fund but would be coordinated with funds for climate change adaptation and mitigation and would be the responsibility of MEF. However, the institutions managing the existing environmental funds (such as PROFONANPE, FONAM and FONDAM) expect to manage the financial resources coming from REDD. FONAM already administers the financial resources of the project Strengthening of Technical, Scientific and Institutional Capacities for the Implementation of a REDD+ Program in Peru, and the project Support to the Implementation of REDD+ in Peru. Some organizations already have experience in the management of the debt swap with the United States for forest conservation, such as the Tropical Forest Conservation Fund by FONDAM and the Tropical Forest Conservation Agreement by PROFONANPE. There is also broad experience in the management of funds for cooperation on environmental issues, as there has been a 'Green Table' since the 1990s, recognized in November 2010 as the Green Thematic Sectoral Group (Grupo Temático Sectorial Verde), composed of international cooperation agencies working with the environmental sector in Peru (Grupo Temático Sectorial Verde 2011).

Some of the projects or early initiatives put forward to trade in carbon certificates expect to do so in voluntary markets. MINAM considers it acceptable that financing for REDD+ activities comes from both funds and markets. However, AIDSESEP has opposed REDD being funded by carbon markets because it believes that emission reductions achieved through REDD should not be used to meet the reduction targets that must be met in developed countries. AIDSESEP has also successfully proposed that funds for land and territory titling and regularization should be considered within the REDD readiness budget, from which USD 200,000 have already been considered in the R-PP. Although the planned funds are insufficient, it is significant that any funds are assigned to specific actions for indigenous land titling and regularization.

#### Shared benefits

The Peru REDD Group expects REDD to help ensure environmental, social and economic benefits from forest conservation for local people, the country and the planet. This was noted in

the Declaration of Tarapoto agreed at the first National Workshop of the Peru REDD Group, held in the Amazonian city of Tarapoto in October 2008. However, what the benefits will be and how they will be distributed remains unclear.

Although the legal framework has not yet specifically determined the payments that REDD project developers will have to make, the existing legal framework and the draft version mention some elements, such as ownership of carbon rights, competent authorities and other obligations involved in these rights. Both the new Forestry and Wildlife Law and the draft Law of Provision of Environmental Services establish that the economic benefits resulting from conservation and improvement of forest ecosystem services should be given to natural or legal persons who have a granted right to the use or conservation of forest ecosystems, and who are recognized by MINAM as effective contributors to the conservation, recovery and enhancement of environmental service sources. In addition, in general, the Organic Law on Sustainable Natural Resource Use stipulates that any natural resource use is subject to the payment of an economic compensation. In this sense, the new Forestry and Wildlife Law establishes that such compensation is part of the payment made for the right to exploit the natural resources. However, the above draft law states that *campesino* communities and indigenous peoples are exempt from such payment and that its regulation would establish the distribution percentages between the different public entities. It assigns control and supervision duties to three bodies: the Office of Environmental Assessment and Inspection

(Oficina de Evaluación y Fiscalización Ambiental), OSINFOR and SERNANP.

Among the funding sources, some are used for REDD, but there are others that help reduce deforestation in Peru. However, existing information is diverse, vague and contradictory in some cases, so further analysis is required (Che Piu and García 2011). One of the activities planned in the framework of the development of the FIP Investment Strategy was intended to analyze financial gaps and overlaps. However, the consultants' report reiterates the existence of difficulties in gathering accurate information about these public programs and projects. Nevertheless, Table 12 shows the main expected financing flows. It is worth highlighting that there are other important funding sources, but more dispersed, for civil society activities, such as the Norwegian International Climate and Forest Initiative and donations by foundations.

## 5.5 Towards a national MRV system

Peru still lacks a national MRV system for REDD. A CIFOR study (Rugnitz-Tito and Menton in press) highlights the following issues:

- Development of the national MRV system: Some steps have been taken to develop institutionality and coordination, but they still lack clarity. The PNCB, which, according to MINAM, combines and articulates national-level mitigation priorities and international financial support, has not yet shown how it will be articulated with REDD+,

**Table 12. Sources of funding for REDD in Peru.**

Source	Project or document	Phase	Million USD
FCPF	R-PP (approved in 2011)	REDD+ readiness phase	3.8
Germany	Support to the Implementation of REDD+ in Peru project (starting in 2012)	REDD+ readiness phase	7.1
Japan	Forestry Support Program (starting in 2011)	Subsidy for forest conservation	50
FIP	Investment Plan (in preparation in 2012)	REDD+ implementation phase	50
Gordon and Betty Moore Foundation	Strengthening of Technical, Scientific and Institutional Capacities for the Implementation of a REDD+ Program in Peru project (starting in 2010)	REDD+ readiness phase	1.9
FAO-Finland	National Forest Inventory and Sustainable Forest Management for Climate Change Mitigation in Peru project (starting in 2011)	REDD+ readiness phase	4

although it is indicated as one of its pillars with the greatest potential. Meanwhile, progress is being made in the realization of the project Strengthening of Technical, Scientific and Institutional Capacities for the Implementation of a REDD+ Program in Peru and in the implementation of its Project Management Unit (Unidad de Gestión de Proyecto), which should be articulated with the project Support to the Implementation of REDD+ in Peru, funded by the German Development Bank, so the Project Management Unit will become the basis for the future OCBR. There has also been a proposal for the articulation of the projects National Forest Inventory and Sustainable Forest Management for Climate Change Mitigation in Peru and Strengthening of Technical, Scientific and Institutional Capacities for the Implementation of a REDD+ Program in Peru, with the MINAM–Carnegie Institute Inter-institutional Collaboration Agreement for the technical strengthening of MINAM for deforestation and forest degradation control and the National Data Generation System for the National Greenhouse Gas Inventory (Sistema Nacional de Generación de Datos para el Inventario Nacional de Gases de Efecto Invernadero) (see Figure 12). MINAM also plans to establish a registration system for REDD projects in order to monitor projects and ensure the protection of safeguards.

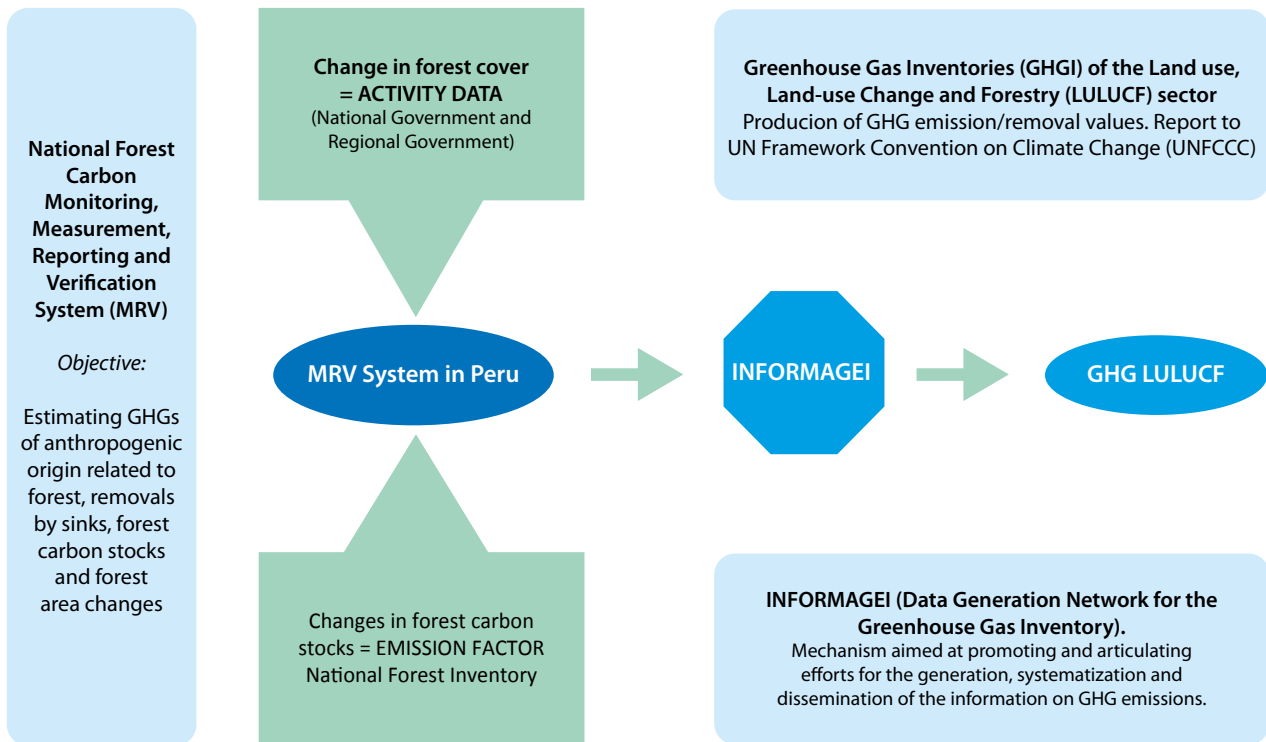
- **Nested approach:** Peru has chosen a tiered approach. In this sense, the development of the reference levels and the monitoring system is expected to be adjusted to the different capacity levels in place. The R-PP suggests that the development of the baseline scenario should be based on the subnational (regional) level as the unit of analysis. Therefore, a tiered approach should enable implementation at different rates depending on technical capacities and addition of efforts at the regional level and subsequently the national level. To this end, Madre de Dios and San Martín are considered pilot sites to provide projections at the regional level following guidelines proposed by MINAM, which will then help develop the reference scenario at the national level (MINAM 2011b). In these two departments, regional baseline levels are being developed, which may be used in the future to establish a national baseline level. The stakeholders most interested in these reference levels are project developers because

they need them to establish the baselines of their projects. Therefore, the definition of the methodologies and technologies used have been subject to discussion and consensus within regional round tables. In each of the five levels (multilateral, bilateral, national, subnational and project), programs, projects and other initiatives have been executed with a view to REDD implementation. But it is necessary to coordinate these levels and ongoing processes for knowledge management. There is no system or mechanism that allows mutual learning between multiple processes at different levels. This means not only that activities may be repeated, but also that they may be leading to inconsistent and even opposite results. In this sense, although there are efforts to coordinate processes at the same level, such as the National Forest Inventory and the project on Strengthening of Capacities at a national level, there are no similar efforts to coordinate these specific project-level initiatives for voluntary markets or specific funds.

- **Gaps:** Unlike in Brazil (May and Millekan 2011), there is not an advanced, continuous monitoring system for land-use change in Peru. There are several maps and studies of these changes (see lists in Rugnitz-Tito and Menton in press), but there are no updated data on land cover and deforestation in 2013. To reach this monitoring level, the country requires investment in human capital (increasing the number of skilled people) and technical capital (access to high-frequency, high-resolution images) to assess land-use change and specific deforestation drivers in different areas. The deforestation map published in June 2013 showing deforestation in 2009–2011 (MINAM 2012) is already a big step in this direction. As Rugnitz-Tito and Menton highlight, there is a lot of available information in the country, but there are big gaps in terms of the amount of information for certain areas or issues, and when there is information, it is dispersed and access is limited.

## 5.6 Political options and future REDD+ processes

The R-PP approved by FCPF proposes an institutional arrangement based on four goals: “(i) the Forest and REDD+ Coordination Body will be created; to (ii) ensure an anchoring of this



**Figure 12. National Carbon MRV System.**

Source: MINAM 2012

body attached to MINAM but reporting to an inter-sectoral board of directors; to (iii) strengthen GTREDD and its coordination with REDD round tables at national and regional levels; and to (iv) establish coordination between donors for the Readiness process, administration through environmental funds and the implementation by OCBR.”

Coordination will be one of the most important challenges, but also one of the most difficult to meet. Although the proposal builds REDD institutionality on the creation of a coordination office as its central axis, it recognizes that efforts will also be required at the levels of regulation, monitoring systems and participation. In this sense, the R-PP expects the OCBR to have sufficient political decision-making power, i.e. to be able to direct the actions of the organizations involved in deforestation and degradation. Thus, it would also have the necessary tools to facilitate inter-institutional coordination and incorporation of the REDD+ strategy into national, regional and sectoral plans.

With the aim of achieving “an institutional anchoring of the National REDD+ Strategy”

(MINAM 2011b), the R-PP suggested that OCBR should be attached to MINAM but report to an intersectoral board of directors ensuring that its plans and activities are supported and adjusted to the activities and programs of the different governmental sectors and levels (national, regional and local). This board of directors would involve MINAM, MINAG, MEF, MINEM, the Ministry of Foreign Relations and a regional government representative. The executive director of OCBR, a donor representative and a GTREDD representative would also participate but without voting rights. The latter would represent nonpublic actors (including NGOs, indigenous peoples and companies). This proposal has been rejected by AIDSESEP and the Peru REDD Group, which believe that it would mediate and reduce the participation of indigenous peoples, community organizations and civil society organizations. This is because these stakeholders participate jointly with public actors in the Peru REDD Group, through which they are part of the REDD Technical Group where public entities participate directly and would have the exclusive power of decision in the board of directors of OCBR. AIDSESEP and the Peru REDD Group

have requested direct and full participation in the board of directors of the entity to be created to coordinate REDD. This request was accepted in the agreements reached in March 2011 between MINAM and Peru REDD Group.

The agreements reached between MINAM and Peru REDD Group are as follows:

- REDD will be harmonized to Peru’s specific characteristics with a multicultural, regional and decentralized approach, as well as defining the concepts adapted to the Peruvian reality and establishing safeguards that are appropriate to the national situation.
- The entity to manage REDD will be attached to the Presidency of the Council of Ministers to promote a cross-sectoral approach, incorporating representatives of the Ministry of Culture, civil society and indigenous peoples as members with decision-making authority. It should ensure that its decisions will be binding for all other sectors.
- The existence of consultation plans specific to local and indigenous peoples will be approved as set out in the Framework of the Law of Prior Consent.

- MINAM is committed to complying with the agreements reached with AIDSESP.
- After the CP8 meeting in Vietnam, further discussing these and other issues for the R-PP.

Finally, the proposal of coordination mechanisms also affects private actors and financing sources. Regarding the strengthening of GTREDD and its coordination with REDD round tables at the national and regional levels, the R-PP proposed a coordination mechanism for all public and private institutions with key roles in REDD+ readiness and implementation. A similar measure was proposed for the coordination between donors of the readiness preparation process, management through environmental funds and implementation by OCBR, in order to achieve effective coordination and efficient management of different financing sources. MINAM plans to create a Donors Committee with Environmental Funds (MINAM 2011b); however, as mentioned above, it has the Green Table. MEF is also evaluating the launch of a counterpart fund to raise, manage and implement international funds in an orderly manner, preventing double spending and achieving measurable, reportable and verifiable spending.

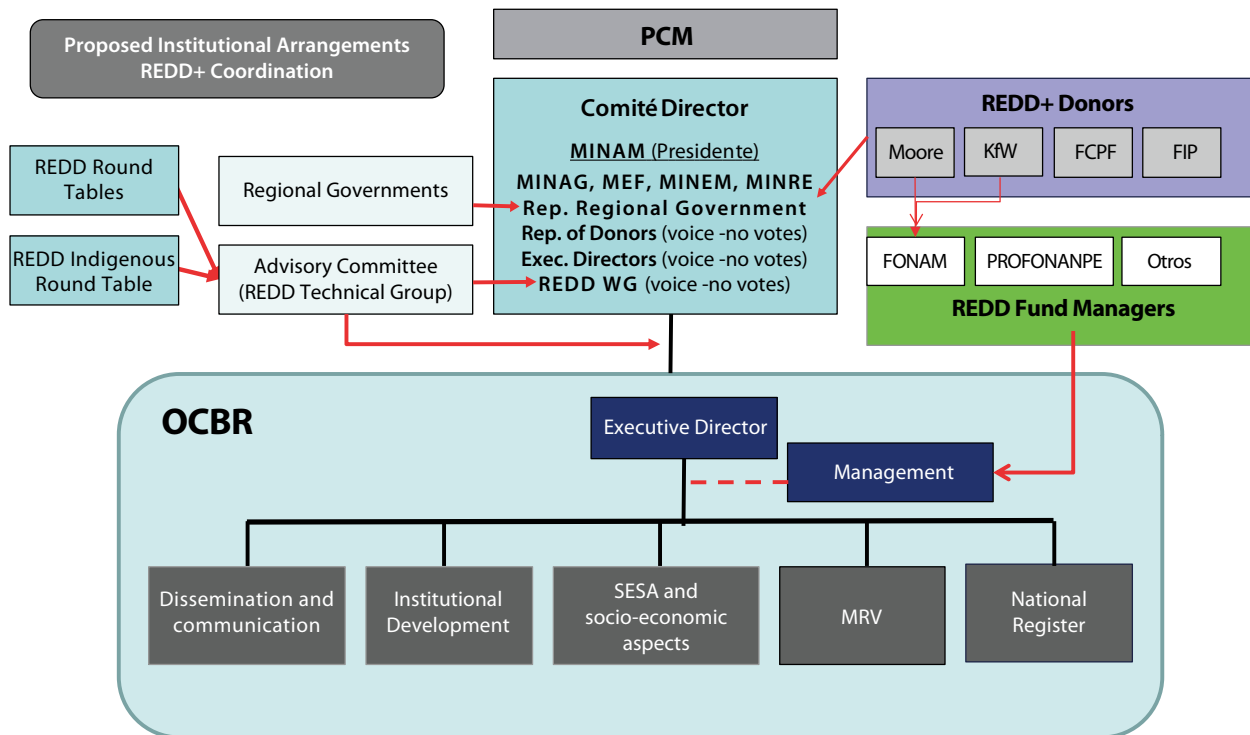


Figure 13. Proposed institutional arrangements for the Peruvian R-PP.

Source: MINAM 2011b

# 6 Implications for the 3Es

## Effectiveness, efficiency and equity

### 6.1 National policies and policy options

Stern (2008) proposed analyzing the consistency of these policies through the revision of the effectiveness, efficiency and equity principles, in order to establish an evaluation framework for proposed global policies aimed at fighting climate change. In this way, it is possible to verify that global policies designed to fight climate change reduce GHG emissions at the required levels, to keep the risks associated with climate change within acceptable levels. These policies should be implemented in a cost-effective fashion, to reduce mitigation expenses, through new and transparent policies and fair sharing mechanisms. Poor countries are often the first and most affected by climate change, whereas rich countries are responsible for past emissions. GCS-REDD+ evaluates REDD implementation by asking the following questions: Is the mechanism achieving the goal of reducing GHG emissions (effectiveness)? Has it fulfilled this goal at a minimal cost (efficiency)? What are the consequences in terms of benefit sharing and co-benefits (equity and collateral benefits)? (Angelsen and Wertz-Kanounnikoff 2009). In addition, Hajek et al. (2011) suggested that the requirement of equitable, efficient and effective results is one of the reasons why organizations with different thinking get together to implement REDD initiatives.

In Peru, three initial efforts have addressed these principles in the process of REDD implementation. At the national level, Capella and Sandoval (2010) described some of the aspects that should be taken into consideration during REDD implementation in the Peruvian Amazon. At the project level, Hajek et al. (2011) noted that 12 projects evaluated in the Madre de Dios region are working toward the fulfillment of these criteria within the limits of their institutional

agendas. However, they argued that it is still too soon to conclude that these projects have united the agendas and competencies needed to succeed in the long term, since they continue to face the following challenges: the uncertainty of legal rights and responsibilities, benefit sharing and the lack of a deforestation model for the entire region. Finally, from a local perspective, Velarde et al. (2010a) analyzed residents' perceptions of equity and efficiency in the REDD value chain, based on both current or perceived values and ideal values. They noted local residents' preference for a balanced approach — that is, for a value chain that is equitable and efficient — but also for clear definitions on REDD+ and for replacing the development model that is based on resource exploitation with one based on a sustainable economy.

Below we review some of the elements of the REDD implementation process in Peru through the effectiveness, efficiency and equity criteria of such measures.

#### 6.1.1 Effectiveness criterion

In the past decade, the continuity of two governments has maintained economic policies based on fiscal balance, the exploitation of raw materials, opening of markets, and promotion of exports and foreign investment. Despite having first supported a proposal to change economic policies, the current government has had to commit itself to not changing the essence of these policies in order to gain support and power, seeking to ensure better benefit sharing that is environment- and community-friendly. Policies that promoted settlement in the Amazon have now become policies aimed at promoting extraction of natural resources, investment and export-oriented agricultural production. The policy options discussed in the framework of climate change in



general and of REDD+ in particular have not explicitly raised an integral approach to changing these policies, but rather the adaptation of their implementation. In this sense, sources of emissions are not intended to be removed altogether, only moderated. Therefore, it is likely that all projects for natural resource exploitation expected for the next decade will be implemented with some measures to reduce emissions (Dourojeanni et al. 2010). The rapid population growth in the Amazon is expected to continue without proper planning or effective measures to reduce its impact on forests (Cueto and Enrique 2010; MINAM 2010a). Efforts to reduce deforestation will occur but will have a limited impact. Without REDD+ initiatives and policies, economic development policies are unlikely to be reformed. Rather than introducing far-reaching changes in the development model, any reforms that do occur are likely to be realized through new conditions for projects.

The nested approach seems appropriate for Peru, where increased capabilities and governance are required to reduce the displacement of emissions (leakage) of ongoing projects and early initiatives. However, the weak capacity of regional governments raises immediate challenges to this approach, since it puts under question the verification and control of the displacement of emissions at the subnational level as well as the presence of avoided reductions. In addition, since regional governments do not have the authority to define and implement some of the policies driving deforestation (including policies related to extraction of hydrocarbons, mining and large infrastructure projects), and due to their weak level of coordination, it is unlikely that they will effectively formulate development policies. This threat is present even in the light of different mitigation measures in other sectors, like transport, in which consideration is given to the improvement of the road network and the use of biofuels as measures to reduce emissions. However, when this improvement is intended for roads crossing forests, it increases the pressure on them. Similarly, biofuel plantations change the use of forests, as is occurring in Barranquita in the department of San Martín.

In order to reverse this situation, effective long-term policies and instruments are needed. To date, ENCC and ENMDL have lacked

effectiveness and potential to serve as effective instruments at the national level; they lack prioritization and focus on changes in land use and deforestation despite being the main source of emissions. In the future, the lack of coordination on NAMAs or national mitigation programs between the Climate Change Mitigation and Adaptation Action Plan and the Second National Communication of Peru to the UN Framework Convention on Climate Change will create effectiveness problems that should be addressed through the elaboration of a National REDD Strategy. However, this has not been properly incorporated into the R-PP or PNCB. These are serious challenges to achieving the goal of reducing the deforestation rate to zero in 54 million ha of primary forest by 2021.

### 6.1.2 Efficiency criterion

The R-PP estimated the cost of developing the National REDD+ Strategy at USD 12.6 million. However, if all the activities set out in the R-PP were completed, they would cost more than this amount, so additional funds may be required. Also, if a balance is sought between this budget and the priorities set by the Peruvian state (REDD+ co-benefits), additional funds will be required. In this sense, and due to the relatively limited importance of national emissions in the context of global emissions, the implementation of a mechanism such as REDD+ in Peru is justified by its collateral benefits at the social and environmental levels. However, a quick read of the R-PP (MINAM 2011b) shows that it is expected to allocate 1.5% of the total budget to the identification and establishment of the social and environmental impact monitoring system, whereas 30% of the total budget has already been allocated to the development of standards and reference scenarios, as well as to the system for emissions MRV and carbon capture. Therefore, additional funds will also be necessary if priority is to be given to co-benefits, to prevent them from negatively affecting populations and forest biodiversity.

The funds for REDD implementation come from FIP, as well as from other projects and programs aimed at the operation of the scheme (MINAM 2011 b). The R-PP is not a real projection of the necessary activities for REDD implementation and operation, but only the sum of ongoing

and expected projects and programs. Some gaps and overlaps have been identified. For example, PLAAMCC does not cover the costs of social and environmental monitoring, or the MRV of emissions reduction. Armas et al. (2009) concluded that 55% of annual deforestation in the Amazon could be compensated through payments equivalent to the average prices of carbon credits in voluntary markets, estimating the minimum value of transfers needed to reduce the deforestation rate by half for 10 consecutive years at USD 540 million.

In addition, seeking to preserve forests without covering the opportunity costs of native communities, and through a system of incentives, PNCB applies a payment of PEN 10/ha/year, for which PEN 130 million a year would be needed (about USD 47 million) in order to implement the program in the 13 million ha currently under the tenure of indigenous peoples in the Peruvian Amazon. However, nothing is said regarding opportunity costs for the major productive activities causing deforestation.

Rendón et al. (2010) concluded that although project costs vary, overall costs in Peru are consistent with published estimates. The study noted that the budgets for the six projects, which are calculated on a 10-year basis and expressed as average annual costs per hectare, are USD 0.50–3.25/ha/year, with an average cost of close to USD 2 per hectare, transaction costs excluded. From the stakeholders' perspective, transaction costs, particularly certification and verification, are so high that they are mostly benefiting international consulting firms, thus turning the regulated carbon market into an exclusive mechanism rather than an inclusive one. Stakeholders believe that neither the mechanism for communities and indigenous people to take part in the process nor the benefits from REDD are yet well defined (Velarde et al. 2010b).

There has not been a clear study on the transaction costs borne by the different stakeholders involved in the implementation of a REDD project. These are likely to vary from case to case. For example, for projects developed in areas where previous projects exist, many of the readiness costs are costs sunk into the implementation of the early stages, whereas for the first project in any given area, costs may be higher.

The preparation, implementation and transaction costs of a national REDD program have also not been assessed. They include design and implementation of institutional infrastructure and establishment of regulations and operating and monitoring mechanisms as well as capacity-building and dispute-settlement mechanisms. One of the readiness costs involves measuring and monitoring carbon stock and fluxes in large and diverse areas like the Peruvian Amazon. Some optimists, however, believe that technology may reduce those costs to affordable levels. The Carnegie Airborne Observatory conducted a LIDAR (remote-sensing) analysis of 4.3 million ha in the Madre de Dios region, Peru, at USD 0.08/ha (Asner et al. 2010).

The failure to consider compensation payments for hydrocarbon extraction projects, the generation of electric power through dams and the construction of large road infrastructure are all signs that the development of positive incentives in these sectors with a view to changing the dynamics of deforestation is not actually being taken into account within REDD. However, the draft Environmental Services Provision Law (CPAAAAE 2011), which is currently under discussion in Congress, considers that these large projects should include, among their environmental impact mitigation measures, compensation payments for the environmental services affected, thus generating a fund for the preservation and restoration of environmental services (among others, by REDD).

### 6.1.3 Equity criterion

The main equity-related objective of the Peruvian state is to ensure that REDD will generate social and environmental co-benefits to improve the living conditions of forest dwellers and to conserve biodiversity. Peru has many forests and a low average deforestation rate (Wertz-Kanounnikoff and Kongphan-Apirak 2009). Thus, REDD schemes giving priority to historical deforestation rates are not deemed convenient, since they do not recognize that the country is experiencing economic growth leading to a deeper impact on nature in general and forests in particular. For example, the impacts of the increase in road and energy infrastructure, both existing and planned, are not accurately reflected in the current deforestation rate.

For equity's sake, changes to policies that drive deforestation and forest degradation should be rewarded, and policies promoting conservation and sustainable and harmonious forest use should be encouraged. REDD schemes based on deforestation rates would not recognize that policies aimed at protecting the rights of indigenous peoples, conserving biodiversity and ensuring the sustainable use of forest resources, despite not having been fully implemented, have helped conserve forest cover in Peru. That is the case, for example, for the recognition and titling of native communities, the creation of territorial reserves for the protection of indigenous peoples in voluntary isolation or initial contact, and communal reserves. As part of the biodiversity conservation policy, Peru's system of protected natural areas has put a stop to deforestation, especially in protected natural areas of indirect use (where extractive activities are not allowed), as well as to the implementation (although not completely satisfactory) of the system for timber forest concessions, concessions for non-timber products, ecotourism and conservation (Oliveira et al. 2007). These achievements have occurred in contexts with a low monitoring capacity, weak governance and poverty, especially in forest areas. For this reason, the Government of Peru has emphasized that REDD funds should be additional and be made available at an early stage. This means that they should complement funds supporting strategies to conserve forests, and that they are needed for the preparation and implementation phase.

Equity also requires that early public- and private-sector efforts to implement REDD should not be penalized. More than 20 REDD projects have been identified in Peru (MINAM [2011b] identified 24 and Che Piu and Garcia [2011] identified 35), early local actions focused on voluntary market access. These projects have sufficient flexibility to gain access to a future regulated market. While the R-PP (MINAM 2011b) acknowledged the importance of these early initiatives to institutional coordination between levels of REDD+ implementation and to capacity building and technical information for the areas of reference scenarios and MRV, it also pointed out that these early initiatives should comply with the following requirements:

- Contribute to the readiness phase for REDD+ in Peru, mainly with capacity-building for

the implementation of the mechanism at the regional level.

- Where there is no regional reference scenario for REDD+, all initiatives should contribute to the development of these scenarios, which will have to be accepted by competent authorities.
- Where there is a regional baseline scenario for REDD+ accepted by the competent authorities, project designers should use it when developing REDD+ activities.
- Contribute to data networking for the National Greenhouse Gas Inventory.
- Become strategic partners, at national and regional levels, in the proposal and validation of equitable and fair mechanisms for the cost and benefit sharing associated with REDD+.
- Contribute to the validation of methodologies for the development of information, participation and eventually stakeholder consultation processes.

No decisions have yet been made on who will cover REDD+ costs and receive the benefits and to what extent. Some take a skeptical stance (Rojas 2009), considering that indigenous people are unlikely to be direct beneficiaries of REDD mechanisms in the Peruvian Amazon, due to the lack of clarity in the relevant legal frameworks. However, as discussed above, the new Forestry and Wildlife Law (not yet in force) and the draft Environmental Services Provision Law establish that holders of rights to the exploitation of forest resources and wildlife would be the beneficiaries of schemes to compensate for the recovery, maintenance or increase of the provision of forest ecosystem services. Still, these texts also establish that beneficiaries must pay the state for the right to use these ecosystem services.

Furthermore, this requires decentralized, multilevel cost sharing and centralized, vertical benefit sharing. If a nested approach is used, regional authorities need to develop activities (such as establishment of subnational baseline levels, spaces of regional coordination and competent regional bodies) representing multiple costs that should be borne by the authorities. This multilevel approach will also require actions corresponding to the national and local levels (projects). As regards income administration and sharing (economic benefits), the R-PP (MINAM 2011b) proposed MINAM as the administrator of REDD funds, supported by FONAM and

PROFONANPE at the readiness phase, and by the proposed OCBR during the implementation and pay-for-performance phases.

As already noted, one of the priorities set by the Government of Peru in 2008 is REDD co-benefits. In this sense, REDD implementation in Peru is expected to bring about improvements for local and indigenous communities. REDD readiness addresses the need to fight poverty, not only as a co-benefit, but also as one of the causes of deforestation and degradation. In Peru, other national planning instruments related to forestry had already approached the fight against poverty from different perspectives, but in all cases, the results were not satisfactory (Che Piu 2007). The National Forest Strategy introduced the concepts of sustainable and equitable sharing of forest benefits, access to and control over resources and equal opportunities in various economic, political and social activities organized around forestry. On the other hand, the National Multisectoral Strategy in the Fight Against Illegal Logging does not pose a link between poverty and illegal logging or between the strategy and poverty reduction. The National Reforestation Plan addresses poverty tangentially, and the anti-poverty element of the Strategic Action Plan for the Implementation of CITES Appendix II for Mahogany in Peru lacks specificity. In other words, while national forestry planning instruments address the fight against poverty, in practice, they do not apply specific, deliberate measures to stop it. This is a concrete risk of REDD.

Biodiversity has been taken into even less account than poverty. While many public and private organizations involved in REDD readiness in Peru consider biodiversity a high priority, it has not been sufficiently addressed in REDD-related discussions. The R-PP discusses it briefly, placing greater emphasis on monitoring biodiversity and environmental services (other than carbon). However, the National Forestry Inventory is intended to generate valid information on the status of biodiversity and wildlife and develop a map containing indices of biodiversity, forests of high conservation value, fauna, water sources and potential areas for tourism and conservation.

Finally, even when gaps and deficiencies are recognized in forest governance and institutional performance, there is a lack of initiatives and

programs to address these issues. While it is true that the R-PP proposes resources for OCBR and participatory processes, it is clear that they are focused on REDD issues and not so much on changing forest governance. Thus, these conditions could be improved by REDD initiatives, but they are not being proposed as a direct objective. However, the issues related to governance and forest management may be addressed directly in other REDD phases and other initiatives. Among other funds, the Forest Investment Program allocates USD 50 million to REDD from the Climate Investment Fund, which invests in projects for institutional capacity building and improved forest management. Other processes could take place simultaneously, like the Sustainable, Inclusive and Competitive Forestry Development Program in the Peruvian Amazon, which is intended to strengthen forest management with a USD 50 million budget, USD 30 million of which come from the CAF.

## 6.2 Can REDD+ achieve the 3 Es in Peru?

Low levels of corruption control, governance, rule of law and transparency in Peru (Wertz-Kanounnikoff and Kongphan-Apirak 2009; Che Piu and Martinez 2011) are major challenges for REDD effectiveness, efficiency and equity. Several of these gaps were apparent during the 'Baguazo' (see Box 7), one of the most tragic events in recent Peruvian history, which showed the country's poor forestry governance. This background raises doubts about whether conditions in Peru are conducive to REDD.

However, other processes are changing forestry institutions in Peru such as the process of forest decentralization through the transfer of forest functions to regional governments and the adoption of an Anti-Corruption Plan for the Forest and Wildlife Sectors. The forest decentralization process that started four years ago has still not finished, and regional governments are already facing the difficult challenge of becoming forestry authorities and, at the same time, forestry development promoters. In addition, the Anti-Corruption Plan has not been implemented and may never be, like the National Multisectoral Strategy in the Fight Against Illegal Logging. It is expected that the United States–

### Box 7. The 'Baguazo' and the new Forestry and Wildlife Law

In June 2008, President Alan García enacted Legislative Decree No. 1090, which passed a new Forestry and Wildlife Law, making use of the legislative powers delegated by Congress to adapt legislation in order to facilitate the entry into force of the United States–Peru Trade Promotion Agreement. This Decree was one of the 99 decrees that were enacted to this end, most of which were published on the same day. Legislative Decree No. 1090 was questioned by almost all stakeholders since it was drafted without any involvement, which led to amendment by Congress twice through Laws 29263 and 29317 before it entered into force in January 2009.

However, this did not quell all criticism, especially from indigenous organizations led by AIDESEP, which took to the roads, oil wells and oil pumping plants in order to rule out the possibility of forest land-use change and demand respect for their right to free, prior and informed consent established in International Labour Organization Convention No. 169 concerning Indigenous and Tribal Peoples in Independent Countries. These protests increased until 5 June 2009 when 34 people were killed including protesters and police officers in a clash that broke out when police tried to evict the indigenous groups that had taken the roads in the Amazon province of Bagua. The clash is known as the Baguazo.

After these acts of violence, Congress repealed Legislative Decree No. 1090 and the government created a National Coordination Group for the Development of the Amazonian Peoples, through which it negotiated with indigenous organizations. In late 2009, the government initiated development of a proposal for a new Forestry and Wildlife Law: the bill was submitted to Congress in June 2010. However, despite recent events in Bagua, the Government of Peru requested Congress to exempt it from a number of procedures for quick approval.

After several questions, the Congress decided to subject the bill to a process of indigenous peoples' free, prior and informed consent. However, this process was strongly challenged by AIDESEP on the grounds that it was not sufficiently informed and free and that the Government had vetoed the law on the right to prior consent that Congress had approved in May 2010. Nevertheless, the process continued, with the support of several other indigenous organizations. The Ombudsman Office, which participated as an observer in the process, concluded that even though minimum prior consent conditions had been met, the process should not serve as a model. In the last days of President Alan García's administration, Congress passed a new Forestry and Wildlife Law after a quick debate.

Although the new law was enacted in July 2011, just before the government changed, enforcement was postponed until the publication of its regulation. Under the new government, AIDESEP has reiterated its criticism of the new law, and a number of new authorities in MINAM have expressed their intent to have it repealed or at least amended.

Peru Trade Promotion Agreement (the United States is Peru's largest trading partner), which contains an Annex on the improvement of forest management in Peru, will bolster processes such as decentralization and the fight against corruption.

The existing legal framework in Peru does not allow private ownership of forest resources. However, individuals can gain the right to use them through concessions, permits, authorizations and, more recently, use assignment for agroforestry purposes under the new Forestry Law (not

yet in force). Furthermore, the state exercises considerable forest tenure: according to the 2010 Peruvian National Report for the Global Forest Resources Assessment, more than 80% of forest areas are under public domain, and most of them are protected natural areas or territorial reserves for indigenous peoples in voluntary isolation or initial contact. However, there are several stakeholders that own forests but have none of these rights. This is the case both for indigenous people whose land rights have not yet been recognized and for migrants who have recently settled in forest areas.



Major challenges for REDD effectiveness and equity include the completion of the forest management process, a unified register on land use, tenure and rights over forests and indigenous peoples' titling processes. Although some forests have been declared permanent production forests, the identification of other types of forest management, like reserved forests or forests for future exploitation, has not been completed. In addition, there is no unified register of existing forest uses, granted rights and actual forest tenure. If such register existed, there would be certainty about who makes forest-use decisions. Finally, AIDSESEP has indicated that nearly 20 million ha of indigenous land is still awaiting recognition: five territorial reserves for the protection of indigenous peoples in voluntary isolation, eight communal reserves (which are a type of natural area protected under indigenous administration) and at least 988 native communities awaiting recognition, titling or expansion of their land ownership and territorial assignments (AIDSESEP 2012).

As noted above, REDD readiness and implementation phases have different funding sources. Funding comes from multilateral sources (FCPF, FIP and CAF), bilateral cooperation (the United States, Germany, Japan and Switzerland), private sources (the Gordon and Betty Moore Foundation and Conservation International) and other sources (FAO and the Carnegie Institution for Science). In this regard, funds from the FIP are allocated to the identification of overlaps and gaps between different funding sources. These gaps and overlaps do not represent a specific problem for Peru, but rather a general international financing problem for REDD, but their management is clearly one of the main challenges for REDD efficiency in Peru. Furthermore, confusion resulting from the large number of funding sources can hinder transparency and lead to inefficient spending and corruption.

The net profit of economic activities causing deforestation at the local level is more than PEN 758 million per year (Armas et al. 2009), while the value of non-timber products harvested in tropical coastal forests has been estimated to range from USD 13/ha/year to USD 698/ha/year (León 2007). Protected natural areas contribute around USD 1.125 billion a year (SERNANP 2009), even if this value is not noticed by society

and forest dwellers. Projects related to forest conservation and climate change mitigation, including REDD, are compiled in the Climate Change Mitigation and Adaptation Action Plan (MINAM 2011c) and represent around USD 300 million.

Participation is an important element for REDD effectiveness, efficiency and equity. Different REDD processes in Peru have had different levels of participation. In the case of FCPF, although development of the RPIN lacked participation and transparency, participation increased for the R-PP, allowing REDD Peru to improve in both process and substance. However, this did not occur with other stakeholders; regional governments and local stakeholders could not fully participate due to the lack of participation mechanisms and the complexity of the issues involved. Respecting indigenous peoples' right to information, participation, consultation and consent is a major challenge not only to the REDD process, but to the country as a whole. Peru has recently passed a law requiring consent by indigenous peoples, which is expected to create better conditions for the inclusion of indigenous peoples in FCPF and other processes. Some studies have shown that participation by indigenous and local people is hindered by the lack of information on REDD in formats and languages that they can understand (Velarde et al. 2010a). Local stakeholders have the most difficulties participating in REDD processes. Although regional round tables are held in San Martín, Piura, Ucayali, Cusco, Madre de Dios and Loreto, local stakeholders are not yet significantly involved (Zelli et al. 2011), and relations between REDD beneficiaries and funding sources are poor or nonexistent (Castaño et al. 2011). A recent study (Castaño et al. 2011) found that funding sources have more relations with the government and NGOs than with local stakeholders and forest holders. This shows a distance between those who will receive REDD+ payments or benefits and those who will fund them.

Coordination between national, regional and local governments is also poor. Forestry decentralization, which began in 2009, has still not overcome the historical concentration of forest roles within the national government. In addition, local (municipal) governments lack roles and competencies in the field of forestry, even though the new Forestry and Wildlife Law requires

them to support regional authorities with forestry control and allows for local management of forests. The future implementation of systems such as the National Forestry Information and Control System and the National Data System for the National Greenhouse Gas Inventory is expected to help integrate the different government levels.

Coordination between MINAG and MINAM has been difficult, but has improved recently thanks to the coordination of issues such as the implementation of the Forestry Annex to the United States–Peru Trade Promotion Agreement, REDD readiness, the National Forestry Inventory and the preparation of publications such as *Peru: A Country of Forests*. The current national forestry authority, MINAG’s General Directorate of Forestry and Wildlife, and the national authority for forest monitoring, OSINFOR, have had low coordination and communication levels, which has hindered their activities. Also, coordination is limited or nonexistent with other ministries such as MEF, MINEM, the Ministry of Transport and

Communication, and the Ministry of Housing, Construction and Sanitation.

Horizontal coordination between the new regional authorities started problematically when each region established its own procedures for forest product transport; these have not been harmonized and in some cases are not even communicated to other regions. Each regional forestry authority has opted for its own model of administrative organization, which could also create difficulties for coordination. While in San Martín the regional forestry authority is responsible for the Directorate of Natural Resources and Environmental Affairs, Loreto has an autonomous Regional Forestry and Wildlife Management Program, Ucayali has an Executive Directorate of Forestry and Wildlife, and Madre de Dios has a Regional Forestry and Wildlife Management Program, which is a decentralized body. However, all regions plan to establish a system under a single environmental regional authority with a territorial approach.

# 7 Conclusions

Peru has been making progress on REDD+ readiness, with 41 pilot projects underway as of July 2012 (MINAM 2012). While pilot projects are already underway, with national and international funding, and even certification by international standards (VCS 2012), the national government is in the process of developing strategies for REDD+ and MRV with the leadership of MINAM.

The success of REDD implementation requires the resolution of legal challenges and clarity about land management and tenure rights. The adoption of the Consultation Law represents a step forward for the protection of the rights of indigenous peoples and equity, but implementation of free, prior and informed consent still needs to be improved. AIDSESEP is still demanding the protection of the right of consent and tenure as a prerequisite for REDD. A proposed law on ecosystem services and regulation of the new forestry law are in preparation. The lack of legal clarity on carbon rights and the overlapping of forest tenure and use rights create uncertainty.

In spite of strong support for REDD from some government agencies and civil society organizations, it will face great challenges in the implementation phase unless legal clarity and intersectoral coordination and integration are improved. Although intersectoral coordination in the development of the national REDD strategy has been proposed, a gap remains between goals and reality. The lack of intersectoral support for socioeconomic development that encourages conservation and stops deforestation and degradation is seen as one of the greatest challenges for REDD in Peru. An increase in deforestation due to the growth of agricultural and extractive sectors is projected for Peru. As Peru has large forest areas but relatively low deforestation rates, the REDD potential lies in focusing attention on the current trend of institutional and legal support for development of the Amazon, which fosters the

expansion of resource extraction without concern for its ecological footprint. The search for balance between growth and conservation will be central to any REDD strategy.

This country profile provides an analysis of the causes of deforestation and forest degradation in Peru and the economic, institutional and political context in which REDD+ is emerging. Peru has a total forest area of around 73 million ha, or almost 60% of the national territory. In recent years, deforestation dropped from 150,000 ha/year to 106,000 ha/year but is still one of the largest sources of GHG emissions in the country. Although it has fallen recently, it is expected to increase in the next few years as a result of development policies supporting road infrastructure expansion in the Amazon, a growth in agricultural production and support for extractive sectors. The government has stated that it aims to reduce to zero the deforestation of 54 million ha of primary forest by 2021 and has begun the process of REDD+ readiness at the national and subnational levels. While pilot projects are already underway, with national and international financing and even international standard certification, the national government is in the process of building strategies for REDD+ and MRV under the leadership of MINAM. Although REDD has strong support within some sectors of the government and civil society, it will face major challenges in the implementation phase due to lack of both coordination and intersectoral support for socio economic development that encourages conservation and slowing of deforestation and degradation. In the REDD+ readiness process, the country has made progress on the processes to safeguard civil society participation and native and local communities' rights protection. At the same time, weak governance at the national and regional levels and conflicts of interest are threats to effective, efficient and equitable long-term implementation of REDD+.

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## Interviews

- Alberto Pizango, president, AIDSESEP (23 May 2011)
- Alejandro Bernilla, former natural resources manager, Madre de Dios (3 June 2011)
- Claudio Delgado, officer, Gobierno Regional de Madre de Dios (3 June 2011)
- Elvira Gomez, REDD specialist, MINAM (3 June 2011)
- Johana Garay, specialist, SERNANP (10 June 2011)
- Jorge Malleux, former director-general, Forestry and Wildlife (7 July 2011)
- Julia Justo, executive director, FONAM (no date)
- Manuel García, CDM specialist, MINAM (no date)
- Oseas Barbaran, president, CONAP (7 June 2011)
- Renzo Barrón, protected natural areas specialist, SERNANP (no date)
- Roberto Espinoza, member, Equipo Técnico de AIDSESEP (25 May 2011)
- Sergio Arbayza, coordinator, Proyecto CIPA (26 May 2011)







CIFOR Occasional Papers contain research results that are significant to tropical forest issues. This content has been peer reviewed internally and externally.

This country profile contains an analysis of the causes of deforestation and forest degradation in Peru, and the economic, institutional and political context in which REDD is emerging in the country. Peru has a total forest area of approximately 73 million hectares, almost 60% of national territory. In the past few years, deforestation decreased from 150,000 ha/year to 106,000 ha/year but it still represents one of the biggest sources of greenhouse gas emissions in the country. While it has decreased recently, an increase is expected during coming years due to development policies that support the expansion of road infrastructure in the Amazon, an increase in agricultural production and support for the extractive sectors. The government has declared a goal of reducing to zero the deforestation rate across 54 million hectares of primary forest by 2021, and has initiated the preparation process for REDD+ (Reducing Emissions from Deforestation and Forest Degradation Plus) at a national and subnational level. While the pilot projects are already underway, with international and national funding, and even certification according to international standards, the national government is still in the process of developing REDD+ and MRV (Measuring, Reporting and Verification) strategies under the leadership of MINAM. Even if REDD has solid support within certain sectors of the government and civil society, it will face big challenges during the implementation phase due to a lack of intersectoral coordination and support to a socioeconomic development that would stimulate conservation and stop deforestation and degradation. In the process of preparation for REDD+, the country has advanced with the processes of safeguarding the participation of the civil society and the protection of native and local communities' rights. At the same time, the challenges concerning weak governance at a national and regional level and conflicts of interest are threats to the effective, efficient and equitable implementation in the long-term.



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