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# A Financial Strategy for the Production-Protection Compact in the Peruvian Amazon

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Lawrence Szott, Gustavo Suárez de Freitas, Victor Galarreta,  
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With support from



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## Foreword

Keeping tropical forests standing, and healthy is one of the great challenges of our time. The best way to overcome this challenge is through strong partnerships between governments, farmers, and businesses to grow more food, fiber, fuel, and forage on lands that are already cleared while managing, restoring or protecting forests. Strong political leadership, innovative farmers and communities, and businesses committed to sustainable sourcing are essential ingredients for these partnerships to thrive. This report summarizes pioneering work in building such partnerships in the Peruvian Amazon—one of the world’s richest cultural and biological treasures.



**Dan Nepstad**

President & Executive Director  
Earth Innovation Institute





## Introduction

Peru has the second-largest area of rainforest in Latin America. However, accelerating deforestation and forest degradation are threatening the country's diverse natural resources. For the Amazon ecoregion, which includes about 95% of the country's forests, there is a clear upward trend in annual deforestation, which has more than doubled from 84,000 hectares (ha) to 156,000 ha between 2001 and 2015 (MINAM, 2016). The vast majority of this deforestation occurs on plots of land that are smaller than 5 ha in area, and the deforestation is associated with slash-and-burn production of coffee, cacao, livestock, and, increasingly, oil palm. However, illegal logging, mining, and coca production also contribute significantly to deforestation. Underlying drivers include rural poverty in neighboring regions leading to migration to the Amazonian region in search of land and better opportunities; undefined land use classification and rights; weak land use governance and enforcement; low farm productivity associated with low input use; limited access to credit and technical assistance; and relatively high market prices for coffee, cocoa, and oil palm over the past decade, which have driven demand for expanded production into forest areas.

Peru's Nationally Determined Contributions (NDCs), which were reported to the United Nation's Framework Convention on Climate Change (UNFCCC) in 2015, focus on reducing deforestation, which currently accounts for approximately 50% of the country's total greenhouse gas (GHG) emissions.<sup>1</sup> Projections under the business-as-usual scenario suggest that 3.5 million deforested ha will be added by 2030 to the 7.3 million ha that are already deforested, primarily in the Amazonian region, resulting in an increase of more than 50% of emissions calculated at a national level, and in particular from the Land Use, Land Use Change, and Forestry (LULUCF) sector. At the same time, mitigation of 53.6 metric tons per year of carbon dioxide equivalent (MtCO<sub>2</sub>e/year) of emissions from the LULUCF sector is expected to contribute to two-thirds of Peru's expected emissions reduction goal of 30% by 2030.<sup>2</sup>

The production-protection compact (PPC), proposed and outlined over the two previous papers in this series,<sup>3</sup> can form a key element of Peru's strategy to reduce deforestation, on the basis that environmentally sustainable and economically profitable agricultural production can be combined with increased forest conservation to enable sustainable development that improves livelihoods and environmental protection. A principal challenge of the PPC, however, is how to finance climate friendly farming practices that improve farm productivity and rural incomes and reduce deforestation.

The overall financing requirements are very significant, and as available funding and expertise within the public sector alone are likely to be insufficient to address the scale of the challenge, for the PPC to be successful there is the need to develop public-private partnerships.

In the two previous papers, we analyzed the application of the PPC in the Peruvian context, comparing similar approaches in other countries, including the identification of major questions and areas of uncertainty in the coffee, cacao and palm oil sectors, and proposed a model for implementing the PPC in the Peruvian Amazon.

In this paper, we seek to provide a diagnosis of the current financial needs and opportunities to support the PPC as part of Peru's broader goals contained in its NDCs and its National Strategy for Forests and Climate Change (NSFCC). More specifically, we examine the following:

- Scale of finance required to implement the enabling conditions related to land use, smallholder credit, and technical assistance
- Sources of existing public and private agricultural finance, constraints to their use, and the potential for improving access to finance to support changes in agricultural productivity linked to forest conservation
- Potential for accessing additional resources and scaling up financing to support the PPC in the Peruvian Amazon, notably by accessing international climate finance

In the next section, we provide an overview of the proposed PPC model.

<sup>1</sup> INFOCARBONO. National Inventory of Greenhouse Gases, 2012. MINAM, Lima, Peru. <http://infocarbono.minam.gob.pe/inventarios-nacionales-gei/inventario-nacional-de-gases-efectos-invernaderos-2010-2/>.

<sup>2</sup> <http://www.minam.gob.pe/wp-content/uploads/2015/06/contribucion-NDC21.pdf>.

<sup>3</sup> 1) King, D., F. Hicks, G. Gammie, V. Galarreta, L. Szott, D. Coronel, L.M. Ormeño, and M. Leal (2016). Towards a Production-Protection Compact for Peru: Elements and Lessons from Global Experience. Forest Trends/Earth Innovation Institute, MDA. 22 pp. 2) Szott, L.T., L.M. Ormeño, G. Suarez de Freitas, V. Galarreta, R. Edwards, I. Alcantara, D. Coronel, O. Saavedra, M. Leal, and E. Mendoza (2017). The Production-Protection Compact in the Peruvian context. MDA/Forest Trends/Earth Innovation Institute. 46 pp.

## Proposed Model for the Production-Protection Compact

Unlike in other countries, notably in neighboring Brazil, it is unlikely that in the Peruvian Amazon a primary focus on the use of “sticks”, or sanctions, such as denying access to credit for farmers engaged in illegal activities, will be effective in reducing deforestation rates. Instead, given the weak governance, institutional capacity and land use enforcement capacity in the region, and the fact that most producers lack access to credit, the PPC strategy will have to rely primarily on “carrots”, or incentives, to increase agricultural productivity and competitiveness linked to forest conservation. Increased access to credit and markets and improved land use rights, all conditioned on reduced deforestation by the recipients, can be used as positive incentives.

“Protection” on its own will not address the underlying cause of deforestation, which is rural poverty. Since farmers cannot afford fertilizers and other agricultural inputs, crop yields are low, and the farmed soil quickly becomes depleted in nutrients resulting in declining crop yields, leading producers to abandon their plots and repeat the deforestation cycle. Thus, farmers use natural capital – forest land - because they lack access to financial capital necessary to purchase fertilizer and other inputs. The primary proposition of the proposed PPC strategy is that by increasing the productivity of current farms, deforestation rates driven by agriculture will decline significantly.

The ability of smallholders to increase their productivity and reduce their historical dependence upon continued expansion into forest areas will depend in part upon the ability of the public sector to partner with private actors in the financial and agriculture sectors to provide innovative financial products and technical assistance that overcome current barriers to credit. These barriers include lack of land title or other collateral, high interest rates, high transaction costs, and lack of familiarity with agriculture and the perception of high risk in lending to smallholders on the part of financial institutions. Increased productivity will also depend upon the private sector providing strong market signals to smallholder producers, and ultimately being able to demonstrate to farmers that sustainable practices are more economically viable than current practices. Ultimately, producers will need to be able to generate significantly higher returns to their land, labor and capital in order to be sufficiently motivated to change their farming and natural resource management practices.

In addition to these financial and technical assistance incentives, there is also the need to combine regulatory incentives to instill a longer-term perspective and a sense of stewardship and willingness to invest in sustainable production on the part of smallholders. One of the primary regulatory incentives is the provision of limited land use rights within areas designated by government as special treatment zones for agroforestry systems (“contratos de cesión en uso para sistemas agroforestales”).<sup>4</sup>

At the same time, these various incentives would also need to be complemented by the improved ability of the regional and national governments to monitor changes in land use and forest cover and to respond more effectively to detected/ reported illegal deforestation. In a similar fashion, these monitoring and evaluation systems could be linked to the participating financial institutions and company supply chains to help ensure that continued access to finance and markets by producers is linked to compliance with forest conservation.

The key is that the access to this combination of incentives by smallholders needs to be conditioned on their compliance with the commitment not to engage in deforestation, and ideally to reforest degraded areas over time.

The following table shows the actions and types of financing required to develop a “reduced deforestation” economy that would result in reduced or zero-deforestation supply chains and landscapes over time.

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<sup>4</sup> This process allows the allocation of partial rights over forestland: full allocation of such rights on lands with the capacity to be used primarily as forests – whether currently forested or deforested – is not permitted (under Forest and Wildlife Law N° 29763 Article N° 37).

Table 1. Actions to Develop a “Reduced Deforestation” Economy

Category	Uses of Finance	Sources of Finance
<b>Establishing the enabling conditions for reduced deforestation</b>	<ul style="list-style-type: none"> <li>• Institutional strengthening;</li> <li>• Designing and implementing national and regional climate-change strategies;</li> <li>• Implementing land use titling and monitoring &amp; enforcement systems;</li> <li>• Simplifying the associated legal framework and bureaucratic processes</li> </ul>	Primarily from government funds and international cooperation.
<b>Increasing agricultural and forestry productivity, leading to improved forest conservation</b>	<ul style="list-style-type: none"> <li>• Improving access to technical assistance, technology, productive inputs, and rural finance;</li> <li>• Building infrastructure, such as roads, drainage and irrigation systems, and telecommunication;</li> <li>• Improving natural resource and forest conservation management practices at the farm and landscape levels.</li> </ul>	Public and private investment, ideally via public-private partnerships, with incentives and risk reduction provided to the private sector, at least for an initial period.
<b>Generating ecosystem services payments</b>	<ul style="list-style-type: none"> <li>• Providing incentives or payment for results to actors that contribute to reducing deforestation.</li> </ul>	Climate/carbon funds, bilateral/multilateral cooperation, and companies/industries.

## Financing Requirements for the Production-Protection Compact

### Establishing Enabling Conditions

Within Peru's NDCs for the land use sector and its NSFCC, a principal GHG mitigation measure is the establishment of enabling conditions for sustainable land use (e.g. land classification and zoning, land titling and assignment of rights, and systems of monitoring and enforcement).

The establishment of enabling conditions can facilitate investments in more productive and sustainable land use, such as agroforestry-based coffee and cocoa, oil palm, cattle production and reforestation. In combination with support for producers in these sectors and the implementation of effective conservation strategies, these enabling conditions can also contribute to reduced deforestation.

It is important to note that enabling conditions are a necessary pre-condition for reduced deforestation, but they alone are not sufficient for determining that outcome. In addition, some of these conditions, such as obtaining land use rights for smallholders, could be included as part of proposed efforts to increase agricultural productivity, versus the private sector waiting for such conditions to be fully met in a given area prior to engaging with smallholders.

#### Box 1. Land-Use Rights Implementation in San Martín Province in Partnership with the Private Sector

Lack of clarity of land tenure and land use is a major cause of uncertainty for private sector investments and governmental productive strategies in the Peruvian Amazon, often determining whether an investment can be made in a certain territory or not. Sub-national governments are aware of the need to complete the titling and allocation process to create an adequate business climate. However, even when there is the political will to move forward, the process tends to be protracted due to various factors.

For this reason, the regional government of San Martín (GORESAM) has established agreements with private investors to include the costs of land-use rights allocation in areas that are of strategic importance for the government's development strategy. For example, GORESAM has permitted private investors in the cocoa and jatropha (biofuel) sectors to incorporate these costs as part of their pre-investment analysis and design, prior to successful implementation of the agricultural investments.

Public institutions can also meet the costs of land titling. For example, the National Commission for Development and Life without Drugs (DEVIDA) included direct transfers of more than US\$250,000 in 2017 for the titling of rural properties as part of implementing alternative development projects.

These approaches could be scaled up as a practical means of creating the necessary enabling conditions for the proposed PPC.

While the incremental investments needed to support the range of enabling conditions on 20.6 million ha of land in the Amazon is still difficult to estimate accurately, a conservative projection is in the vicinity of US\$1 billion by 2030.<sup>5</sup> The majority of this investment is expected to come from public finance and international cooperation. And while the projected future government expenditure related to this issue is also difficult to assess accurately, it appears that current Peruvian government line items could contribute to covering a part of these costs from 2017 to 2030.<sup>6</sup>

As of 2015 Peru had negotiated bilateral and multilateral agreements for more than US\$600 million for climate mitigation and adaptation. However, most of these funds are payments for results that depend, in turn, on the

<sup>5</sup> Limachi Huallpa, L (2015). Propuesta técnica actualizada de contribución del sector USCUS al iNDC. Informe Final. Submitted to Ministry of the Environment, Peru. Lima, Peru.

<sup>6</sup> There are four Peruvian government budgetary line items that could potentially contribute up to \$78 million/year, assuming constant annual investments: 0057 – biodiversity and natural resources in protected natural areas, 0072 – sustainable, integrated alternative development, 0130 – sustainable use of forest resources, and 0144 – sustainable natural resource management. In: Szott, L.T., D. Coronel, and V. Galarreta (2016). Estudio de pre-factibilidad de la vinculación del sector forestal y REDD+ con el mercado de carbono doméstico en Peru. Producto 4. Estimación de oferta y demanda doméstica. Report to UNEP, MDA, Lima, Peru.

establishment of enabling conditions for sustainable land use. Also, these pledged funds are not pigeonholed for the public investments needed to catalyze private investments in more productive and sustainable production systems and practices, such as improved coffee and cocoa agroforestry systems, commercial and community reforestation on already deforested land, and sustainable forest management (SFM), nor do they include private investments in production systems needed to reach the ambition of the NDCs.

These additional investments are also still difficult to estimate accurately, but a conservative projection is that these would be in the vicinity of US\$3 billion within the same period, or about three times larger than those needed for enabling conditions.<sup>7</sup>

As a result, the government of Peru will need to provide incentives to catalyze private investment (such as those which are recommended in the following section). International climate finance can help support some of this additional cost, but most of this climate finance is results-based. This financial challenge presents a “chicken-and-egg” situation: the government of Peru needs to scale up public investment today in order to benefit from: a) future REDD+ and other climate-related payments, and b) more competitive and productive agriculture/timber sectors.

### **Increasing Agricultural Productivity via Credit**

At present there are significant barriers to smallholders obtaining access to credit to increase agricultural productivity. Major reasons include the following:

#### **Perceptions of High Risk**

- Perceived high risk by financial institutions due to international commodity price fluctuations, exchange rates, erratic weather and loan default
- The lack of credit histories and low levels of financial education on the part of farmers
- The lack of solid guarantees to back loans due to the low level of formal land titling and other collateral
- Financial products that are poorly aligned with the characteristics of perennial crops or reforestation – notably due to loan terms that are only for one to two years
- The scarcity of enabling goods or services such as technical assistance, road infrastructure, irrigation and drainage, and energy systems
- Scarcity of crop insurance (it should be noted, however, that Agrobanco has recently started to offer agricultural insurance for climate-related risk - more than 10,000 farmers were insured and 305 claims, worth about US\$700,000, were paid in 2015)

#### **High Transaction Costs**

- High costs of processing credit applications and administering loans due to the dispersed nature and lack of solid databases or credit profiles related to small-sized farmers and the small size of average loans
- A paucity of existing farmer organizations, with the majority of smallholders being disaggregated and located in remote, inaccessible areas
- High costs to farmers of accessing or managing credit due to high transport costs and the lack of local banking agencies or services
- Low rates of bank use and capture of deposits that increase the cost of capital and consequently interest rates of loans

It is also worth noting that in addition there is a widespread perception on the part of smallholders that banks and financial institutions are remote and unlikely to provide services to them and/or that the processes and costs involved are beyond their reach.

#### **Current Credit Availability**

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<sup>7</sup> Limachi Huallpa, L. (2015).

Total agricultural lending in Peru in 2016 amounted to around US\$6 billion, or about 9.5% of total national credit, although only a small proportion of this was available to smallholders. In 2016, approximately 673,000 loans were granted to a potential universe of 2.2 million farmers. This was only about 30% of the national farmer population, though a significantly smaller percentage of smallholder farmers benefitted, as loans tend to be provided to larger, commercial, farmers.

At the national scale, roughly 65% of agricultural credit is granted by commercial banks (principally the Banco de Crédito del Perú, BBVA Continental, Interbank, and Scotiabank Peru) with the vast majority of the loans going to those large and mid-size agro-industrial businesses on the coast that have, over the last decade, experienced rapid growth, both in value and volume of exports. Average loan size in this segment was about US\$65,000.

The public bank, Agrobanco, accounts for about 11% of total agricultural loans. Agrobanco's credit operations prioritize lending to small- and medium-sized producers, rural and indigenous communities, community, or group businesses. Agrobanco dedicates 95% of its loan portfolios to agriculture, compared to 5% of the portfolios of commercial banks, and its average agricultural loan size (US\$4,870) is about one-third that of commercial banks. According to Superintendencia de Banca y Seguros (SBS), during 2016 Agrobanco provided 131,237 agricultural loans worth approximately US\$639 million to Peruvian farmers.

The Cajas Municipales (municipal savings and loan associations) are the third largest source of agricultural finance after commercial banks and Agrobanco, though agriculture represents only 13% of their total portfolios. Financial businesses are the fourth largest source of agricultural finance, accounting for 13% of total agricultural loans.

In combination, Agrobanco, the municipal savings and loans organizations, and financial businesses accounted for 53% of total agricultural loans but only 20% of loan value, while commercial banks provided 42% of all agricultural loans but 79% of loan value.

Table 2 summarizes agricultural finance in Peru.

Table 2. Total Agricultural Credits by Sector and as a Percentage of Total Credits, 2016

Type of Company	Number of New Credits Disbursed	Credits Disbursed in National Currency (Thousands of S /.)	Credits disbursed in Foreign Currency (Thousands of S /.)	Total Direct Loans (Thousands of S /.)	Total Direct Loans (Thousands of US\$) Exchange Rate: 3,352	Distribution Direct Credits
<b>Total Agrarian Credit</b>	672,739			19,607,960	5,849,630	
<b>Total Companies Multiple Operations</b>	541,502	8,690,078	8,774,745	17,464,822	5,210,269	
<b>Multiple Banking</b>	282,146	6,656,861	8,760,594	15,417,456	4,599,480	88.28%
<b>Financial Companies</b>	97,052	649,847	11,681	661,527	197,353	3.79%
<b>Municipal savings -and -loans organizations</b>	123,503	1,186,709	2,470	1,189,178	354,767	6.81%
<b>Cajas Rurales</b>	22,984	128,721		128,721	38,401	0.74%
<b>EDPYMES</b>	15,817	67,940		67,940	20,268	0.39%
<b>State Entities</b>	131,237			2,143,137	639,361	
<b>Agrobanco</b>	89,482			1,591,137	474,683	74.24%
<b>Fondo AgroPeru</b>	41,755			552,000	164,678	25.76%

<b>Total Credit Companies Multiple Operations to all sectors</b>	5,919,655	146,911,817	49,256,014	196,167,832		
<b>Banco de la Nación</b>		10,396,674		10,396,674		
<b>Total Credits to all sectors</b>		157,308,491	49,256,014	206,564,506		
<b>% Of Credit to the Agricultural Sector regarding Total Credit</b>				9.49%		

Source: Superintendencia de Banca y Seguros

In the Amazon region, fewer than 20% of small- and medium-sized farmers use credit. Agrobanco is the principal credit institution in the region, and 67% of its local credit portfolio is dedicated to small-scale farmers, with an average loan size of US\$6,500 per farmer.<sup>8</sup> Agrobanco offers 16 agricultural/forestry loan products. Annual interest rates depend on the term and size of the loan, but are in the range of 15% - 23% (where borrowing in Peruvian Soles) and 10% - 14% (where borrowing in US dollars – although there are also significant “hidden costs” in terms of the time and expenses that borrowers incur in obtaining these loans). It is also worth noting that Agrobanco has a relatively high cost of capital, of around 6% to 8% per year.

In the Amazon regions of San Martín and Ucayali, the principal municipal savings and loans organizations are Caja Maynas, Caja Paita and Caja Piura. Their annual rates of interest for agricultural loans range between 25% and 125%.

Other specialized rural “impact” financial institutions operate in the agricultural sector in the Peruvian Amazon, with Root Capital and Shared Interest Society being the two major actors.

In Peru, Root Capital works through the Asociación Capacitadora y Catalizadora de Desarrollo Empresarial Rural (ACCDER). Root Capital/ACCDER provides loans of between US\$30,000 and US\$1 million for working capital, harvest finance, commercialization, and crop renovation, and lends to businesses that are too large for microfinance institutions, but which are unable to access credit from conventional commercial banks. In addition to credit, Root Capital/ACCDER also provides financial management, organizational and business management services. Its clients in the Amazon region include several cooperatives that export certified coffee and cocoa.

Shared Interest Society focuses on loans to smallholder associations for the international commercialization of Fair Trade-certified products.

Most of the other international rural financial institutions in Peru provide loans of at least US\$500,000 to US\$1 million, which means they do not work with smallholders, and in any case they are not very active in the Amazon region.

Progress is already being made in scaling up existing public finance for agriculture, and a number of new developments suggest various government agencies will pay greater attention in the coming years to providing credit in the Peruvian Amazon.

For example, Agrobanco, with the support of a US\$57 million investment from the French Development Agency (Afd), is transitioning toward becoming a “green” bank. In particular, Agrobanco intends to grow its ‘green’ portfolio to 27% of total lending – thereby reaching 8,000 new borrowers with credit that incorporates social and environmental safeguards, helping smallholders to increase their farm productivity and income while reducing GHG emissions by 30%.<sup>9</sup>

The Peruvian national government is also lending US\$150 million to Agrobanco in order to expand the scope of its services while providing loans at lower interest rates<sup>10</sup>, with the goal of doubling the number of farmers financed at the national level from approximately 100,000 to 200,000.

### Box 2. Access to Credit in the Amazon

According to the latest National Agricultural Census (IV CENAGRO, 2012), only 9% of more than 2.2 million farmers solicit credit and 8% receive loans. According to ICRAF, 56% of Amazonian farmers identify the scarcity of credit as a principal factor limiting agricultural production: 11.7% of the farmers in the region obtained credit while 10.2% solicited credit but were denied. In addition, associated financial products such as crop insurance and farmer pension systems are absent.

Credit recipients are most often men between 45 and 65 years old and Spanish speakers (as opposed to speakers of native languages). Credit access increases with education level, number of family members, farm size, proximity to the district capital, and lack of participation in other social welfare programs. Moreover, 48.3% of credit recipients have other jobs and 23% belong to a farmer association.

Women who read and write are more likely to receive credit than those that don't, and access to credit tends to increase with educational level.

<sup>8</sup> [http://www.agrobanco.com.pe/data/uploads/memorias/memorias2016/MEMORIA\\_2015\\_.pdf](http://www.agrobanco.com.pe/data/uploads/memorias/memorias2016/MEMORIA_2015_.pdf).

<sup>9</sup> <http://gestion.pe/empresas/agrobanco-recibe-prestamo-us-57-millones-financiar-creditos-verde-2160084>.

<sup>10</sup> <http://gestion.pe/economia/minagri-inyectara-capital-agrobanco-otorgar-creditos-mas-baratos-2166886>.



In 2016, Agrobanco, with support from Global Canopy Programme, signed a memorandum of understanding to implement a fund in San Martín in which it committed a US\$88 million credit line, at concessional rates with extended repayment periods, for seven of the region's main agricultural supply chains.<sup>11</sup>

The recently-elected government of Peru has placed special emphasis on the agricultural sector as an engine of economic growth, poverty alleviation and social inclusion. In line with these aims, the Ministry of Agriculture (MINAGRI) is investing US\$60 million in the Serviagro platform, which provides market information, agricultural extension and planning services to smallholders with the aim of covering 1 million ha in 2017.<sup>12</sup>

The government is also investing in the following programs nationally:

- US\$100 million via the Mi Riego program, to expand drip irrigation on 100,000 ha of land
- US\$15 million per year to help promote commercial reforestation on 1 million ha of land, mainly in the Amazon
- US\$100 million in the Cocoa Center of Excellence (in association with the National Institute for Agricultural Innovation (INIA)), which is co-funded by the Inter-American Development Bank (IADB), and is of particular relevance for the Amazon region

Despite these positive steps, there is still a significant financing gap regarding the provision of credit to the majority of the 447,000 small- and medium-sized<sup>13</sup> farmers in the Peruvian Amazon, of which about 310,000 have perennial crops – mainly coffee and cocoa.<sup>14</sup> Currently only about 80,000 of these farmers (approximately 20% of medium-sized farmers and 10% of small-sized farmers in the Amazon) have credits from Agrobanco or other financial institutions (see accompanying box above). The use of technical assistance, improved technologies, and inputs is also generally low – practiced by less than 20% of the farmers – and access to agricultural insurance is virtually non-existent. Additionally, only a small fraction of farmers are organized into producer co-operatives or farmer associations, which presents a significant barrier to the provision of low-cost financial and agronomic services, insurance and market access.

The above information suggests that there is an unmet credit need of US\$2.38 billion among small- and medium-sized farmers in the Amazon (US\$6,500/loan x 367,000 farmers without credit), which represents about double the current combined agricultural loan portfolio of Agrobanco and Fondo AgroPeru (another state financial institution). Of this total, about 70%, or US\$1.7 billion, is needed for perennial crops. This total also corresponds with the estimated incremental investment needs for coffee and cocoa in the analysis of Peru's NDCs.<sup>15</sup> In addition, even greater investments will be needed for reforestation if Peru is to reach the goal of 2 million reforested ha under the government's commitment to the World Resources Institute's (WRI)/ IUCN 20 x 20 Initiative. Estimated financial and technical assistance costs for filling the gap of unmet credit needs are approximately US\$150 million annually.

### Generating Ecosystem Services Payments

As noted earlier, to support the PPC, Peru should invest in institutional strengthening and the design and implementation of national and regional climate-change initiatives such as REDD+.<sup>16</sup>

The achievement of reduced deforestation under the REDD+ framework would allow Peru to receive “payments for results” under the Joint Declaration of Intent between Peru, Norway and Germany, and from the World Bank Carbon Fund, potentially amounting to ~US\$280 million. Payments for results could then help underwrite the costs associated with implementation of the PPC.

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<sup>11</sup> <http://globalcanopy.org/new-innovative-credit-line-to-fund-sustainable-land-use-transitions-san-martin-showcases-how-peru>.

<sup>12</sup> <http://ppk.pe/documentos/plandegobierno.pdf>.

<sup>13</sup> Farmer classification: small-sized farmers have < 10 ha of land in the high jungle and <15 ha in the low jungle; medium-size farmers have 10 – 50 ha in the high jungle and 15-115 ha in the low jungle (Robiglio et al., 2015, see below).

<sup>14</sup> Robiglia, V., M. Reyes Acevedo, and E. Castro Simauchi (2015). Diagnóstico de los productores familiares en la Amazonia Peruana. ICRAF Oficina Regional para América Latina, Lima, Peru.

<sup>15</sup> Limachi Huallpa, L. (2015).

<sup>16</sup> REDD+ stands for countries' efforts to reduce emissions from deforestation and forest degradation, and foster conservation, sustainable management of forests, and enhancement of forest carbon stocks.

However, to be eligible to receive payments for results, a certain amount of costs must be incurred upfront. To these ends, Peru is able to benefit from REDD+ “readiness” funding from international donors. However, international readiness funding only totals about US\$21 million, and Peru’s own contribution of public funds in this sphere is quite meager (around three times international funding).<sup>17</sup>

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<sup>17</sup> This ratio of 3:1 can be compared to Brazil (11:1) and Colombia (7:1 (intended)).

## Recommendations for Improving the Implementation of the Production-Protection Compact

In the following sections we consider ways to support the implementation of the PPC by (a) improving access to credit for smallholders, (b) improving access to climate finance and (c) encouraging private investment and linking to specialty markets.

### Improving Access to Credit for Smallholders

Some of the more promising opportunities for enhancing domestic finance channels to smallholders are listed below. As mentioned, credit should be linked to land use monitoring to ensure that it does not drive further deforestation.

#### Innovative Policies, Practices, and Mechanisms

- Make available increased public resources for reduced interest rate loans (for example via equalization payments to public banks when they lend to farmers at concessional rates)
- Expand the use of fiscal tools to support agricultural and forest conservation infrastructure (including accelerated depreciation rates and tax breaks to private companies that redirect their tax payments to finance such investments)
- Enhance and reform national institutions such as Agrobanco and the Development Bank of Peru (COFIDE) and regional development funds, such as the Amazon Fund (FONDESAM) in San Martín and Ucayali, to become leaders in financing the implementation of low-emission development (LED) initiatives
- Develop a national public fund platform to better harness existing finance instruments in Peru and to develop new ones, such as is proposed under the National Forest Fund (see below)

#### Alternative Lending Models

- Promote the use of factoring finance - using contracts, inventories, accounts receivable, etc., as loan collateral<sup>18</sup>
- Promote the use of “triangulation” financial arrangements in which the credit extended to associations of smallholders by credit institutions is repaid by the buyers who deduct the loan principal and interest from the value of their purchase agreements<sup>19</sup>, paying the difference to the associations
- Support longer-term loans for farm rehabilitation, renovation and/or crop diversification, etc., linked to the cash flow of on-farm production
- Given that an unknown, but likely significant, portion of current financing of productive activities occurs via informal channels, such as advance payments to producers provided by exporters, processors, or input suppliers against future production, seek to involve such organizations in these alternative practices

#### Risk Mitigation

- Support credit institutions to take risks on agricultural financial products, including through first loss reserves and partial risk guarantees provided by the government and various donors (see the box detailing FONDESAM’s program in Ucayali)
- Provide group loans based on solidarity guarantees among members of producer associations, which generate peer pressure to repay loans
- Link the provision of cost-effective extension services to credit for smallholders, ideally with the private sector playing a leading role
- Expand current initiatives to provide crop insurance to famers, with particular emphasis on the participation of smallholders

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<sup>18</sup> However, the SBS has yet to establish procedures for valuing biological assets, such as plantations.

<sup>19</sup> This system is used by COIFDE (Producto Financiero Estructurado), Root Capital and other specialized rural financial institutions.

## Reducing Transaction Costs

- Expand group lending to producer associations (versus loans to individual farmers); incentives could be provided by government to financial institutions and the private sector to underwrite the associated costs of establishing and supporting such associations
- Expand use of mobile technologies, GPS and information technology platforms (referred to as “fintech”) by rural financial institutions to help reduce the time and cost of determining the credit worthiness of loan applicants, processing and administration of loans, and monitoring loan performance of smallholders.

Regardless of who convenes, successful multi-stakeholder platforms in this space have been designed to actively lead partnerships and action by the public and private sectors. Key design elements to consider for maximum impact in this respect include the scope, level of engagement, and facilitation of the working groups.

### Box 3. Amazon Development Fund (FONDESAM) Ucayali Loan Guarantees to Facilitate Finance for Smallholder Producers

#### 1. Palm Oil Sector

Between 2008 and 2012, the regional government of Ucayali (GOREU) supported the members of the Central Committee of Oil Palm Producers of Ucayali (COCEPU) to establish 1,000 ha of oil palm via access to commercial loans, benefitting 447 producers.

Amazon Development Fund (FONDESAM), in coordination with the Development Bank of Peru (COFIDE), provided a 100% loan guarantee to participating financial institutions (Caja Piura and Caja Maynas). Loans to producers had an annual interest rate of 12% and a term of seven years, with an initial one-year grace period. The funds that FONDESAM provided (around US\$3 million) were used to leverage around US\$1.2 million of additional co-financing from the Ministry of Agriculture that was used as collateral for individual loans.

Without the involvement of FONDESAM, producers would not have qualified for loans. However, more than half of the 447 producers have been able to develop assets with the potential to serve as collateral and are now clients of the financial institutions, with access to preferential interest rates. During the four-year period only 9% of producers (40 farmers) experienced problems of late payments, and that the mechanism was able to maintain 100% of initial loan funds.

While the use of the loan guarantee, via the FONDESAM trust fund administered by COFIDE, provides a model for how smallholders could be supported to qualify for loans, in the process leveraging other funds to further reduce the associated risks, it should be noted that the use of individual loans resulted in relatively high transaction costs on the part of the financial institutions.

#### 2. Cocoa Sector

The Colpa del Loro Cooperative, an association of approximately 100 cocoa-growers, has been able to rely on a loan guarantee from FONDESAM Ucayali to obtain a loan from Caja Piura. The loan is also based on the cooperative's relationship with Kaoka, a French chocolate company that has purchase agreements for the "fine flavor cocoa" varieties that members of the cooperative produce.

The US\$385,000 loan from Caja Piura supports three activities: (1) the purchase of cocoa by the cooperative from members and the cost of infrastructure for cocoa processing, (2) rehabilitation of 200 ha of cocoa (via pruning and the use of inputs) that will increase the average annual yield from less than 700 kg/ha to 2,500 kg/ha in 2 to 3 years, and (3) the adoption of "fertigation" (fertilization via drip irrigation systems) on 20 ha of demonstration plots, and associated training for extension personnel in the use of this technology, which has the potential to achieve annual yields of up to 3,800 kg/ha, albeit with conventional cocoa varieties (such as CCN51). The loan has a three year term, and has an annual interest rate which is 5% below Agrobanco's prime rate.

FONDESAM's loan guarantee is contingent on the commitment by each member to maintain existing forests on their farms. These areas are geo-referenced as part of the organic certification program of the cooperative, and are therefore verified by credible third parties.

Unlike the experience in the palm oil sector above, FONDESAM is guaranteeing a single loan to the cooperative, which has the responsibility for individual loan disbursement and recovery from its members. This structure is designed to reduce transaction costs.

## Improving Access to International Climate Finance

In addition to pursuing payments for results under the REDD+ framework (see earlier), the government of Peru could apply to other sources of climate funding, such as the Green Climate Fund, the Adaptation Fund, and bilateral arrangements with donor countries and development institutions.

This finance could be used to support the implementation and scaling-up of the PPC, as part of the larger NSFCC, in the following ways.

- Expand public banks' concessional lending programs for farmer productivity, along the lines of Agrobanco's initiative in San Martín
- Support the ringfencing of tax revenue from the national government to incentivize forest conservation by the regional or municipal governments
- Provide first loss guarantees for private investment in improved agriculture in municipalities/regions adopting the PPC, following the model of FONDESAM's guarantee for a loan to a cocoa cooperative in Ucayali

The government of Peru is currently considering the creation of a "National Forest Fund" (NFF), which could seek, manage, and distribute deforestation-related climate finance from domestic and international sources.

The NFF could support some of the initiatives mentioned above, as well as more broadly supporting the establishment of enabling conditions for reduced deforestation, distributing funds to regions and municipalities, providing fiscal incentives for private actors, increasing access to credit at concessional rates for sustainable practices, and providing direct payments for carbon sequestration and other ecosystem services.

The NFF could also be used to coordinate and leverage existing government programs, such as the national system for public investment, Agroideas, ProCompite, the National Program for Agricultural Innovation (PNIA), etc., that require counterpart funding. Such a national fund, backed by the combined efforts of the Finance, Agriculture and Environment Ministries, could be effective in aligning public resources and in linking to international climate finance from DFIs and REDD+.

## Encouraging Private Investment and Linking to Specialty Markets

Domestic public investment and the use of international climate-change-related cooperation/REDD+ funding can help to overcome upfront costs of the transition to more productive smallholder agriculture. However, the objective is for financing flows from private agribusiness and commodity markets to increase and the agriculture sector to become less dependent on public funding.

Private sector investment will depend upon increasing crop production, improving product quality, and forging market linkages or accessing higher-priced, differentiated markets based on product quality and/or sustainability.

Investment in sustainable practices can mean that farmers can access differentiated markets for coffee, cacao and palm oil, and benefit from associated market premiums. Such differentiated markets include certified palm and palm kernel oils, and specialty cocoa and coffees that meet international quality standards and flavor specifications. Certification schemes that combine crop quality with environmental safeguards (e.g. Rainforest Alliance, Utz, Nespresso AAA, Starbucks C.A.F.E. Practices, the Roundtable on Sustainable Palm Oil (RPSO), etc.) have a potentially important role in this regard, but the bulk of these crops produced in the Amazon region are not part of such systems, but are rather commercialized as undifferentiated, conventional commodities.

### Box 4. IDH - The Sustainable Trade Initiative and Norway: Climate Finance Supporting Sustainable Agriculture

IDH has incorporated a fund with an initial US\$100 million from the government of Norway to catalyze private sector investment into agriculture productivity that also protects forests. The fund targets countries/jurisdictions where governments are implementing strategies to protect forests and reduce GHG emissions. The aim includes supporting smallholder production and linking to companies with sustainable commodity sourcing commitments.

Although the fund is focused on Brazil and Indonesia, the approach could be replicated for Peru.

Source:

<https://www.idhsustainabletrade.com/uploaded/2017/01/A-Tropical-Forest-and-Agriculture-focused-fund.pdf>

Apart from crop certification, the promotion of regional branding that includes decreased deforestation as an attribute could help promote the adoption of climate-smart, environmentally-friendly production systems and could eventually aid in accessing differentiated higher-quality markets.

Achieving broader regional reduced deforestation outcomes, such as those specified by regional branding, could also attract investment from commodity buyers (such as members of the Consumer Goods Forum) focused on legality and sustainability in their supply chains at a broader landscape level. Such regional branding could:

- Validate regions as territories for the supply of certified low/zero net deforestation commodities
- Achieve scale in sustainability more quickly and cost-effectively than farm-level certification (for example, RSPO is currently attempting to develop a jurisdictional certification system in Indonesia as an alternative to current farm-level approaches)
- Potentially, link to private investment for a broader range of emerging payments for ecosystem services (including water)

Additionally, there is a broader set of financial instruments that the government of Peru could consider adopting in the context of sustainable agriculture and forest management. For traditional public-private infrastructure projects, Peru has developed a payment mechanism that increases project bankability by reducing the investment risk down to a level equivalent to the nation's sovereign credit risk, resulting in higher levels of private investment.<sup>20</sup>

In the land-use sector, future revenue streams from e.g. sustainable forest management (SFM) may be less certain than those from infrastructure in the built environment. However, a combination of international climate finance supporting payments for ecosystem services related to SFM, combined with credit enhancement from the national government, could be effective in leveraging private investment.

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<sup>20</sup> See for example: Peru and the Project Bond Revolution: Project Finance International. Issue 552. (May 2015) [http://www.bakermckenzie.com/-/media/files/insight/publications/2015/05/peru-and-the-project-bond-revolution/files/read-publication/fileattachment/ar\\_la\\_peruprojectbond\\_may15.pdf](http://www.bakermckenzie.com/-/media/files/insight/publications/2015/05/peru-and-the-project-bond-revolution/files/read-publication/fileattachment/ar_la_peruprojectbond_may15.pdf).

### Conclusion

Despite some recent progress in terms of increased government funding to reduce deforestation and bilateral and multilateral agreements to support climate change mitigation and adaptation, there is still a significant financial gap to reduce deforestation rates and meet Peru's NDC commitments. The Paris Agreement should lead to increased international REDD+ funding in addition to the commitments that Peru has already secured. However, such commitments will be based largely on payments for performance, so Peru will need to demonstrate concrete results in the coming years in order to obtain this contingent funding.

Therefore Peru needs to address the challenge of providing the upfront costs associated with catalyzing a successful PPC, including via the provision of credit and technical assistance to increase smallholder productivity. As a result, it will be necessary for the national government, together with the regional governments in the Amazon region, to engage the private sector, as the financial resources and expertise of the public sector alone will be insufficient.

The proposed PPC model focuses primarily on the provision of financial services to smallholders, as the majority of these producers in the Amazon region currently lack access to credit. The provision of credit in turn will depend upon the incentives that can be provided to the private sector to aggregate smallholders and to reduce the risks and transaction costs associated with providing improved access to inputs and markets. Unless smallholders can significantly increase their current low levels of productivity and farm income they are unlikely to change their unsustainable practices and reduce deforestation rates.

There is a need and opportunity to engage with leading commodity sector companies and financial institutions to design more effective strategies to engage and incentivize smallholders. Some of the most promising opportunities include the use of alternative lending models – based on factoring, triangulation and group lending – supported by the use of fintech, loan guarantees and improved land use rights, and the expansion of the new insurance scheme being promoted by Agrobanco.

In this context, there is also a need, as well as an opportunity, for the provision of bundled services that link farmers to input suppliers, financial institutions, and buyers, strengthening the capacity of the agricultural commodity value chains. These efforts can also be linked to increased support for certification systems that incorporate environmental conservation principles and broader sustainability labelling and branding initiatives.

The key is that continued access to these incentives must be contingent upon compliance with forest conservation laws and policies, and that the associated environmental monitoring and evaluation systems, and responses by both the public and private sectors, must be coordinated, effective and robust.

There are a number of new government and donor initiatives that are starting to be implemented, and an associated opportunity to demonstrate how these initiatives can be utilized to implement the PPC model and to scale it up over time.

One of these is the proposed National Forest Fund, which can be complemented by a number of other national and regional government programs. In particular, there is good scope for expanded use of existing development funds, such as FONDESAM in San Martín and Ucayali, to provide loan guarantees to facilitate access to credit by smallholders. Such funds could also be expanded to other Amazonian regions that currently lack such facilities.

Regional trust funds such as FONDESAM could also be supported to play a more proactive role in aggregating demand for credit and supporting alternative forms of lending based on the use of export contracts, liens of assets, inventories/warehouse receipts, etc., backed by loan guarantees and the provision of technical assistance. These trust funds could also seek to obtain access to additional loan guarantees from a number of development organizations, including: the IADB, Corporación Andina de Fomento (CAF), World Bank (Multilateral Investment Guarantee Agency - MIGA) and USAID (Development Credit Authority (DCA)).

The proposed National Forest Fund and regional trust funds could serve as platforms for the national government and regional governments in the Amazon region to seek additional international support from DFIs and bi/multilateral donors to combine improvements in enabling conditions, implementation of regulations aimed at forest conservation and monitoring capacity, with efforts to catalyze private sector investment and increased access to credit aimed at significant improvements in agriculture productivity and livelihoods.







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