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Towards a Protection-Production Compact for Peru: Elements and Lessons from Global Experience

Danielle King, Frank Hicks, Gena Gammie, Victor Galarreta, Larry Szott, Daniel Coronel, Luis Miguel Ormeño, and Monica Leal

FOREST TRENDS

Earth Innovation Institute

MDA Mecanismos de Desarrollo Alternos

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Acronyms

COP	Conference of the Parties of the UNFCCC
CSA	Climate-Smart Agriculture
DFI	Development Finance Institution
ENBCC	National Strategy on Forests & Climate Change (Peru) — *Estrategia Nacional sobre Bosques y Cambio Climático*
FSC	Forest Stewardship Council
MINAGRI	Ministry of Agriculture (Peru) — *Ministerio de Agricultura y Riego*
MINAM	Ministry of Environment (Peru) — *Ministerio del Ambiente*
NAMA	Nationally Appropriate Mitigation Actions
NGO	Non-Governmental Organization
PFP	Payment for Performance
PPC	Protection-Production Compact
PPP	Public-Private Partnership
REDD	Reducing Emissions from Deforestation and Forest Degradation
UNFCCC	United Nations Framework Convention on Climate Change

Foreword

Most deforestation in Peru happens in increments the size of just a few football fields, overwhelmingly driven by smallholder producers who are living in poverty. This deforestation is a result of a complex web of issues including education, migration, land rights, governance, and physical and economic vulnerability. In contrast to some contexts in which large-scale agribusiness is the principal driver of deforestation, in Peru small-scale agriculture is the primary cause. Sadly, the associated poverty/low-productivity/deforestation cycle is clearly also directly harmful to the producers themselves, as their initial social and economic development benefits quickly tend to stagnate or decline under the current dynamic, and this trend is only likely to worsen over time.

In 2008, Peru committed to net zero deforestation by 2021 and in doing so also committed to breaking this cycle. The National Forestry and Climate Change Strategy, formally adopted by Peru in July 2016, recognizes these entrenched links between deforestation, agricultural production, and poverty and emphasizes the need to take a landscape-level approach, founded on principles of green growth, in order for forest conservation to be successful — focusing efforts at least as much on areas where there are no trees as on the forests themselves.

Forest Trends, Mecanismos de Desarrollo Alternos, and Earth Innovation Institute formed a consortium in 2015 to work with the Government of Peru to design, test, and begin to put into practice a strategy under which Peru can meet its commitment to net zero deforestation while improving livelihoods through productive agriculture. This consortium describes its target as a protection-production compact (PPC) which asserts that the current vicious cycle can and must be transformed into a virtuous cycle of effective environmental protection and profitable agricultural production on degraded lands. This new cycle of truly sustainable development will improve livelihoods while ensuring that the forests upon which we all depend remain standing.

Our consortium's efforts, funded by the Norwegian Government as part of its commitment to support Peru's net zero deforestation pledge, and implemented in collaboration with World Wildlife Fund and other partners, are engaging officials at all levels of government; researchers and leaders from civil society; and producers, buyers, input providers, lenders, and investors across the coffee, cocoa, and palm oil value chains to design a strategy for aligning efforts on the landscape for Peru's PPC. The initial focus of the PPC will be in the departments of San Martin and Ucayali, which have some of the highest rates of deforestation in the country and also where the governors have been proactive in addressing the threats and have also made recent international pledges to reduce deforestation that contribute to the national emission reduction goals.

In this publication, one of the first products under these efforts, we draw on experiences from Peru and around the world to characterize the key elements of a successful PPC. Our critical review of international experience has allowed us to extract these elements and identify best practices, important lessons, and potential risks that should be considered as strategic plans covering each of these elements are developed for the Peruvian context.

The analysis in this publication lays a clear conceptual foundation for the work ahead, which is as urgent as it is ambitious. In the coming months, we will work with partners from national, regional and local governments, producer groups and industry associations, non-governmental institutions and companies, technical specialists, lenders, and development finance institutions to identify and quantify what will be needed — in terms of finance, policy, capacity, and institutions — to implement strategies that address the PPC elements. We will consider how climate finance and public funds can leverage agricultural credit, private finance, supply chain relationships, and private sector acumen, to achieve the alignment of resources needed for the vision to turn into a reality. And we'll continue our work on the ground to start to put all of this into practice through specific pilots, while informing the planning for how to mainstream the PPC across Peru's entire Amazonian region.

We thank the Governments of Peru and Norway for their confidence in our team and the numerous experts and actors that have contributed to the analysis presented in this paper, both directly and through the number of experiences around climate-smart agriculture and landscape-level planning in Peru and around the world that we have drawn upon for this report. We look forward to continuing this good work together in the critical next steps ahead of us.

Sincerely,

Michael Jenkins
President & CEO
Forest Trends

Victor Galarreta
President of the Board
Mecanismos de Desarrollo Alternos

Daniel Nepstad
Executive Director & Senior Scientist
Earth Innovation Institute

Introduction

In the Peruvian Amazon, inefficient agricultural practices, a lack of land rights, and lax enforcement of environmental protections have resulted in farm-by-farm clearings of rainforests. In fact, according to the Peruvian Ministry of Environment (MINAM), 95% of Peru's deforestation in recent years was driven by farmers clearing land for agricultural and livestock production (MINAM 2015).

Peru's National Forestry and Climate Change Strategy (henceforth referred to as "ENBCC," for its Spanish acronym; MINAM 2016) proposes an integrated landscape approach to forest conservation and restoration. It recognizes the need to invest in smallholder agriculture, alongside more traditional conservation activities like formalization, monitoring and enforcement of standing forests. The ENBCC thus reflects the broader understanding held by governmental and civil society leaders in Peru that positioning forest conservation within a framework of green growth is critical to achieving Peru's target of net zero deforestation by 2021.[1]

The ENBCC also identifies a number of demographic, economic, technological, political, institutional, and socio-cultural factors contributing to the current dynamic of deforestation in Peru. It highlights that the vast majority of smallholder producers in the Amazon are not affiliated with cooperatives or producer organizations. As a result, most smallholders lack access to credit, technical assistance, and agricultural insurance. Weak land-use rights also discourage good land stewardship. These conditions contribute to low yields and low-quality products, which result in generally poor economic returns for producers, often leading to farmers substituting land for capital. This extensive agriculture thus expands into standing forests, resulting in the loss of valuable forests for short-term gains for producers that tend to fade quickly.

Following this diagnosis, the ENBCC is based on the conviction that strengthening conservation efforts while improving agricultural returns on existing farmland or degraded lands can transform this vicious cycle into a virtuous cycle with widespread benefits for producers, forests, and society. A variety of efforts by government, business, and civil society already underway in Peru recognize the potential for such a "protection-production compact" (PPC) in the Peruvian Amazon.

These efforts can be informed by what has been shown to work in other places, adapting international experience to the particulars of the Peruvian context, in particular to the value chains that have been shown to drive the majority of deforestation in the Peruvian Amazon: small-scale coffee and cocoa, and also larger-scale oil palm production linked to smallholders.

The Peruvian government and a number of international donor organizations are proposing to allocate significant resources to support the PPC, however finance for "Protection and Production" will only be effective if adequate regulatory regimes and incentives for producers and the private sector are in place. The key is to determine how these "carrots" and "sticks" can be provided in an integrated fashion, ideally achieving synergies in the process, rather than these occurring in parallel, or even isolation of each other.

The PPC model builds on experience in related fields, such as climate-smart agriculture and integrated landscape management. As a result, there is an increasing body of experience and evidence to draw on internationally and in Peru as stakeholders from the national and regional governments to producers, the private sector, and civil society seek to implement an effective PPC.

With the preceding in mind, this paper seeks to inform the efforts of Peruvian stakeholders to design and implement an effective PPC by presenting a framework composed of four critical elements that have emerged from experiences from around the globe. It also analyzes international experience, from Ghana to Guatemala and within Peru itself, across these elements and identifies key lessons, best practices, and potential risks that Peruvian leaders should consider in the development of their PPC.

[1] The Peruvian government has committed to zero net deforestation and degradation in addition to preserving a total 54 million hectares of forest by 2021, as announced at the United Nations Framework Convention on Climate Change (UNFCCC) Conference of the Parties (COP) in Poznan in 2008, reiterated at the United Nations General Assembly in 2010, and stipulated in both Peru's National Environmental Action for 2011-2021 and Bicentennial Plan towards 2021. At the 2014 COP in Lima, Peru also committed to restoring 3.2 million hectares of degraded lands by 2020 in support of the Bonn Challenge as part of the Initiative 20x20, which was reiterated at the 2015 COP in Paris.

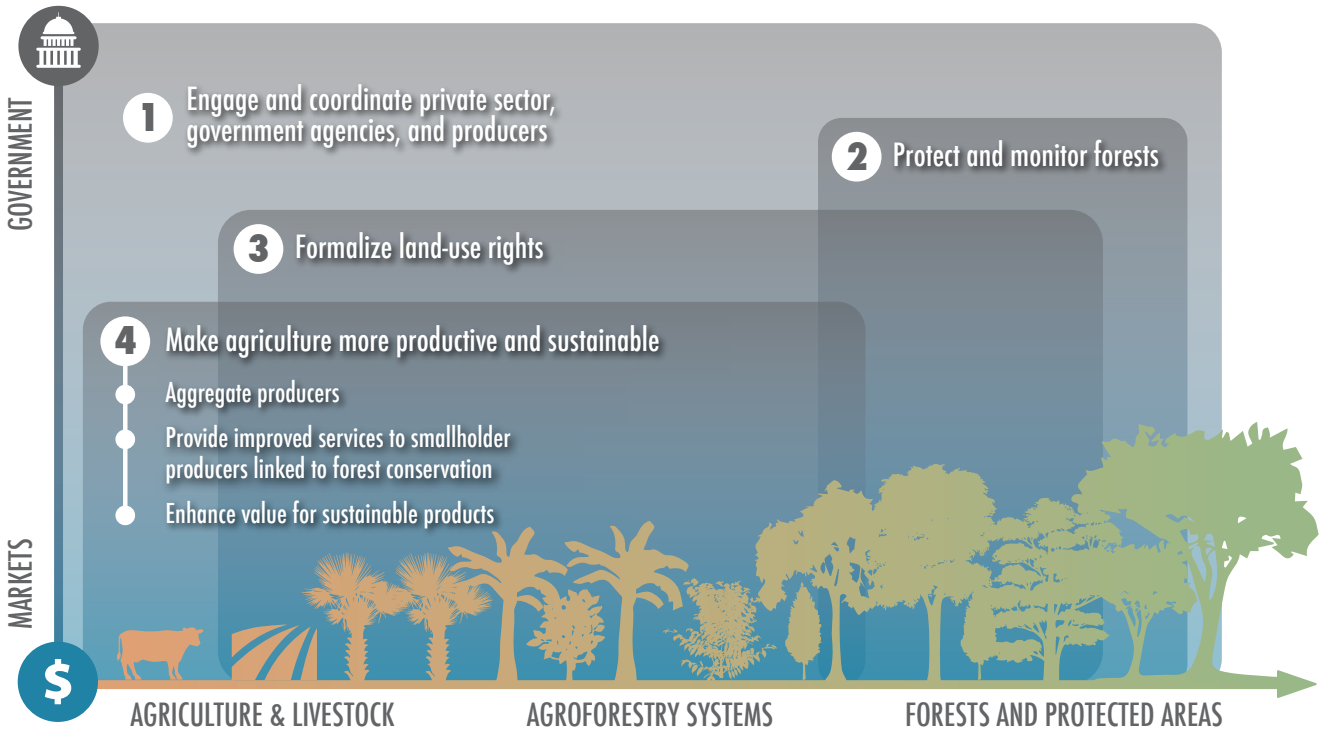
Elements of a Protection-Production Compact

Overview

The model of a protection-production compact presented here consists of four major, interrelated elements, beginning with the engagement and coordination of the private sector, government agencies, and producers through a strategically-coordinated multi-stakeholder platform. The second element focuses on systems of policies, capacities, technologies, and incentives to strengthen land use planning and governance with the intention of protecting and monitoring forests. The third element focuses on the critical task of formalizing land-use rights, in particular in areas where standing forests meet areas designated for agroforestry and agriculture. Finally, the model considers a range of strategies and incentives for coordinating systematic investment in agriculture in areas that are already under production or degraded, allowing production in those areas to become more efficient and sustainable. This final element considers three sub-elements, beginning with aggregating producers, then moving on to providing improved services to those producers, linked explicitly to forest conservation, and then finally to applying a range of potential options for further enhancing the value of sustainable products.

Figure 1 depicts these elements, how these elements require engagement of both the public and private sectors, to varying degrees, and how they play out on a continuum of farm, agro-forest and forest areas across the landscape. The elements work together to achieve the overall objectives of the PPC: forest conservation and improved livelihoods for smallholders.

Figure 1. Elements of the Protection-Production Compact



1. Engage and Coordinate Private Sector, Government Agencies, and Producers

This first element supports all the others, as an effective PPC depends on the alignment of efforts and resources of a range of actors that most often are not coordinated on the landscape. If government agencies at all levels and across sectors, especially in environment, agriculture, and economic development, are not aligned, conflicting agendas and policies can easily derail a protection-production strategy, potentially even resulting in more deforestation if agricultural production is emphasized at the expense of environmental protection. Additionally, the know-how and buy-in of private actors, including commodity buyers, input providers, and producers in relevant value chains, is critical to the success of the strategy developed. Financial institutions that could provide capital to support the strategy, or to activities that work against the PPC, also need to be consulted and brought on-board. And non-governmental organizations (NGOs), donors, and research institutions can play critical roles in leveraging social capital, filling in governance gaps, and generating and disseminating important information and technology.

Precisely because no one entity can realize a compact for protection and production, establishing effective multi-stakeholder working groups is fundamental to the PPC model and is the foundation upon which the effective design and implementation of all other elements rests.

Our review of international experience suggests that such working groups can be initiated by a variety of actors, as long as relevant public and private authorities buy in to the process (World Economic Forum 2016). For example, the Climate-Smart Cocoa Working Group in Ghana was established in 2011 by the NGOs Forest Trends and the Nature Conservation Research Centre with the goal of supporting efforts to achieve national targets to reduce deforestation while boosting yields in the cocoa sector (Forest Trends and Nature Conservation Research Centre 2013). The NGOs led the convening and coordination of a range of government agencies, cocoa industry companies, banks, insurance companies, farmers' associations, civil society, and research institutions, focusing on finding shared priorities among the stakeholders, identifying and addressing information gaps, and working on "no regrets" actions as a group. This working group remained highly active for many years, surviving various changes in senior management representatives and other members, while also producing a range of in-depth and timely reports to inform the members and their collective decision-making.

Other successful working group models have been convened by the private sector or by government. For example, the Beira Agricultural Growth Corridor (AgDevCo n.d.) was launched by the multinational company Yara International in hopes of developing the agricultural sector in rural Mozambique by connecting producers to infrastructure, inputs, financing, training, and markets. The success of that platform inspired Tanzania's President to launch the Southern Agricultural Growth Corridor platform with support from the World Economic Forum in his own country, with co-chairs from the Tanzanian Ministry of Environment and Unilever. Both platforms have successfully engaged actors across relevant government agencies, donors, development finance institutions (DFIs), private sector actors, producer organizations, and NGOs.

Box 1. Mato Grosso's Territorial Performance System

In Brazil's Mato Grosso state, through multi-stakeholder dialogue with more than 50 organizations, government agencies, soy and beef traders, processors, producers, retail companies, financial institutions and civil society came together to develop regional, "territorial" approaches, unifying diverse programs and processes that are fostering sustainability within a positive agenda of change for low emission rural development.

Through this process, stakeholders agreed that priority criteria for measuring success under Mato Grosso's territorial approach were: (1) deforestation; (2) labor law infractions; and (3) agricultural productivity, with other important socio-environmental attributes to be included.

To support the monitoring and evaluation of this criteria, Mato Grosso stakeholders created the Territorial Performance Monitoring Platform, which integrates data based on the prioritized criteria. The Platform has allowed stakeholders to better understand production systems and risks, informing the development and adaptive management of a regional plan for achieving healthy landscapes, productive farms, and equitable development while reducing deforestation . The Platform measures performance at the municipal level across the state..

Mato Grosso stakeholders were ultimately able to elevate this plan to a political priority with new political leadership, which beginning in 2015 worked with the private sector and civil society to develop the Produce, Conserve, Include Plan, which was launched at COP21 in Paris in 2015. The plan includes specific goals across the criteria identified with the multi-stakeholder platform, namely: a) Reduce deforestation by 90% in Amazonian Forests and 95% in Cerrado forests, by 2030; 2) achieve zero illegal deforestation by 2020; c) provide technical support to 104,000 smallholder families by 2030; d) support soy expansion onto cattle pastures; e) achieve higher beef yields while planting 2.7 million hectares of new forests; and f) avoid 6 billion tons of carbon dioxide emissions by 2030.

The Mato Grosso experience has demonstrated, to date, that creating a bottom-up, shared definition of success is possible and critical to secure necessary support for implementing a PPC. Additionally, this experience shows that high-level political support (in this case, the governor) can foster extraordinary collaboration within and across sectors, including from market actors, as long as the process has a clear, deliberate focus on financial mechanisms that address agricultural production.

Source: Earth Innovation Institute 2014.

First, clearly-defined scopes which focus on either a single crop or a single region have allowed successful working groups to align their constituents' attentions and efforts to produce results. For instance, focusing on a single crop at the national level has allowed the Climate-Smart Cocoa Working Group to influence national policy and strategy relating to cocoa and climate-change, as demonstrated in the group's contributions to Ghana's Forest Investment Plan and its ability to secure support for these efforts from the World Bank's Forest Carbon Partnership Fund. Alternatively, the Corridor platforms in both Mozambique and Tanzania have worked in specific regions to boost yields of several priority commodities with the deep engagement of key supply chain actors active across those commodities.

Furthermore, careful selection of working group participants based not only on representation of various sectors but also their skills and commitment to the process and the outcomes has allowed successful working groups to have operational impacts. In this regard, one of the lessons learned from international experience is that while it is important to have senior personnel from various organizations approve and review working group activities, the engagement of lower-level, more operational personnel and external consultants will support the group's ability to follow-through efficiently on discrete tasks.

Finally, experts in this space have noted that less successful working group processes have lost interest and support of participants, particularly of the private sector, due to overly-extensive processes that do not produce clear results. Therefore, working group facilitators should look for opportunities to achieve "quick wins" while working for longer-term results on agreed goals, as these help to establish a sense of achievement, commitment, and, over time, even camaraderie, for the members.

2. Protect and Monitor Forests

If working groups are the foundation of a protection-production compact, a sound system for protecting and monitoring forests is its cornerstone, critical to assuring that investments and incentives linked to improving agricultural production (Element 4) do not have the unintended impact of increasing deforestation.

This element primarily focuses on functions of the state — land use planning and governance, the crafting and implementation of strong policies for forest protection, and systems for monitoring the status of forests and responding effectively to threats, from illegal activity to forest fires. As environment ministries and protected area managers worldwide know too well, however, such systems require significant, and often unfunded, investments in personnel and technology. When these functions are considered within a PPC framework, however, strategic opportunities can be identified for leveraging the support and efforts of producers, local communities, and the private sector to reinforce public efforts around forest protection.

That has been the case in the state of Acre, Brazil, for example, where a territorial system has proved highly effective in aligning actors across the landscape and slowing deforestation. In recent years, national efforts to reverse deforestation trends have focused on a new Forest Code and sustainable production of export-oriented commodities — notably soy, beef, and leather — while the management of public forests has been transferred to the states (Fishbein and Lee 2015). Within this national context, in the early 2000s Acre began to form councils to coordinate zoning and land-use planning efforts, in addition to designing mechanisms to address growing deforestation from cattle ranching, agricultural production, and infrastructure projects.[2] The work of

[2] Personal communication, Monica Leal. 27 July 2016.

the state and councils was facilitated by satellite imagery and other innovative technologies which have supported cost-effective data collection and monitoring to inform baseline analysis and continued monitoring. This data, combined with coordinated governance efforts, permitted the agreement by a range of stakeholders on clear, data-informed, achievable targets to slow deforestation, which has been a success factor common across territorial programs.

Acre's strategy did not, however, singularly focus on what the public sector could do to manage forests and slow deforestation. Critically, the state developed its Environmental Services Incentives System, which established the legal framework to incentivize provision of ecosystem services through forest management. Moreover, Acre's forest carbon incentive program facilitates the development of low carbon management plans, and its Environmental Services Development Company seeks to leverage public-private partnerships (Fishbein and Lee 2015).

A variety of potential incentives for engaging private actors in the work of the PPC, such as subsidizing credit for improved agricultural practices or investing in rural infrastructure to improve access to services and markets, are discussed under Element 4. It is critical to the success of the PPC that such incentives are designed within an integrated territorial system, closely linked to monitoring efforts, and conditioned on commitments by the recipients regarding reduced deforestation, with clear consequences in place if commitments are not met.

The Maya Biosphere Reserve in Guatemala, described in Box 2, provides another example of smart territorial management, where zoning efforts strategically made space for both effective forest protection and economic activities, including by enforcing zoning through coordinated efforts of government, community groups, and NGOs. This example also demonstrates how noncompliant land users lost the incentives provided by the territorial system, allowing for the system to achieve its overall goal of virtually eliminating deforestation.

Box 2. Maya Biosphere Reserve

Guatemala's Maya Biosphere Reserve is an example of how smart land-use zoning and community engagement in monitoring land use can effectively support forest protection goals while allowing for sustainable economic development. Established in 1990s, the Reserve is the largest protected area in Central America, spanning some 2.1 million hectares of broadleaf tropical forest. The Reserve is divided into three zones: the Core Zone, in which only research and tourism are permitted (36% of the reserve); the Multiple-Use Zone, in which low-impact natural resource activities are permitted (40%); and the Buffer Zone, in which a broader variety of activities are permitted, including agriculture (24%). The approach to zoning in the Reserve allows for a critical balance between protection activities and productive activities.

From 1994 to 2002, twelve community concessions were granted in the Multiple-Use Zone, totaling over 400,000 hectares. Under this arrangement, communities were granted usufruct rights through 25-year contracts, with the potential for renewal. The National Council of Protected Areas required that all concessions met — and then maintained — Forest Stewardship Council (FSC) certification within three years of their establishment. To date, three of the concessions that were granted to resident communities of recent migrants have not met performance goals and have been cancelled or suspended indefinitely. However, the remaining nine concessions have performed exceptionally well: while the entire Reserve experienced a 1.2% deforestation rate from 2000-2013, the FSC-certified concessions experienced essentially zero deforestation at 0.01%.

There is a strong presence from a range of donors and NGOs within the Reserve, many of whom have partnered with the National Council for Protected Areas to provide training and technology to community concessions for their patrolling and vigilance duties. In addition to community vigilance and the use of good systems, the success is also based on the government being able to respond effectively responding to threats when notified by the communities, and taking action towards enforcement as necessary.

Sources: Hodgdon et al. 2015; Personal communication, Roan Balas McNab, 28 July 2016

A protection-production compact in Peru may also find important synergies for supporting monitoring efforts by designing systems that simultaneously assess threats to forests and inform efforts to improve agricultural productivity. For example, satellite imagery and the use of drones could detect crop and soil conditions, and help to inform farming decision making, while also conducting surveillance of changes in forest cover and condition, thereby benefitting local communities and the agricultural supply chain companies in addition to regional and national government agencies. In this way, the costs and benefits of the surveillance and information technologies could be shared by the public and private sectors.

As in the case of Acre, territorial programs allow for measurement, validation, and verification[3] of international REDD+[4] commitments, and sector-specific commitments, such as Nationally Appropriate Mitigation Actions (NAMAs), and receipt of their associated payments for performance (PFP) agreements, and can also decrease investment risks and promote sourcing of zero-deforestation commodities. In this way, the monitoring that supports forest management and the supervision of incentives to landowners can also justify compensation and investment by actors outside of the state which can help to fund the forest protection activities and incentives themselves, once the associated funding structure and processes by which such payments are received and disbursed at the national and sub-national levels are clearly articulated and developed.

Box 3. Common Success Factors Among Territorial Programs

A recent survey by The Nature Conservancy and the World Bank's Forest Carbon Partnership Facility found the following common success factors among territorial programs intended to achieve reduced deforestation and low-emissions development at the level of a state or region:

- Alignment of political will at both national and subnational levels;
- A strong legal and regulatory environment;
- Effective enforcement of regulations;
- Transparency and accountability;
- International investment and support;
- Community-based approaches; and
- Effective benefit sharing mechanisms.

Source: Fishbein and Lee 2015.

3. Formalize Land-Use Rights

The lack of land registration plays a significant role in deforestation: since 2001, nearly half of total forest loss in Peru has taken place in areas without assigned rights (MINAM 2016). On the other hand, secure land tenure is also often correlated with significantly improved environmental conservation, as it gives local land users an increased stake not only in investing in their own properties but also greater motivation in deterring and reporting illegal activities.

Improved tenure security also plays a fundamental role in improving agricultural production. In Peru, areas with more secure land tenure see higher investment in land, access to credit, efficiency in land & labor markets, and attraction to outside investments (Roth and McCarthy 2013). Improved land tenure not only provides collateral for opening access to formal credit, it also provides the security farmers need to justify long-term investments in their land, such as improved agricultural practices, reforestation efforts, or farm infrastructure and equipment. A meta-analysis of the impact of land rights on productivity suggests an average 40% gain in productivity associated with land titling over an average 12-year study period, which is even more dramatic in Latin America and the Caribbean where gains have been between 50 and 100% (Lawry et al. 2014).

Given this importance in securing environmental protection and improved livelihoods, national governments and international development agencies have supported projects to formalize land-use rights for several decades. Large-scale registration efforts require significant investment and collaboration, typically with phased implementation. In general, the associated institutional aspects of titling projects, such as establishing an online registration system and improving local enforcement capacities, are the most time and resource demanding, though the use of remote sensing technologies can speed up the land use classification and titling processes.

[3] Validation confirms project design meets stated requirements, while verification confirms results claimed by a previously validated project.

[4] REDD plus the conservation and enhancement of forest carbon stocks and the sustainable management of forests in developing countries.

Box 4. Brazil's Rural Environmental Registry (CAR)

One of the principle legal instruments in Brazil's 2012 Forest Code is the Rural Environmental Registry (Cadastro Ambiental Rural, or CAR), in which all rural landowners, or "possessors," must register their properties. The integration of property information, including satellite images and geo-referenced borders, allows for the identification of Areas of Permanent Protection (APPs), Areas of Restricted Use (AURs), and Legal Reserves.

Requirements for compliance vary based on property size. Properties considered medium or large require proof of ownership or possession, identification, and a map of their property with at least one geographic coordinate for registration, while smaller properties benefit from a simplified registration process, which requires proof of ownership or possession, identification, and a rough map of the property's perimeter (from which the state is responsible for registering geographic coordinates). While CAR is a method of registration that can support future efforts in titling, registration does not imply rights or title to the land.

Once landowners or possessors register their property and agree to the terms, they become eligible for benefits through the Environmental Compliance Program (Programa de Regularização Ambiental) for assistance with land restoration. Small properties are not required to make up for deficits in their percentage of protected land under Legal Reserve; however, medium and large land owners/possessors must comply with Legal Reserve requirements through either native vegetation restoration on their property or compensation outside of their property. The restoration of degraded APPs is required by law for all properties.

The Brazilian government reported 60% of rural areas registered at the close of 2015. The remaining 40% will likely be more difficult due to complex tenure arrangements and/or individual resistance. Beginning in 2017, those who have not yet registered their property in the CAR will no longer have access to agricultural credit from financial institutions.

Sources: Chiavari and Lopes 2015; Machado and Anderson 2016.

A review of World Bank land administration and/or registration projects found that those which performed poorly did so due to: conflicting bureaucratic priorities, complex project designs with multiple objectives, and lack of political support and institutional capacity (Holstein 1996). The same report suggests several recommendations for best practices, confirmed by our review of international experience, including:

- **Strong government commitment to single objectives, streamlining services, and consolidating government offices and agencies.** Brazil's online registry (see Box 3) integrates all property information, including satellite images and geo-referenced borders. The project mentioned earlier in Indonesia's Berau district was designed to develop a strong centralized land agency through which landholders could access any resources or information, spanning fifteen years and registering a total 4.2 million titles (Bachriadi 2009). Perhaps the best example is that of the Philippine Land Administration & Management Project, in which regional "one stop shops" were developed to serve all the needs of registering properties for the area (Bell 2005).

- **Community-focused methods and an inclusive scope.** In many cases, customary lands and certain regions can be overlooked in favor of rapid titling of urban or semi-rural areas. While a phased approach is practical for implementation, care should be taken that this does not jeopardize the security of less common tenure arrangements. In Peru, for example, a third phase of the Inter-American Development Bank's Special Project on Registration and Titling of Lands has been delayed due to protests from the national indigenous Amazonian peoples' organization about the lack of significant progress in titling indigenous lands and the disproportionate issuing of titles to migrant farmers.

- **Protection against intimidation and unintended consequences.** In some cases, the issuance of land titles can lead to pressures on the rural poor to sell their properties. For example, in the case of Guatemala's land titling program, many families became vulnerable to harassment or intimidation from rural elites or those pursuing illegal activities to sell their newly acquired land rights.[5] A mechanism for protecting rural landholders could consist of establishing a period of several years during which land titles could not be transferred, to allow the owners time to develop their land without such pressures.

[5] Personal communication, Roan Balas McNab. 27 July 2016.

- **Phased implementation with potential graduated cost recovery.** A phased approach, focusing first on areas where the number of titles and amount of land registered can be maximized at the lowest cost, or alternatively on areas with high deforestation pressure, can be a cost-effective method. For example, the highly regarded Thai Land Titling Project consisted of four phases spanning a total of 20 years (Bowman 2004). By tackling geographies with the most straightforward ownership first, the project was able to develop effective systems and demonstrate results. In total, the project distributed 5.5 million titles with investments totaling US$247 million, with the project subsidizing nearly 90% of the total costs and landowners only being charged US$4 per title (Bachriadi 2009). The system required landowners to pay for subsequent renewal of the registration every ten years, resulting in partial recovery of costs over the long-term (Holstein 1996). Given that about half of Peru's lands are still without title, a phased approach will be critical to ensuring lands in priority areas for achieving PPC objectives are prioritized (USAID 2010).

Overlapping land and natural resource rights can also significantly complicate land registration efforts and are a particular risk factor in Peru. Regardless of how land is registered, in Peru the state maintains full rights to the resources both below ground, such as minerals, oil, and gas, and above ground, such as water and fish; extraction rights for these resources are often transferred to third parties under distinct concessions. Through this arrangement, the state regularly grants concessions for resource extraction which conflict with existing land claims and titles, undermining the strength of land rights in the country and fueling conflicts which have turned deadly in recent years.

Research has also highlighted that gender considerations are critical when formalizing land use rights. For example, the Food and Agriculture Organization has found that restrictions in women's decision making and access to land and other productive assets affect their resilience to climate shocks and longer-term climate change, and similarly a study conducted in Peru found that peasant farmers in Peru felt that "female land rights were strongly associated with better outcomes for owner-operated farming households" (FAO 2011; Deere et al. 2004).

4. Make Agriculture More Productive and Sustainable

Whereas the preceding three elements rely primarily on public sector leadership, this element involves a transition from state-focused strategies to ensure environmental conservation, albeit with strong private and civil society involvement in the first element, to private sector-focused strategies to improve livelihoods via improved agricultural productivity and profitability. As a result, government and donors need to generate the enabling environment for the private sector to play a larger role, and in many cases this is likely to require improving the macro-economic conditions, legal arrangements, and market signals, investing in rural infrastructure, and developing public-private partnerships (PPPs) where each sector seeks to leverage the other.

This element consists of three subcomponents that are linked sequentially: aggregation of producers, provision of improved services to them — and the associated incentives to companies and financial institutions to provide these services, and adding value based on improved product quality and sustainability attributes. All three subcomponents share the goals of seeking to increase returns to the supply chain actors while also reducing costs and risks, in order to ultimately increase substantially the value of agriculture on lands that are already degraded or have low production.

It is important to underscore that these efforts have to take place within the context of and need to reinforce the overarching goal of forest conservation, which is the primary basis for providing the proposed incentives to the private sector and the producers in the first place.

4a. Aggregate Producers

The vast majority of producers in the Peruvian Amazon are not organized under cooperatives or associations, yet aggregation of these smallholders is a precondition for commercial entities to be able to interact with them in a cost-effective manner.

While scaling up the number of government extension personnel and seeking to expand the size and reach of existing rural cooperatives and association is necessary, this approach is likely to be inadequate in engaging sufficient numbers of smallholder producers within the timeframe of the PPC commitments. Therefore, a complementary approach will also be required, involving the private sector, most likely working in conjunction with specialized NGOs, to aggregate producers and offer a range of services to them. In most cases, the produce buying companies and agricultural input suppliers already employ and/or work with significant number of buying or sales agents based in rural communities throughout the production areas, so there is now the need for the government and its donors/partners to make the case that there is a business opportunity for these companies to go beyond their current levels of investment to offer additional services to smallholders, with incentives provided for this linked to the PPC initiative. That is likely to require the companies to either hire additional field agents to take on this role and/or to work with NGOs and others that can provide this function. There is also good scope to promote the use of information technology/hand held devices, farmer field schools/and farmer-to-farmer linkages, competitions to recognize and reward leading communities/municipalities/companies, etc., to help reduce the transaction costs of such outreach and/or to increase the value to various actors.

There are several international examples of this approach, with significant differences regarding the organizational structure.

For example, Lecofruit in Madagascar signs annual contracts with 11,000+ highland farmers, primarily for high-quality, hand-picked French beans. There is no involvement of a producer association or cooperative; instead Lecofruit deploys 300+ private extension agents, each of which is responsible for an area and works with 5-6 extension assistants who live in villages in the area. These assistants, in turn, are responsible for coordinating the production of groups of farmers, with about 30 members per group on average. Farmers receive benefits directly from Lecofruit, including standard inputs in addition to collection of produce by firm-operated trucks during harvest time.

Another example of an innovative model for aggregating producers to improve services is that of the Ghana Grains Partnership, described in Box 5.

Box 5. Ghana Grains Partnership

The Ghana Grains Partnership was established in 2009 to improve efficiencies throughout the grain value chain, help meet shortfalls in production and respond to surging international food prices. The partnership was initiated by Yara International, a leading international fertilize company, and Wienco, a local inputs trader, who financed the initial inputs and established a revolving credit fund to attract private sector investments. Other members of the consortium include the Africa Enterprise Challenge Fund, the Ministry of Food and Agriculture, commercial banks, domestic grain buyers and traders, and a farmer association.

All producers involved in the Partnership are members of the Masara N'Arziki Association of farmers, and are organized in community groups. Through this arrangement, Masara distributes inputs, provides technical training, and sells crops of behalf of its members, while Yara provides agronomic training through clinics and practical demonstration. Producers also have access to warehouses to ensure adequate post-harvest storage. The Partnership has been successful in providing more secure sourcing of grains, encouraging further private sector investment while improving transaction efficiency and technology use.

Masara has become Ghana's biggest maize producer, with 24,000+ farmers spanning 21,000 hectares. Overall, this partnership has helped the member farmers to boost productivity by tripling their annual yields on average.

Sources: Guyver and MacCarthy 2011; de Cuello 2013.

While in the Ghana Grains Partnership example the input companies Yara and Weinco provide fertilizer, agronomic training, storage facilities and purchase contracts, they do not interact as directly as Lecofruit does with the producers. Rather, Masara N'Arziki facilitates the services on behalf of its members. It is worth noting that the association also does not operate as a cooperative, as many producers in Ghana are suspicious of cooperatives given the problems that many of these organizations have experienced, such as poor performance, bankruptcy, corruption, and political interference.

In other cases, civil society has effectively worked with rural populations to aggregate producers. For example, in the southern highlands of Colombia, Catholic Relief Services works with savings and loans groups in rural coffee farming communities. The NGO builds on the social trust already created through these networks to promote the formation of producer organizations as co-owners of coffee processing mills, which typically results in improved coffee quality and traceability and better market access and prices.

In Peru, NGOs Soluciones Practicas and Solidaridad have been successful in one region of San Martin in establishing groups of smallholder coffee producers around lead farmers and then linking these "nodes" to others, creating a network of producers. The NGOs have offered focused technical assistance on a number of cost-effective production and post-harvest practices, and within a three-year period the producers have managed to more than double yields and significantly improve the quality of their coffee, and they've also found more direct and alternative marketing channels resulting in significantly higher profits. Although the scale of the initiative is still quite modest, the approach could serve as a model for expansion. Other companies doing similar work include Comercio y Compania's Programa Familia and ProAsocio, both of which help to form groups of producers around lead farmers and provide access to inputs on credit, product certification and improved market access.

4b. Provide Improved Services to Smallholder Producers, Linked to Forest Conservation

Once producers are aggregated, then it becomes possible for the private sector, and government extension personnel — either working separately or in collaboration — to offer focused agronomic and other assistance to them in a more cost-effective manner. But as noted earlier, the private sector is unlikely to do so in general and particularly in remote areas where deforestation is most rampant, without some additional incentives until a compelling business proposition can be demonstrated. This also applies to the financial sector upon which agricultural companies tend to rely for their operations.

Incentives to Promote Alternative Farming Practices

Within the context of the PPC, it will be important for private sector, and government and NGO, extension personnel to offer smallholders a consistent suite of services. And, in addition to focusing on how agricultural productivity and profitability can be improved on existing and degraded/abandoned farmland, it will be critical to ensure that the recommended practices and management systems are resilient to increasingly erratic and extreme weather associated with climate change.

It has been demonstrated in a number of contexts that the promotion of such good agricultural practices and "climate-smart" approaches to farming can be highly effective. For example, in Brazil analysis shows that the use of quality fertilizers, seeds, and seedlings; improved cattle and other livestock breeds; or the implementation of drip micro-irrigation systems can increase productivity by 25-150% (Graf et al. 2015). And these results are closely tied to the availability and quality of agricultural services; only 24% of small farms have access to such assistance; however, those municipalities with sufficient technical assistance are 47% more productive than those without (Assunção et al. 2013).

As in the case of land titling efforts, it is also important to include attention to gender issues when designing extension services to smallholders. Some recent studies have noted that women are playing increasing roles in smallholder agriculture, while at the same time being at a disproportionately high risk to negative impacts from climate change (Jost et al. 2016).

In some cases, programs to provide improved services and inputs are privately-funded, though they regularly also rely on partnerships with an NGO or donor to meet funding needs. For example, Equator Kenya Ltd., sources from 7000+ smallholders, who are organized into 280 groups, with an average size of 25 farmers per group. The company

provides climate-smart technologies, training, and inputs, in addition to access to micro-credit and markets. This system has proved extremely successful: in 2014 the company increased its production of chilies by 54%, in part based on the distribution of drip irrigation kits, subsidized by the government, to 1500+ of the producers (Business Call to Action 2015).

Such methods typically encourage farmer-to-farmer learning and harness support so that producers are more willing to try new practices. Indeed, this practice of increasing and capitalizing upon social interactions is one of the most effective ways to implement new agricultural practices and increase both productivity and adoption of new practices at the local level (Munasib and Jordan 2011). For example, in Lesotho, the adoption of conservation agriculture, known locally as likoti, has spread rapidly due to a focus on participatory efforts and increased social capital (Silici et al. 2011).

Another approach is the use of third-party-led extension, where the services are paid for by companies with donor support and/or public subsidies, or by the farmers themselves (Hellin 2012). Under this approach, service providers work on a contractual basis to provide extension services and inputs to producers. Chile pioneered privatized extension services in the 1960s, through their Institute of Agricultural Development (INDAP, for its title in Spanish; Cox and Ortega 2004). INDAP supports the delivery of extension services to smallholders by specialized agricultural or consulting firms that are paid by government. Over time the system in Chile has evolved; while farmers were initially given vouchers, the system proved more efficient with direct INDAP coordination and payment of extension services (Valdes 2008). Even so, the high transaction costs involved in providing services to dispersed clients have limited the interest of third-party actors, though the use of bidding auctions to select the third parties has proven an effective means of selecting the most capable, and cost-effective providers. Even so, experience there demonstrates the need to supervise the quality of implementation and the results achieved.

Another approach that has good potential is for the government, NGOs, and other partners to identify a number of so called “anchor” companies in the various agriculture commodity sectors that can be supported to demonstrate how the process of improving agricultural productivity and benefits can be linked to forest conservation. Anchor companies are typically the dominant, or a major, commercial entity in an area that assumes leadership in the value chain and supplier network, providing a range of goods and services. These are typically larger companies, though they could also be relatively large regional or local companies. Farmer groups (e.g., cooperatives), intermediaries, input distributors and NGOs can all serve as aggregators, or “articulators”, but they typically can only do so based on commercial relationships with major buyers, both international and domestic (Lundy 2012).

Such anchor companies, and other actors, can be encouraged to participate via PPPs that offer a range of incentives, including financial support for technical assistance provided to priority smallholders, favorable tax and/or accounting treatment for investments in the provision of inputs and/or priority activities, simplifying regulatory procedures, etc. There are already a number of palm oil producing and oil palm processing companies that are playing such roles with networks of smallholder outgrowers in the Peruvian Amazon, who can be further incentivized to expand the scope of their operations, but it remains to be seen if companies in the coffee and cocoa sectors will be willing to play this role on a significant scale.

Another, indirect, way that the private sector can be incentivized to engage with smallholders is through improving infrastructure related to roads, water, electricity, etc. that are prioritized within PPC and rural development strategies. For example, an innovative tax policy in Peru — *Obras por Impuestos* — operates by allowing private entities to invest in infrastructure projects equivalent to what their tax payments would have been, in lieu of those tax payments.

Incentives for Financial Institutions to Lend to Smallholders

As noted earlier, access to credit is critical for improving smallholder productivity and wellbeing, and the success of the PPC, as long as it is linked to forest conservation outcomes. While traditional barriers to accessing finance exist in the agricultural sector — namely, lack of collateral against which to borrow money — at an even more basic level, many

rural producers are unaware of available credit, typically due to the lack of sufficient or effective outreach by relevant financial institutions or lack of physical presence in rural areas.

In terms of motivating finance institutions, some of the incentives that have been successful in international efforts include:

- Loan guarantees (typically only partial) designed to reduce the risk of loans in the event contractual obligations are not met;
- First-loss protection, which decreases financial risks by transferring responsibility for a portion of the potential loss to a sponsor (Bouri and Mudaliar 2013); and
- Interest rate buy-downs, also referred to as "interest equalization", whereby a sponsor pays for a portion of the interest, or even of the principal, of a loan, decreasing the overall cost of borrowing.

Facilitating loans directly to producers is labor-intensive, and would require significant capacity building in the public sector. One way of addressing this is to require that banks devote a portion of the portfolio to rural credit and low interest rates, which is then subsidized by the federal government to make up for the discrepancy in interest rate and the administrative effort. This is the case with Brazil's National Rural Credit System (Sistema Nacional de Credito Rural — SNCR), which is able to offer interest rates of around 0.5-5.5% annually, as compared to 8.4-10.9% annually for non-subsidized loans (Lopes and Lowery 2015). Sustainable agriculture-specific sources of financing should also be considered, like Brazil's ABC program, Programa Agricultura de Baixo Carbono, which offers low-interest loans for producers with well-developed low-carbon agriculture plans (Lopes and Lowery 2015).

Colombia has similarly designed agriculture-specific programs, albeit with higher interest rates, where the primary source of public funding for agricultural credit is financed by mandatory investments from private credit institutions and extractive industries and managed through the Fund for Financing and the Agricultural Sector (Fondo para el Financiamiento del Sector Agropecuario — FINAGRO; Edwards et al. 2014). Both the SNCR and FINAGRO require land titles as collateral and suffer from low disbursement rates.

Another interesting example is that of La Cooperativa Agrícola Integral Unión de Cuatro Pinos (Cuatro Pinos) in Guatemala that supports its more than 7,000 producer members to export a diverse range of vegetables (Lundy et al. 2012; Lundy 2007; Jay and Lundy 2008). Cuatro Pinos secures loans and grants at the cooperative-level to provide its members with in-kind credit for seeds, inputs, technical assistance, new technology (e.g., drip irrigation systems), insurance, marketing assistance, and extensive social services. The cooperative has increased productivity and profits by 50% annually, based on yields from 2008-2010, and also nearly quadrupled its membership over the same period. It has also been particularly innovative in managing supply chain risks by agreeing with its major buyer, Los Angeles Salad Company, to have both parties place 10% of the value of the produce sold into a jointly-managed shared risk fund to guarantee payment to farmers. These funds are then used to write off damaged product, invest in technical assistance and technology, and cover other unforeseen costs.

As importantly, there is the need to combine the provision of credit with technical assistance. Without investing in increasing productivity and product quality there is little opportunity that producers will be able to break the cycle of poverty and environmental degradation. This is true for any loans to smallholders, such as shorter-term working capital, input or harvest finance loans, but particularly for longer-term loans involved tree planting, income diversification and equipment purchases.

In order to ensure that funds are used appropriately and producers are able to pay them back, loan contracts should require that producers receive technical assistance. Neither financing nor technical assistance can succeed without the other. Rural credit programs should also consider increased options for collateral other than land titles, considering that the majority of smallholders lack titles, and any titling efforts will take several years to fully implement. In the case specialized rural finance institutions, such as Root Capital, Oikocredit, etc., short-term loans are typically "backed" by contracts and or produce in inventory (where a percentage of the value of the contracts or inventory is provided as credit), however longer-term credit typically requires the use of physical assets, though the use of partial loan guarantees or first loss reserve funds can be used to help reduce the risks to financial institutions.

4c. Enhance Value for Sustainable Products

The preceding incentives should result in significant benefits for the participating smallholders as their improved access to inputs, technical assistance and credit will lead to higher crop yields and increased sales. Over time, as investments in rural infrastructure occurs and the producer aggregation process progresses, they should also benefit from reduced transaction costs and realize economies of scale, thereby obtaining inputs and access to markets at lower cost. They should also be able to obtain higher prices linked to increased competition from buyers and improved negotiation. Increases in crop yield will likely be more important than increases in crop quality as a determinant of improved farmer incomes, unless there is a major push to develop niche markets based on quality that can then "pull" improvements along the chains. Even so, there is likely to be increased demand for specialty coffee and cocoa that can help to drive such production and post-harvest changes over time. These various benefits should happen under existing market conditions.

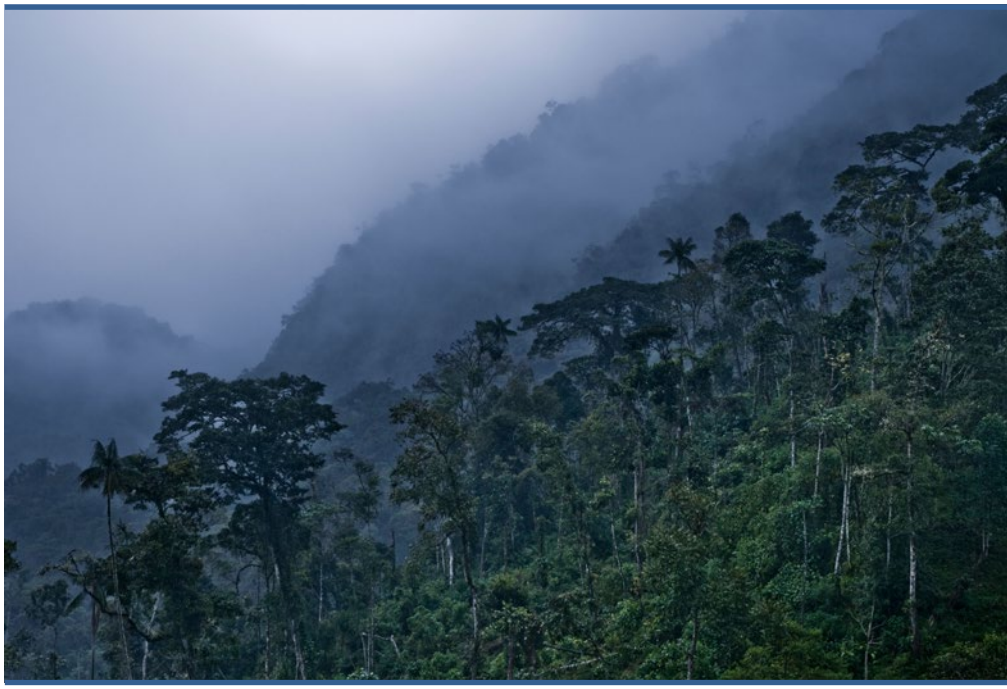
In addition, however, it may be possible to increase the value that producers and other supply chain actors obtain via higher-level marketing and branding activities, linked to sustainability and climate change attributes of the products and the regions where they are produced. For example, it should be possible to position the agricultural products as being from deforestation-free or low-carbon supply chains. The ability to realize such benefits will, in turn, depend upon the willingness or ability of government and private sector actors, with support from international donors, to invest in marketing and branding campaigns, and the associated monitoring and reporting activities, which could include certification and/or traceability systems. In the short-term, these efforts are likely to focus on niche markets but over time the demand for such products could expand into more mainstream markets.

One potential approach could be to promote the agricultural products associated with the PPC using existing, widely recognized unique origin systems, such as Controlled Denomination of Origin, Protected Designation of Origin, or Protected Geographical Indication, which have strict location and process-based guidelines and regulations. Some of the most well-known examples include certain alcohols, such as Champagne, Tequila, and Bordeaux, and cheeses, such as Gruyère and Parmigiano-Reggiano.

A more applicable example of a geographically-based high quality product is coffee from Jamaica's Blue Mountains, which has been sought after for decades. In order to protect and enforce its reputation, the Jamaica Coffee Industry Board was established to standardize the quality of coffee and regulate its production. "Jamaica Blue Mountain Coffee" is now a globally protected certification mark (Brown 2014). Unfortunately, with this recognition of quality — and associated increased demand and price premium — comes the risk of counterfeit production. Revenues from authentic "Jamaica Blue Mountain Coffee" have dropped in recent years due to increased exports from fraudulently labeled coffees. As such, the Coffee Industry Board has had to establish a task force and work in partnership with several state agencies towards eradicating illegal labeling.

There is certainly a great potential to tap into such high quality, "single origin," markets, particularly with Peru's coffee and cocoa production. However, while creating a market for such products will attract buyers seeking high-quality products, it also has the potential to significantly limit efforts to scale-up, given the geographic restrictions of such an approach, though there could be the potential to promote a number of separate regions for various crops, based on different taste/flavor and/or other attributes perhaps.

An interesting example of creative efforts to establish such an "origin" is provided from Brazil regarding fish from the Amazon (see Box 6).



Box 6. Peixes da Amazônia

Established in 2011, Peixes da Amazônia (PDA) works to produce high-value regional fish species (e.g., pirarucu, tambaqui, surubi) for local consumption and, as of this year, export for international markets. The facility, located in Acre, Brazil, has three operations: breeding for production of fingerlings (15 million per year), production of specialized fish foods (40,000 tons per year), and a fish processing and packaging plant (20,000 tons per year). Development of PDA's massive industrial center was made possible through investments by the local government in Acre, the Brazilian Development Bank, the Acre Business Promotion Agency, and private funds totaling nearly USD$30 million, with support from 2,500 small family producers organized into five associations along with large producers in the region.

The producers receive fish and food from PDA at subsidized costs, grow the fish in ponds on their own property, and then return the full-grown fish to PDA for processing. Due to the fact that PDA captures many links in the supply chain, the cooperative members are able to capture a large share of the profits.

The small and medium-scale family farmers involved in the project are located throughout seven states in Northern Brazil, many of whom were trained on aquaculture techniques by the Brazilian Micro and Small Business Support Service and the Brazilian Agricultural Research Corporation. In order to increase awareness of and demand for local fish species, the Brazilian government has sponsored gastronomy exhibitions and contexts highlighting it as a high-end cuisine. Fish bred under the project also bear Brazil's Selo Peixes Amazônicos label, indicating that they were sustainably produced in the Amazon. The success of the program has led to consideration of similar programs designed around pork and poultry production.

Sources: Daniels 2015; Kaeté Investimentos 2016.

There is also good potential to promote territorially-based sustainable commodities in Peru, and there is growing demand for such products. As one example of many international commitments, the CEOs of Unilever and Marks & Spencer, along with five other major Consumer Goods Forum members, pledged in December, 2015 to support sustainable, climate-friendly forest, and agriculture initiatives by sourcing preferentially from jurisdictions meeting a criteria of commitments related to eliminating deforestation from their supply chains (Unilever 2015). In doing so they also noted that "the current pipeline of production protection compacts cannot fulfill global demand for all commodities" — a good indication that Peru could increase current sales to such major buyers based on successful PPC implementation while also developing focused campaigns to attract other large buyers to source from zero-deforestation zones in the future (Marks & Spencer and Unilever 2015).

Brazil has also led in responding to this increasing global demand for sustainable value chains by positioning and marketing itself as a source of commodities produced within zero deforestation jurisdictions or large landscapes, The national soy moratorium was passed in 2006, to prevent the trade, acquisition, or financing of soybeans linked to deforestation (Gollnow and Lakes 2014). Brazil's national sustainable beef roundtable was implemented in 2009 to ensure ranching practices in line with the Global Roundtable on Sustainable Beef, and the first certified sustainable palm oil was under production in Brazil in 2011, under the international Roundtable on Sustainable Palm Oil (Roundtable on Sustainable Palm Oil 2016).

Despite their vast differences, there are key similarities between the cases of Blue Mountain Coffee, Peixes da Amazonia and Brazil's sustainable commodity commitments. Most importantly, each case is the work of a strong, foundational PPP through which goals have been aligned in support of common objectives among various stakeholders. In forming the Coffee Industry Board, Jamaica is able to secure preferential treatment by exporters and intermediaries for producers in the Blue Mountain area. In the case of Peixes da Amazonia, concerted efforts by multiple organizations, and significant investments by government and the private sector, have lead to the creation of a brand based on geography and management practices, versus any inherent difference in the fish species which occur throughout the Amazon, including in Peru. And, by implementing and enforcing international sourcing standards through national policies, Brazil has become a leader in meeting global demand of sustainable commodities. In each scenario, government protection and validation is key.

It is also worth noting that in future, implementing and monitoring sustainability goals at the territorial level may provide a platform for obtaining finance for PPC activities, and incentives for the private sector, from REDD+ or other climate-finance PFP schemes (such as NAMAs). Such an approach may also attract private actors seeking to improve sustainability and transparency along their supply chains while contributing to conservation and/or climate change objectives. There is also likely to be an increasing demand for agricultural commodities that can be credibly demonstrated to come from deforestation-free landscapes, though the extent to which this plays out in Peru, and how quickly, is still to be determined.

Putting the Model Together

While there are many cases from around the world that include some of the elements identified in this PPC, the strength and innovation of the Compact is its holistic approach to identifying and addressing the key factors necessary for implementation and scale. Implementation of the PPC will require careful planning and coordination by a range of diverse stakeholders, effective implementation of policies, widespread capacity development of various organizations, and significant government and donor funding and investment by the private sector, for both initial efforts and to scale up over time.

Beginning with the working group, public entities should coordinate actors across sectors to develop a phased timeline for designing, testing, refining, and scaling the PPC. Given resource constraints, government will likely need to convene various stakeholders to consider multiple criteria in prioritizing sites — for example, selecting the first pilot sites where successful coordination and implementation is most likely, to build confidence and trust among stakeholders, while then expanding to concentrate on scaling-up resources in areas that are at highest risk of deforestation. The working group should also identify throughout its process opportunities for synergy regarding the design and implementation of the elements, recognizing that technology, outreach, and institutional- and capacity-building activities can be leveraged to achieve multiple objectives.

Most importantly, actors should maintain the focus on lowering deforestation: if the focus shifts to focusing primarily on increasing productivity for smallholder producers without sufficiently linking these activities to forest protection, activities could have an adverse effect on forests by providing smallholders the technical and financial means to not only improve production in already-degraded areas, but also to seek to implement the improved practices by expanding their farms into standing forests.

When implemented with appropriate emphasis on both the protection and production aspects, the PPC has the potential to meet the needs of a diverse group of actors and harness the capital necessary to promote and scale sustainable agriculture and forest protection. Such an arrangement would support state actors to achieve climate commitments, develop territorial platforms, and receive associated PFP; private sector actors to invest in CSA and sustainable supply chains; producers to access markets, technical assistance, and credit, to increase yields and improve livelihoods; and NGOs, civil society organizations, donors and other sponsors to achieve their respective goals and to efficiently integrate their efforts.

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