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Report No: PAD2639

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED GRANT FROM THE STRATEGIC CLIMATE FUND
IN THE AMOUNT OF US$5.8 Million

AND

ON A

PROPOSED CREDIT FROM THE STRATEGIC CLIMATE FUND
IN THE AMOUNT OF US$6.4 Million

TO THE

Republic of Peru

FOR AN

Integrated Forest Landscape Management Project in Atalaya, Ucayali (P163023)

Environment & Natural Resources Global Practice
Latin America And Caribbean Region

CURRENCY EQUIVALENTS

(Exchange Rate Effective {Nov 30, 2017})

Currency Unit	=	
	=	US$1
US$	=	SDR 1

FISCAL YEAR
January 1 - December 31

Regional Vice President:	Jorge Familiar Calderon
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ABBREVIATIONS AND ACRONYMS

AIDESEP	Interethnic Development Association of the Peruvian Rainforest
ARA	Regional Environmental Authority
CAM	Municipal Environmental Commission
CAR	Regional Environmental Commission
CDD	Community Driven Development
CIAM	Ministry of Culture, and Interregional Amazonian Council
CPF	Country Partnership Framework
CONAP	National Amazonian Confederation of Peru
ESMF	Environmental and Social Management Framework
DGM	Dedicated Grant Mechanism
FEMA	Attorney General's Office for Environmental Matters
FIP	Forest Investment Program
GDP	Gross Domestic Product
GHG	Greenhouse Gas
IDB	Inter-American Development Bank
IP	Indigenous Peoples
MEF	Ministry of Economy and Finance
MINAGRI	Ministry of Agriculture and Irrigation
MINAM	Ministry of Environment
NDC	Nationally Determined Contribution
OSINFOR	Forest Resources Supervisory Agency
PIP	Peru's Forest Investment Plan
PCU	Project Coordination Unit
POM	Project Operational Manual
SERFOR	Forest Service
SUNARP	Property Registry Agency
WB	World Bank

BASIC INFORMATION

Is this a regionally tagged project?	Country(ies)	Financing Instrument
No		Investment Project Financing

[ ] Situations of Urgent Need of Assistance or Capacity Constraints

[ ] Financial Intermediaries

[ ] Series of Projects

Approval Date	Closing Date	Environmental Assessment Category
15-Mar-2018		B - Partial Assessment

Bank/IFC Collaboration
No

Proposed Development Objective(s)

The project objective is to strengthen the capacity of forest dependent communities and enterprises to sustainably manage and use forest landscapes, in the Raimondi, Sepahua and Tahuanía districts of the Atalaya province.

Components

Component Name	Cost (US$, millions)
Capacity Building for Forest Landscape Management	2.78
Strengthening Forest Landscape Management and Business Development	8.22
Project Management, Monitoring and Evaluation	1.20

Organizations

Borrower : Ministry of Economy and Finance

Implementing Agency : Ministry of Environment and Natural Resources

PROJECT FINANCING DATA (US$, Millions)

[ ] Counterpart Funding	[✓] Trust Funds	[ ] Parallel Financing

Total Project Cost:	Total Financing:	Financing Gap:
12.20	12.20	0.00
	Of Which Bank Financing (IBRD/IDA):	
	0.00	

Financing (in US$, millions)

Financing Source	Amount
Strategic Climate Fund Credit	6.40
Strategic Climate Fund Grant	5.80
Total	**12.20**

Expected Disbursements (in US$, millions)

Fiscal Year	2019	2020	2021	2022	2023
Annual	1.80	3.40	3.80	1.80	1.40
Cumulative	1.80	5.20	9.00	10.80	12.20

INSTITUTIONAL DATA

Practice Area (Lead)

Environment & Natural Resources

Contributing Practice Areas

Climate Change and Disaster Screening

This operation has been screened for short and long-term climate change and disaster risks

Gender Tag

Does the project plan to undertake any of the following?

a. Analysis to identify Project-relevant gaps between males and females, especially in light of country gaps identified through SCD and CPF

Yes

b. Specific action(s) to address the gender gaps identified in (a) and/or to improve women or men's empowerment

Yes

c. Include Indicators in results framework to monitor outcomes from actions identified in (b)

Yes

SYSTEMATIC OPERATIONS RISK-RATING TOOL (SORT)

Risk Category	Rating
1. Political and Governance	Substantial
2. Macroeconomic	Moderate
3. Sector Strategies and Policies	Substantial
4. Technical Design of Project or Program	Substantial
5. Institutional Capacity for Implementation and Sustainability	Substantial
6. Fiduciary	Substantial
7. Environment and Social	Moderate
8. Stakeholders	Substantial
9. Other	
10. Overall	Substantial

COMPLIANCE

Policy

Does the project depart from the CPF in content or in other significant respects?

[ ] Yes [✓] No

Does the project require any waivers of Bank policies?

[ ] Yes [✓] No

Safeguard Policies Triggered by the Project	Yes	No
Environmental Assessment OP/BP 4.01	✓	
Natural Habitats OP/BP 4.04	✓	
Forests OP/BP 4.36	✓	
Pest Management OP 4.09	✓	
Physical Cultural Resources OP/BP 4.11	✓	
Indigenous Peoples OP/BP 4.10	✓	
Involuntary Resettlement OP/BP 4.12		✓
Safety of Dams OP/BP 4.37		✓
Projects on International Waterways OP/BP 7.50		✓
Projects in Disputed Areas OP/BP 7.60		✓

Legal Covenants

Conditions

PROJECT TEAM

Bank Staff

Name	Role	Specialization	Unit
Angela G. Armstrong	Team Leader(ADM Responsible)	Sr. Natural Resource Mgmt	GEN04

Selene del Rocio La Vera	Procurement Specialist(ADM Responsible)		GGOPL
Ana Lucia Jimenez Nieto	Financial Management Specialist		GGOLF
Ana Luisa Gomes Lima	Team Member	Environmental Management	GEN04
Carlos Tomas Perez-Brito	Social Safeguards Specialist	Social Development	GSU04
Catarina Isabel Portelo	Counsel		LEGLE
Klas Sander	Team Member	Environmental Economics	GEN04
Maria Virginia Hormazabal	Team Member	Finance Officer	WFALA
Nelly Ikeda	Team Member	Financial Management	GGOLF
Nina Doetinchem	Team Member	Climate Finance	GEN2B
Raul Tolmos	Environmental Safeguards Specialist	Environment	GEN04
Stamatis Kotouzas	Team Member	Land Administration	GSULN

Extended Team

Name	Title	Organization	Location

PERU
INTEGRATED FOREST LANDSCAPE MANAGEMENT PROJECT IN ATALAYA, UCAYALI

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I. STRATEGIC CONTEXT

A. Country Context

1. Over the past decade, Peru has made great strides in its development. These achievements include significant growth, low inflation, macroeconomic stability, reduction of external debt and poverty, and significant progress in social and development indicators. Prudent macroeconomic policies and a favorable external environment enabled an annual growth rate of close to 6% during the last ten years and 4.7% over the last two decades. This solid economic performance allowed income per capita to double over the last ten years. Between 2004 and 2015, moderate poverty fell by more than half, from 58% to 22%, while extreme poverty fell from 16% to 4%. In addition, real income per capita of the poorest 40% grew at an average of 6.8%, above the 4.4% national average. Despite these gains, social indicators for Amazonian indigenous peoples remain the lowest in the country, with high levels of chronic malnutrition, limited access to education and primary health care, and disproportionate levels of maternal and infant mortality.

2. Peru is the third largest country in South America and it is divided into three large geographical regions: the coastal plains, the Andes, and the Amazon which alone covers nearly 61% of the country. Largely due to the flora and fauna found in the Amazon region, Peru is considered one of the most mega diverse countries in the world. This high biodiversity, which ranks second in South America and ninth in the world, is threatened by high deforestation rates, unsound forestry practices, and illegal logging. On average, nearly 120,000 hectares of forest cover were lost annually between 2001 and 2014. Forty-five percent (45%) of this deforestation has taken place on lands with no legal status. These degradation trends are particularly important in Peru´s Amazon region, which contains 73 million ha (94% of Peru's total forest area) of still well conserved tropical forests. Increasing pressure on forests and forest-related resources over the last few decades has resulted in growing social conflicts, as forests are often a primary source of revenue and income for forest dwellers that are experiencing growing competition for forest resources and lands from agriculture and grazing. In fact, land use change for crop expansion, particularly in small- and medium-sized crops, is the primary cause of deforestation in the Peruvian Amazon. The departments with the greatest cumulative loss of forest cover in the period 2000-2011 were San Martin (277,333 hectares), Loreto (219,671 hectares) and Ucayali (177,630 hectares) (MINAM, 2014). The exploitation of other non-renewable resources also found in the Amazon – mainly gold, oil and gas – that contribute to Peru's national GDP, are another source of deforestation, with extractive practices often dramatically encroaching on forest ecosystems. This situation is compounded by road construction in the region, as well as the limited capacity of communities and private industries to conduct sustainable forestry practices, and national and local government agencies to enforce regulations and promote more renewable forest uses. In addition, indirect causes of deforestation include increasing migration and population growth in the Amazon, as well as a lack of land use planning.

B. Sectoral and Institutional Context

3. **Forest Sector.** According to official sources, 80.1% of the country's total area is suitable for forestry uses, while only 5.9% is suitable for agriculture and 13.9% suitable for livestock-grazing activities. The forest sector encompasses a wide range of subsistence and productive activities, including timber logging from native forests

and commercial plantations, and extraction of a variety of non-timber forest products, including wildlife. Despite its economic relevance, the forest sector only contributes 1.1% to the country's GDP (MINAM, 2013) and receives less than 0.01% of direct foreign investment (MINAM, 2013) and contributes to only 0.3% of national employment (FAO, 2011). Development of the forestry sector falls far short of its potential in terms of surface area. Peru is in fact a net importer of forest products, given low levels of industrialization and value added. The area under commercial plantation is still very low, and less than half of the exploitable forest area is under operating concession. This data, however, does not consider the thousands of people living in rural areas who depend on forests for their livelihoods. For example, although data on rural population exists, the degree of dependence of these populations on forest resources is unknown. In addition, the Ministry of Agriculture notes that while the forestry sector currently represents only around 1% of GDP, it is considered that this share will rise to around 8% over the next ten years.

4. In addition, over half of national GHG emissions come from land use change (predominantly deforestation) and Peru's Nationally Determined Contribution (NDC)[1] sets a target of a 30% reduction in emissions from a projected Business-As-Usual scenario by 2030. Forests offer a significant opportunity to support economic diversification and poverty reduction, and forest-smart interventions can play a key role in addressing climate change and contributing to Peru's green growth agenda. In addition to Peru's NDC, the National Strategy on Forests and Climate Change, approved in 2016, defines a long-term vision for mitigating climate change impacts in the forest sector. This strategy presents lines of action to reduce deforestation and forest degradation, as well as increase carbon stocks and improve sustainable forest management.

5. **Institutional Context.** The country's environmental institutions have been strengthened through the adoption of the General Environment Act of 2005 and subsequent creation of the Ministry of Environment (MINAM), responsible for the design, implementation and supervision of national environment policies, and their compliance at the national, regional and local levels, as well as the creation of the Peruvian National Protected Areas Service (SERNANP) and the Agency for Environmental Assessment and Enforcement (OEFA) in 2008. The Ministry of Environment coordinates these agencies, primarily through Regional and Municipal Environmental Commissions, which serve as a forum for dialogue and coordination among State entities and civil society for addressing environmental issues of regional or municipal concern.

6. Regional governments (GORE) are responsible for managing forest resources, issuing permits, and providing technical assistance to forest users, including indigenous peoples and small forest users. The GORE, which have political and administrative autonomy, organize and lead regional public management in order to contribute to regional sustainable development. The GORE have established Regional Environmental Authorities (ARA), with the same functions as MINAM at the regional level and to provide support to SERNANP, the National Forest and Wildlife Service (SERFOR), and the Forest and Wildlife Resources Supervisory Agency (OSINFOR). The assumption of responsibilities by subnational and local bodies has yielded uneven results, depending on regional and local capacities and resources. Some regional governments have been very proactive in developing environmental and territorial governance tools, while others have lagged behind and require support in strengthening their technical and financing capacities. In particular, some require support in ensuring that unauthorized expansion of production sector activities into environmentally valuable forest lands is prevented, as well as in strengthening enforcement of compliance with the provision of land use classification and territorial

[1] Intended Nationally Determined Contributions under the UNFCCC, mitigation and adaptation commitments defined prior to the 2015 COP in Paris and intended to contribute to the global mitigation efforts of global warming below 2 degrees, http://unfccc.int/focus/indc_portal/items/8766.php

planning. About 30% of ARA staff are financed with external resources, and on average, one ARA staff member manages 37.8 km2 of forest resources and wildlife. The 2014 Forest Law established Forest Community Monitoring and Oversight Committees (CVCFC). However, these committees are not provided with funding under the law, and the cost of performing monitoring can be quite substantial for a community member, requiring approximately 32 days of work per CVCFC member annually.

7. Limitations are also evident in the institutional framework at community level, where producers often suffer from limited organizational capacities. This typically affects their ability to access markets and influence market conditions, to gain access to financial and technical support, and to exploit opportunities for economies of scale through the sharing of post-harvest facilities. Existing governance and participation mechanisms are also often inadequate to guarantee the effective and equitable representation and participation in decision-making of different stakeholder groups, especially traditionally marginalized sectors such as indigenous groups, the poor and women.

8. **Peru's Forest Investment Program (FIP) and Forest Investment Plan (PIP).** The Forest Investment Program (FIP) provides funding to support developing country efforts in reducing deforestation and forest degradation and to promote sustainable forest management that leads to emissions reductions and enhancement of forest carbon stocks (REDD+). Peru was selected by the FIP Sub-committee as one of the first eight pilot countries to initiate its program in 2010. Peru began preparing its Forest Investment Plan (PIP) in 2011, with both the World Bank and the Inter-American Development Bank (IDB) as joint delivery partners. The FIP Sub-Committee approved Peru's PIP in October 2013, with a total funding envelope of US$50 million (US$26.8 million in grant funding and US$23.2 million in loan financing). Peru's PIP is expected to strengthen enabling conditions (governance, innovation in sustainable forest management, and land titling) to foster investments that reduce pressures on forests and restore degraded areas, as well as activities that promote the forest sector's competitiveness. Three geographic intervention areas were prioritized, Atalaya, Tarapoto–Yurimaguas, and Puerto Maldonado-Iñapari, areas where the PIP is expected to have the greatest impact on reducing emissions and producing the most important social and environmental co-benefits. The three areas are also representative of deforestation and forest degradation dynamics in the Peruvian Amazon and are expected to serve as pilot areas for climate-smart landscape models that can be replicated in other parts of the Peruvian Amazon.

9. Peru's PIP includes four complementary projects, three supporting coordinated geographic interventions in Atalaya, Tarapoto–Yurimaguas, and Puerto Maldonado-Iñapari, as well as a national forest governance project. The three geographic interventions aim to address titling and registration of property rights, improve forest governance, and strengthen community forest management targeted at enhancing the value of environmental assets of forest and degraded areas. The Government of Peru has selected the Bank to support the preparation and implementation of the Integrated Forest Landscape Management Project in Atalaya, Ucayali, while IDB is responsible for the other three projects. The three IDB projects support: (i) integrated forest landscape management along the main route between Tarapoto and Yurimaguas in the San Martín and Loreto regions (US$ 12.7 million); (ii) integrated landscape management along the main route between Puerto Maldonado and Iñapari and in the Amarakaeri Communal Reserve and beneficiary communities in the Madre de Dios (US$12.37 million); and (iii) strengthening national forest governance and innovation (US$ 12.46 million). Part of the grant allocation for the World Bank supported-project includes a Project Preparation Grant of

US$400,000.00, which is country executed and has supported project design and the definition of project implementation arrangements.

10. The FIP also includes a special initiative, the Dedicated Grant Mechanism (DGM), to promote involvement and participation of Indigenous Peoples (IPs) in FIP and other related processes. For Peru, the FIP Sub-committee approved a US$5.5 million grant for the Saweto DGM, for which local IPs invited the Bank as their delivery partner for project design and implementation. This project became effective in November 2015 and is supporting IPs in selected communities in the Peruvian Amazon region in their efforts to improve their sustainable forest management practices. Through investments in native land titling, indigenous forest management, and governance, the project aims to benefit approximately 2,250 native communities in targeted regions in the Amazon, of which approximately 50% are expected to be women. The FIP Forest Landscape Management Project in Atalaya will coordinate closely with the DGM as well as the other projects under the PIP. to share data, results and experience where relevant, and will contribute to distilling results and lessons learned at the broader FIP program level to help achieve the overall goals of Peru's Forest Investment Plan.

11. The project area lies within three districts (Raimondi, Tahuania, and Sepahua) of the Atalaya Province, in the Ucayali region of the east central Peruvian Amazon. Atalaya is one of the most important productive forestry regions of the country, with 3.98 million hectares of forests, of which almost 3 million are relatively well-conserved tropical forests. Table 2 reflects that most (over 90%) of the area in the three project districts is covered with forest. The construction 70 years ago of the Federico Basadre highway, linking Lima to Pucallpa (Ucayali's capital city), made it possible to reach forests in central and northern Ucayali and also triggered agricultural practices, primarily by migrants, in areas along the highway that are not adequately supervised. Today, with over 769,000 ha of deforested land, Ucayali is the fifth most deforested region of Peru. Deforestation is caused by a number of inter-related factors, including agricultural expansion, migration, and illegal logging. Over half (66%) of indigenous communities with extraction permits in the project area have been fined for forest violations. Further, what occurred in Pucallpa also appears to be happening in Atalaya province, with the construction of a highway linking Atalaya to Puerto Ocopa, making it unnecessary to transport timber to Pucallpa by river.

Table 1. Project Area

Province	District	Area (ha)	Área (%)
Atalaya	Raimondi	1,453,920.5	48.6%
	Tahuanía	767,200.4	25.6%
	Sepahua	773,700.7	25.8%
Total		**2,994,821.6**	**100%**

Table 2. Land Coverage in Project Districts

Actual Land Coverage	Raymondi		Sepahua		Tahuania	
	ha	%	ha	%	ha	%
Agriculture	40,993.11	2.8%	7,123.14	0.9%	16,638.39	2.2%
Artificial Areas	1,969.20	0.1%	543.87	0.1%	2,739.87	0.4%
Forest	1,343,293.65	92.4%	747,943.47	96.7%	690,035.58	89.9%

Water Bodies	28,047.78	1.9%	11,334.78	1.5%	30,741.84	4.0%
Wetlands	2323.98	0.2%	9.81	0.0%	11,615.58	1.5%
Pasture	13775.94	0.9%	2145.33	0.3%	5162.13	0.7%
Secondary Vegetaton	23,517.86	1.6%	4,599.63	0.6%	10,265.67	1.3%
Total	1,453,921.52	100.0%	773,701.02	100.0%	767,199.06	100.0%

12. Around 64% of Atalaya´s population of about 47,000, are indigenous peoples, mainly from three Amazonian ethnic groups, Ashaninka, Yine and Asheninca, settled in approximately 50 communities that cover more than one million hectares of forest, many of whom are living in conditions of extreme poverty. Social indicators for Amazonian indigenous peoples are the lowest in the country, with high levels of chronic malnutrition, limited access to education and primary health care, and disproportionate levels of maternal and infant mortality. However, those areas pertaining to indigenous peoples do have the lowest levels of deforestation.

13. The classification of land use in the Atalaya province includes: (i) indigenous peoples territories totaling 1.46 million hectares, with some IPs still awaiting land allocation, regularization and/or titling; (ii) forty-six forest concessions under Permanent Production Forest areas, granted by the government to the private sector since 2001, and totaling 320,000 hectares (70% currently inactive or under inspection for lack of compliance with forestry laws and regulations); (iii) 6,000 hectares under irregular land holdings by 1,200 small and mid-size peasants and forest dwellers called “rivereños” and “colonos,” most of them with unrecognized land rights; and (iv) a very small proportion of buffer zones of three protected areas (El Sira Communal Reserve, Otishi National Park and Alto Purus National Park); and (iv) protected areas that also contain large blocks of undisturbed forests totaling about 760,000 hectares.

14. Atalaya faces others challenges in moving towards a more sustainable and climate-smart forest landscape, including: (i) IPs’ and other forest dwellers’ limited capacity and knowledge of how to sustainably manage their commonly owned forest resources (e.g., limited technical capacities to prepare and implement forest management plans, understand conventional forest management, administrative and regulatory processes, as well as limited knowledge of local markets place and negotiation of logging contracts with third parties); (ii) a lack of institutional capacity by both community institutions, producers associations and national/local governments to enforce land tenure rights and sustainable forest management (SFM) rules and regulations that are needed to ensure a fair articulation of indigenous communities to Peru’s mainstream market economy; and (iii) the downside risk of large infrastructure projects, such as the new highway that connects Atalaya with Puerto Ocopa and Lima, which is expected to trigger a wave of illegal colonization by agricultural/grazing peasants from the Andes, and cause illegal logging, deforestation and forest degradation.

15. To better manage the range of challenges, including those associated with climate variability and change, transformation of land management at both community and government agency levels is required. Adoption of sustainable forest landscape management strategies and practices (e.g., silviculture, agroforestry,

among others) will help communities address these issues, including recovery of degraded areas and fostering a low carbon development trajectory. These management strategies can improve local livelihoods and food security, and restore productive natural resources. As part of a broader FIP program of support and through the project's coordination with the other, complementary FIP-financed projects, the project can have an even greater transformative effect, which, if successful, can be converted into public policy on the Amazon and even at nation-wide scale.

16. As described in more detail in Annex 5 on Drivers of Deforestation and Theory of Change, the project assumes a correlation of the effects of tenure security on credit access, agricultural productivity, and ultimately better local community level governance and dialogue. Awarding land title to indigenous and/or local communities can, at least in the short term, help to protect forests and ensure cascading effects in terms of biodiversity conservation, carbon sequestration, water resource provisioning, and a host of other ecosystem services that are vital at local and global ecological scales. The theory of change is that titling can reduce forest cover change positively in a community by: increasing formal regulatory pressure (adherence to forest management plans), strengthening informal regulatory pressure from non-state entities (such as NGOs/CSOs), improving the internal governance mechanisms at community level (e.g., better physical demarcation, communication, and adherence to land use plans), boosting the communities' interaction with public sector entities and thus their ability to access technical extension services, educational programs, and conservation incentive payment schemes, augmenting the community's ability to access credit and/or support interactions with private sector entities for productive input, and improving community livelihoods, which reduce pressure on forest sources. The project activities support land titling and combine these with support for livelihood activities, to sustain the immediate effect land titling can have on reduced forest cover change over the longer term.

C. Higher Level Objectives to which the Project Contributes

17. The activities to be supported under the proposed project are aligned with Peru's FY17-21 Country Partnership Framework (CPF), in particular Objective 8 on strengthening management of natural resources under the Natural Resources and Climate Change Pillar (Pillar III). This Objective recognizes the need to decrease the annual rate of deforestation and forest degradation in the Amazon region, as well as the importance of land tenure and sustainable use of forests and biodiversity. The CPF acknowledges not only the costs of land and forest degradation, but also the importance of forests as an essential source of income and livelihood, as well as forests important role in mitigating and adapting to climate change. The FIP operation is also aligned with the Bank's Climate Change Action Plan and the Bank's Forest Action Plan for FY16-20. FIP project activities are fully consistent with the focus areas of the Bank's Forest Action Plan, namely sustainable forest management and forest-smart interventions in other sectors. These focus areas aim to strengthen the foundations for positive forest outcomes, including climate change and resilience, rights and participation, and institutions and governance.

18. As mentioned, the project is also a key part of Peru's Forest Investment Plan (PIP), which is expected to generate a transformative impact within the next 10-15 years and aims to reduce greenhouse gas (GHG) emissions produced by deforestation and forest degradation, and enhance carbon reserves in sustainable forest landscapes, thereby helping to reach the national target of "Declining net emissions to equivalent to zero in the category of Land Use, Land-Use Change and Forestry by 2021." In achieving this objective, the PIP

is expected to generate two types of co-benefits: (i) reducing poverty of indigenous communities and other local populations, under a gender equality approach, by increasing income from management of sustainable forest landscapes and productive agroforestry mosaics; and (ii) reducing the loss of biodiversity and maintain forest ecosystem services.

II. PROJECT DEVELOPMENT OBJECTIVES

A. PDO

19. The project objective is to strengthen the capacity of forest dependent communities and enterprises to sustainably manage and use forest landscapes, in the Raimondi, Sepahua and Tahuanía districts of the Atalaya province.

B. Project Beneficiaries

20. The project's primary beneficiaries include small forest users and indigenous communities, comprising 5,997 households in 120 communities, who use forest resources for their businesses and livelihoods in the Raimondi, Sepahua and Tahuanía districts of the Atalaya province. Small forest users are comprised of forest concessionaires with timber and non-timber forest product enterprises, or small producers that maintain forests on their property. The majority of beneficiaries (80%) are indigenous and 30% are expected to be women. In addition to the three primary Amazonian ethnic groups (Ashaninka, Yine and Asheninca), the area's indigenous peoples also include Shipibo-Konibo, Amahuaca, Yaminahua, Nahua, and Machi-guenga. Each family has less than two hectares for farming production purposes, primarily for self-sufficiency purposes. The average household income for indigenous communities is US$2,122 per year, compared to US$2,621 per year for other small forest users in the area. These communities are located in districts with a Human Development Index lower than the national average (0.43 versus 0.5). The poverty conditions are also reflected in the high rates of social vulnerability and food insecurity. Indigenous women have lower educations levels and are more likely to lack identification documentation compared with non-indigenous women.

C. PDO-Level Results Indicators

21. The following key results are expected:

- Land area under sustainable landscape management practices (ha) (Corporate results indicator) *(**Target**: 380,500 ha)*
- Target population of forest communities with use or ownership rights registered (number of people) Includes: (i) land holdings registered, demarcated and titled; (ii) forest management permits granted; (iii) participatory territorial zoning plans registered. *(**Target:** 1,500 households)*
- Land users adopting sustainable land management practices as a result of the project (number) (of which female) Includes beneficiaries who receive general technical assistance and capacity

building, as well as those beneficiaries who participate in the incentive grant program. ***(Target:*** *2,300 households, or 11,500 individual beneficiaries)*

- Share of target beneficiaries satisfied with their participation in forest and land-use interventions (Percentage) (of which female) (Core) Indicator will measure project beneficiaries considered "satisfied" according to criteria detailed in Operations Manual and measured by survey taken at project outset (baseline), mid-term, and closure. ***(Target****: 70%)*
- Index for forest entrepreneurship. This indicator measures the percentage of beneficiaries who move from one level of business development to the next. The index is expected to be comprised of the following dimensions: (i) establishment and organization of forest enterprise, (ii) number of value chains, (iii) number of products sold on the market, and (iv) production volume. ***(Target:*** *75%)*

III. PROJECT DESCRIPTION

A. Project Components

22. **Component 1. Institutional Strengthening for Forest Landscape Management and Conservation (US$2.78 million in FIP Grant financing)**

23. **Sub-component 1.1. Provision of land tenure rights and promotion of community-level land-use planning.** The objective of this sub-component is to work with national government agencies (e.g., Ministry of Agriculture and Irrigation [MINAGRI], Property Registry Agency [SUNARP]), sub-regional government agencies (e.g., regional and municipal land regularization and forestry agencies), and indigenous and other forest dependent community organizations to support local efforts to secure forest land ownership and use (e.g., forest concessions). In particular, this component will support the registering of indigenous peoples located in the three districts, in the National Registry of Native Communities, through the provision of technical and legal assistance to native communities. Recognition of a native community in the National Registry of Native Communities as a legal entity is a prerequisite for initiating the land titling process. The component will also finance the demarcation and titling process, which establishes the geographic location and physical boundary for native communities' land and formally registers title for native communities, by covering the costs charged by the respective entities (e.g., regional agricultural offices) to carry out these processes.

24. **Sub-component 1.2. Strengthening enabling conditions for forest governance.** This sub-component aims to foster reduced forest-related crimes and illegal activities and to ensure compliance with sustainable forest management practices, through improving information management, increasing institutional transparency and accountability across relevant institutions, and building the skills base and capacity of forest stakeholders around sustainability principles. Activities will support Regional Environmental Authority (*Authoridad Regional Ambiental,* ARA) personnel, responsible for law enforcement within forest areas, in improving the prevention, inspection, and detection of crimes and illegal activities in forested areas.

25. Support will be provided in strengthening the planning, operation, and coordination of the Community Control and Oversight Committees *(Comités de Vigilancia y Control Comunitario)* responsible for oversight and surveillance within the indigenous communities, in coordination with corresponding environmental and forestry authorities (Forest Resources Supervisory Agency (OSINFOR), ARA, Attorney General's Office for Environmental Matters (FEMA), National Forest Service (SERFOR), and others).

26. This sub-component will also foster citizen participation in the Municipal Environmental Commission (*Comisión Ambiental Muncipal,* CAM) and Regional Environmental Commissions (*Comisión Ambiental Regional, CAR)* to develop a common vision for landscape management. This common vision is expected to contribute to more sustainable land-use decisions and also support the incorporation of this vision into native communities' life plans.[2] The project will encourage the participation of women, youth, and other vulnerable groups in these Commissions and planning exercises.

27. **Component 2. Strengthening sustainable forest landscape management and use (US$8.22 million in FIP Grant and Credit financing, of which US$6.4 million financed with FIP Credit and US$1.82 million financed with FIP Grant)**

28. **Sub-component 2.1 Investing in forest landscapes.** This component aims to promote the development of forest landscape investments and businesses, by providing small-scale grants at the community level that contribute to sustainable forest management, food security, and income generation. Communities and community enterprises will prioritize investments, such as agroforestry, silviculture, ecotourism, and other landscape management measures. Community members will develop investment plans in accordance with criteria outlined in an incentive fund handbook, with technical and business development support provided by project-financed local technical advisors (see sub-component 2.2). This handbook incorporates a listing of best practices to ensure that the investments selected are the most appropriate to sustainably manage forest resources. Project-financed grants are expected to require a match of 20% in beneficiary contributions, which may be in cash or in-kind. In addition, this sub-component will seek to address gender and social inclusion issues, in which community support and training methods will take into account the preferred methods of learning of women and others, e.g., single-sex groups, women-to-women exchanges.

29. **Sub-component 2.2 Strengthening technical and business capacities of forest communities and enterprises to better manage forests.** Under this sub-component, local technical advisors will support communities in developing and strengthening investment plans, optimizing processes, and conducting seminars to share experiences with other communities. The sub-component also aims to support communities in organizing and developing forest enterprises and community associations, and provide guidance on accessing markets for their products (timber and non-timber), and alliances with the private sector, in an effort to improve the profitability.

30. **Component 3. Project management, monitoring and evaluation. (US$1.20 in FIP Grant financing)** This component will finance the operating costs of a Project Coordination Unit (PCU) within

[2] Community life plans outline a community's development plans for a particular areas, including information on land-use patterns, hunting and fishing grounds, and areas of cultural importance, These layers of information are digitized and returned to communities, where they are used as strategic tools for developing sustainable resource management plans.

MINAM's National Program of Forest Conservation for Climate Change Mitigation to carry out project oversight and management functions for Components 1 and 2. Support will be provided for procurement, financial management, coordination, social and environmental safeguard management, reporting, and monitoring and evaluation. The PCU will be responsible for coordinating with a FIP Steering Committee.

B. Project Cost and Financing

31. The proposed operation provides Investment Project Financing in the amount of US$12.2 million, with financing from a Strategic Climate Fund FIP grant (US$5.8 million) and from a Strategic Climate Fund FIP credit (US$6.4 million).

Project Components	Project cost	IBRD or IDA Financing	Trust Funds	Counterpart Funding
Component 1. Capacity Building for Forest Landscape Management	2.78		2.78	
Component 2. Strengthening Forest Landscape Management and Business Development	8.22		8.22	
Component 3. Project Management, Monitoring and Evaluation	1.20		1.20	
Total Costs	12.2		12.2	

C. Lessons Learned and Reflected in the Project Design

32. The Project design benefits from reviews of several previous World Bank operations in Peru, as well as Latin American more broadly. In particular, key lessons from the Indigenous and Afro-Peruvian Peoples Development Project (P060499) and Indigenous Management of Protected Areas in the Peruvian Amazon (P065200) were considered during the preparation of this Project.

Table2: Lessons Learned and Incorporated in Project Design

Lessons Learned	How Incorporated in Project Design
Ensure that all the roles and responsibilities among the various implementation levels are clear at the outset.	The Project Operational Manual (POM) and Grant Agreement will include details regarding the respective roles and responsibilities, decision making authority, requirement of broad community support for community proposals, conflict resolution, etc.
Simple design, light bureaucracy	Contracting and procurement by MINAM will be under the World Bank's policies and procedures

	but Community Driven Development (CDD) rules for procurement at the sub-project level. These rules and eligibility criteria will be clearly spelled out in the POM
Stability in executing agency in terms of staffing and capacity is critical for timely and satisfactory execution	The core executing agency staff within MINAM will comprise staff who supported preparation to ensure continuity. Any change in the core team will require a no-objection from the World Bank.
Indigenous management of protected areas plays a positive role in ensuring biodiversity conservation.	Via its strengthening of community forest management, the project is expected to also build environmentally sound practices at community level.
Providing incentives for sustainable use of natural resources to enhance community livelihoods leads to a positive transformation in environmental management more broadly.	This approach, which provides direct investment support combined with facilitation and training, will help community beneficiaries assume responsibility for sustaining their livelihoods in environmentally sound ways.

IV. IMPLEMENTATION

A. Institutional and Implementation Arrangements

Project Management

33. ***FIP National Executive/Consultative Committee***. To guide the initial design of the PIP, the Government of Peru established a Consultative Committee comprised of the Ministry of Environment (MINAM), Ministry of Economy and Finance (MEF), Ministry of Agriculture and Irrigation (MINAGRI), the Interethnic Development Association of the Peruvian Rainforest (AIDESEP), and the National Amazonian Confederation of Peru (CONAP), the Ministry of Culture, and Interregional Amazonian Council (*Consejo Interrregional Amazónico, CIAM),* representing the subnational governments of the Amazon. AIDESEP and CONAP are the country's largest IP federations representing more than 90% of IPs of the Peruvian Amazon region. This multi-sector/stakeholder committee has played a key role in ensuring the PIP was designed in a transparent, inclusive and participatory manner, both at the national and regional levels. Following the approval of the PIP, it was agreed that the Committee would continue as the main oversight body for the implementation of the four PIP sub-projects to provide higher-level government coordination.

34. ***Institutional arrangements for project implementation.*** A Project Coordination Unit (PCU) within MINAM's National Program of Forest Conservation for Climate Change Mitigation, comprising existing MINAM staff and contracted technical assistance, will be responsible for project management and coordination functions. The PCU will prepare overall project work plans and budgets, update operational manuals, facilitate inter-ministerial coordination, and carry out project administration (e.g., financial management, procurement, specialist recruitment, monitoring, evaluation, and reporting). The Regional

Environmental Authority will provide additional coordination, and technical and project management support at the local level. The PCU will contribute to the overall FIP program, including reporting project results, lessons learned, etc., into the broader FIP results framework, participation in programmatic knowledge management activities and annual reviews, etc.

Project Implementation

35. The project's incentive program follows the concept of community-driven development with communities taking responsibility for the choice, design and management of rural investments. Experienced locally-based consultants will facilitate community mobilization, participatory planning, rural investment planning and implementation, and will help build the technical and administrative capacities of these groups. These consultants will coordinate with local government, local NGOs, community-based organizations and other supporting organizations to provide these services as needed. Fund flow arrangements are designed to be transparent with the transfer of grant funds from MINAM to communities. Regional environmental authorities will be included in a review process of rural investment proposals.

B. Results Monitoring and Evaluation

36. MINAM is strengthening its monitoring and evaluation system for all four FIP sub-projects, to monitor both individual and collective project results. This system involves developing a monitoring platform, supported by sub-national governments and indigenous communities, to monitor titling and land registries, forest concessions and contracts, and permits for timber activities. Monitoring support for this system is being provided under the IDB FIP national forest governance project. In addition, MINAM has developed an MRV system (an essential piece of the REDD+ scheme) to support monitoring and reporting under an upcoming FCPF Emission Reductions Program.

C. Sustainability

37. The project will create the enabling conditions for change in forest and land management, specifically by promoting land tenure security, strengthening governance, and enhancing investments in and opportunities for entrepreneurship in forest communities. Strengthening community land rights is expected to reduce deforestation and to provide long-term benefits for communities. Land rights are the basis for communities to capture the economic opportunities linked to investments in land use. It has been demonstrated that strengthened land rights combined with support to community-level land-use planning supports communities to engage more effectively with outside interests such as potential investors and other business opportunities. At the same time, improved governance will foster transparency, inclusion, and effectiveness of investments and decision-making. By promoting institutional strengthening at all levels (national, provincial, local), capacity will be built for more sustainable land use practices. In terms of environmental sustainability, developing a shared vision for landscape management will help to ensure that the aggregate effect of the different land-use investments supported by the project will promote long-term sustainability. A landscape vision will allow stakeholders to consider the trade-offs from different land-uses and to plan them at a landscape scale and translate this into the "life plans" of indigenous communities.

38. In addition, landscape management investments that provide an incentive framework and sources of financing for improved environmental land management, including forest management, food

security, and income generation, will contribute to the sustainability of rural investments and mitigating climate risks. The use of community-driven development is also expected to contribute to generating long-term benefits. Communities will be key decision-makers on what investments to implement and the distribution of financial resources, thus building ownership. Investment proposals will require that participants consider economic, environmental, and social/institutional sustainability, e.g., cash flow, environmental conservation and mitigation measures. Communities will be responsible for financial management of and procurement for investments. Furthermore, the requirement of beneficiary contributions will help build ownership and also contribute to the sustainability of investments. Institutional sustainability will be addressed through capacity building of the participating rural population, community-based organizations, MINAM and relevant line ministries. Through field-based implementation and collaboration with facilitating organizations and others on how to better support communities in better managing their forest landscapes, it is expected that MINAM will be better equipped to mainstream these approaches in regional and national programs and planning exercises.

D. Role of Partners

39. As mentioned, a Consultative Committee comprised of representatives from MINAM, MEF, MINAGRI, AIDESEP, CONAP, the Ministry of Culture, and CIAM will serve as the project's main oversight body. This Committee will approve annual implementation plans, and review project progress. General project oversight will be the responsibility of MINAM, which will assess the incentive projects proposed by forest communities and verify their eligibility based on agreed criteria. MINAM will also ensure communities are adequately facilitated in preparing and implementing their incentive projects, as well as approve fund transfers for incentive projects.

40. The project will collaborate with the IDB and government teams supporting implementation of the other FIP projects, including via joint missions and sharing of results and lessons learned. In particular, the project will coordinate closely with the two IDB community forest management projects in Tarapoto–Yurimaguas and Puerto Maldonado-Iñapari to share data, results and experience where relevant. The project will also contribute to distilling results and lessons learned at the program level to help achieve the overall goals of the FIP in Peru.

V. KEY RISKS

A. Overall Risk Rating and Explanation of Key Risks

41. The overall implementation risk is considered Substantial, with the project's main risks pertaining to the political climate, design and implementation complexities (particularly with respect to titling and local institutional capacities), as summarized below. These risks are being mitigated via a strong and continuous communication with and participation of indigenous local communities and local authorities. To mitigate design risks, the project has also taken on board lessons from the ongoing and complementary Saweto Dedicated Grant Mechanism for Indigenous Peoples and Local Communities in Peru, in particular regarding titling and registration, as well as lessons learned during the preparation of the IDB's Forest Investment Program.

Risks/Issues	Proposed mitigation measures
Political and Governance	
Political climate and related future uncertainties	The Project is fully aligned with MINAM's strategies and programs and Government commitment to the Project is high; however, any changes in agency personnel could result in implementation delays. To mitigate this risk, capacity building will be provided as needed, and tools and documentation to ensure transfer of in-house knowledge will be developed.
Technical Design	
Boundary conflicts in communal forest territories, or with concessions and other public forest lands	Strengthen/support participatory territorial zoning, boundary demarcation, land regularization, and local alternative dispute resolution mechanisms *(*e.g., local registry offices, *Defensoría del Pueblo e Interculturalidad).*
Illegal logging and related trade in and outside community forests	Improve law enforcement and governance capacity of local government agencies to use tools to improve forest control and supervision, including field verification of annual harvesting plans. Promote the integration and operation of community-based monitoring systems and brigades, such as the *Veedurías Forestales Communitarias* (VFCs). This mitigation measure has been mainstreamed in sub-component 1.2
Internal, and between community conflicts, or between communities and private forestry firms over productive forest management activities.	Strengthen community institutions and regulation mechanisms such as the VFCs. Mainstream the use of available tool kits for forest control and supervision and use of forest industry-community logging contracts based on socially and environmental sound principles. The project's Grievance Redress Mechanism will play an important role in monitoring mitigation measures.
Unplanned community and public forestland occupation and unsustainable production activities by migrating peasants (e.g. the Atalaya-Puerto Ocopa highway)	Community land demarcation and legal registration program; participation of VFC and implementation of grassroots forest land use planning awareness campaigns.
Institutional Capacity	
Limited institutional capacity of national, regional and provincial government agencies to enforce sustainable forest management (SMF) and perform land regularization/titling activities	Promote the establishment of specialized offices to handle and assisting indigenous communities and other forest dependent stakeholders in all forestry related transactions in national and local sectoral agencies (e.g., OSINFOR Forestry Directorate in Atalaya, etc.).

Fiduciary	
Community Driven Development Approach	There is a lack of procurement and financial management knowledge and capacity at the community level. To mitigate this risk, procurement and financial management training will be provided at the local level, including to consultants providing community support, to support communities in preparing incentive plan proposals, as well as to assist communities in implementation and oversight.
Stakeholders	
Indigenous organizations' concern and perception that needs of communities not taken on board in project design and implementation	The team has built a direct relationship with indigenous organizations and leaders and ensure that they participate in all aspects of project preparation and implementation that may impact their constituents.

VI. APPRAISAL SUMMARY

A. Economic and Financial Analysis

42. The ex-ante economic efficiency analysis conducted for the proposed project results in positive economic outcomes that will be achieved with project funding. The consideration of only a few of the benefits in the quantitative analysis yielded positive economic results. The results of the quantitative simulations are also robust across a range of sensitivity analyses assuming changes in discount rates and the core benefit parameter, i.e., the shadow price of tCO2e. It is important to note that absolute carbon benefits, estimated in tCO2e, for the Project are likely to be under-estimated, which is further magnified by applying very low assumptions for the opportunity costs of carbon and not including broader climate regulation benefit values. All of these factors would have resulted in significantly higher simulation results across all assumed parameter changes, hence highlighting the robustness of the economic rationale of the proposed Project, even in the undesired scenarios where Project benefits would have to be downgraded in the course of Project implementation.

43. Sensitivity analyses included benefit value estimations that underwent reductions of minus 10% and 20% and discount rate variations of 5%, 10%, 15%, and 20%, respectively. The economic assessment has exclusively focused on values associated with carbon benefits. Other economic values, such as those related to watershed management benefits, biodiversity conservation, among others, have not been considered due to lack of data availability. Had those project benefits been included in the quantitative analysis, the overall economic efficiency outcome would have been higher.

44. Avoided emissions are valued using the official price of US$7.17 per ton of CO2. The benefits of the project's avoided emissions are estimated taking into consideration the areas of direct intervention, with the following goals: 200,000 ha of timber forest management, 105,000 ha of non-timber forest management, 500

ha of agroforestry systems, 75,000 ha of areas for other forest products and services and 60,000 ha of implementation of enabling conditions (including titling and recognition of native communities) and a monitoring and surveillance system for deforestation and degradation of forests of the entire project area. In total, the area of direct intervention is 440,500 ha through which it is expected to achieve a gradual reduction of deforestation by 49% at the end of the project's implementation.

45. It is anticipated that at the end of the project's five-year timeframe, there will be 6,211 ha of avoided deforestation, equivalent to 3,108,737 tCO2-e.

B. Technical

46. The project promotes a number of technologies for forest landscape management and livelihood strategies. Throughout, the project will build on local knowledge and technologies, as well as relevant international good practices. No significant technical challenge is expected, but technical capacity support to support adoption of good practices will need to be strengthened and increased.

C. Financial Management

47. The World Bank conducted an FM assessment in accordance with OP/BP 10.00 and the Guidelines for Assessment of Financial Management Arrangements in World Bank-financed projects to determine the adequacy of MINAM's PCU - PNCBMCC [3] financial management arrangements to support the implementation of the Integrated Forest Landscape Management Project in the province of Atalaya, Ucayali. Annex 2 provides the main characteristics of the financial management arrangements under the Project.

48. In accordance with proposed institutional arrangements, the Project will be implemented by the MINAM's PCU through establishment of a project implementation team, fully dedicated and responsible for project implementation. Within those arrangements, MINAM would hire finance professionals responsible for financial management tasks required under the Project. Project implementation will comply with Peru's laws governing budget and financial management, including the use of the integrated system for financial administration (SIAF) and the general chart of accounts established in SIAF. The General Comptroller's Office will carry out the selection of the project's audit firm. Bank funds will be disbursed to a Designated Account and its respective operative account, both opened in Banco de la Nación.

49. The FM risk is considered Substantial mainly due to the following factors: (i) MINAM's PCU has experience implementing projects financed by external financed operations such as CAF; however, the PCU staff has limited experience implementing WB financed projects and timely staffing of qualified and experienced professionals for the project will ensure an effective operation of the project; (ii) similar to other projects implemented by MINAM's PCU, the Project comprises decentralized arrangements through the involvement of indigenous communities and small forest users - with different level of capacity, which will be in charge of incentive project implementation under Subcomponent 2.1 including procurement, contract management and processing of payments; (iii) MINAM's PCU has controls, instruments and monitoring tools for incentive project implementation; however, its procedures and tools (information systems) for controlling, reporting and effectively monitoring implementation of incentive projects require strengthening, including

[3] *PNCBMCC - Programa Nacional de Conservación de Bosques para la Mitigación del Cambio Climático*

those arrangements to quantify/measure and report on communities and small forest user's contributions (in cash and in-kind). Given this situation, some process and mechanisms are being designed to adequately strengthen incentive project monitoring and ensure timely and reliable financial information on the Project as whole.

50. There has been important progress in the definition of FM arrangements; however, it is still necessary to complete the definition of some operational and administrative mechanisms that can adequately support project implementation. Additional information is provided in Annex 2.

D. Procurement

51. **Procurement Arrangements.** Procurement will be conducted according to the World Bank's Procurement Regulations for IPF borrowers, issued in July 2016, for the supply of works, goods, non-consulting and consulting services.

52. **Procurement Capacity Assessment**. Procurement activities under Component 1, Sub component 2.1 and Component 3, will be undertaken by the Ministry of Environment (MINAM) through its PCU within the National Program of Forest Conservation for Climate Change Mitigation. For sub-component 2.2., procurement will be conducted by beneficiaries of incentive projects, following a Community-Driven Development approach. The capacity assessment concluded that the PCU has adequate experience and capacity to implement procurement activities. Considering the proposed use of CDD, the Project Operational Manual shall include clear supervision arrangements as well as appropriate simplified templates for the Procurement Plan, contracts, request of quotations, and others.

E. Social (including Safeguards)

53. The World Bank's OP 4.10 (Indigenous Peoples) is triggered for this project because the main community beneficiaries will be from the Raimondi, Sepahua and Tahunía districts of the Atalaya province that comprise primarily (80%) indigenous peoples (IPs). As IP are the project's direct and main beneficiaries, this project is an IP project. As such, the project has incorporated safeguard measures related to OP 4.10 and there has been a process of free and informed consultation to foster community support. An Indigenous Peoples Plan (IPP) was not prepared, however, since IPs constitute the primary and direct beneficiaries. Further, given that project investments will be carried out in isolated forest areas, the project includes protocols and procedures to protect indigenous peoples living in conditions of voluntary isolation or with sporadic contact with surrounding society.

54. With respect to OP 4.12 (Involuntary Resettlement), no involuntary resettlement of population or restriction of access to natural resources will result from any activities financed by the project. The project also does not anticipate any land acquisition.

55. Project social safeguards requirements will be carried out by MINAM , as well as by beneficiaries receiving incentives under the Project. MINAM will be responsible for all safeguards project requirements, including management and compliance. A Social Assessment of the Atalaya region was also prepared to inform and orient key design features of the Project, particularly socio-economic and cultural forest practices in the region as well as gender and social inclusion issues prominent to beneficiary communities.

F. Environment (including Safeguards)

56. The project is classified as Category B given that the proposed investments (e.g., agroforestry, silviculture, and other landscape management measures) are not likely to result in significant adverse impacts on human populations and / or environmentally important areas. The project is likely to result in positive impacts for forest conservation and sustainable use.

57. Operational Policy on Environmental Assessment (OP 4.01) is triggered given that investments, although small in nature, will be carried out in the Peruvian Amazon region, an environmentally sensitive biodiversity hotspot already experiencing environmental degradation and natural resource depletion. An Environmental and Social Management Framework (ESMF) has been prepared as required by OP/BP 4.01 to screen, identify, avoid and mitigate the potential negative environmental and social impacts associated with project activities. This ESMF includes environmental and social aspects related to community forestry in the Peruvian Amazon region, as well as critical natural habitats sustained by these forests. The ESMF guides the preparation of site-specific safeguards instruments during project implementation and includes an exclusionary list, a screening plan for activities to identify, avoid, and mitigate any potential negative environmental and social impacts associated with project activities.

58. The ESMF considers the potential impact of activities, such as community forestry, silviculture, agro-forestry, sustainable management of forest landscapes, guidelines for sustainable exploitation of timber and non-timber products, value chain development, and access to markets. The ESMF provides the necessary recommendations to mitigate these potential impacts and measures and to ensure sound safeguards compliance during implementation. The ESMF was submitted for consultation to AIDESEP and CONAP (the two most important indigenous people confederations in the Peruvian Amazon region), DAR (an NGO), and the subnational government of Ucayali on December 11, 2017. Only DAR provided comments which were included in the ESMF. The ESMF will be disclosed on MINAM's website and the Bank's external website prior to appraisal.

59. Natural Habitats OP/BP 4.04. This policy is triggered given that project activities support forest management and conservation, as well as the number environmental and ecosystem services that natural habitats in the Peruvian Amazon provide. The ESMF addresses issues related to natural habitats and ecosystem services, and potential project impacts. Specifically, the ESMF has appropriate screening criteria to ensure that impacts on natural habitats and biodiversity are properly evaluated and mitigated. In addition, the ESMF clarifies that no project activities which involve significant conversion of natural habitats will be financed.

60. Forests OP/BP 4.36. This policy is triggered given that the project activities are likely to have positive impacts on forest management in indigenous groups' lands and territories as a result of implementing community forestry activities (including reducing deforestation and forest degradation). However, screening mechanisms have been incorporated into the ESMF to ensure that any potential small scale impacts on forests and forest dwellers will be mitigated through measures defined as part of the broader approach on natural habitats. Small-scale and community forestry measures will follow applicable principles for sustainable forestry under the policy.

61. Pest Management OP 4.09. This policy is triggered as the project will finance forestry activities which might include the use of pesticides and fertilizers at tree nurseries. Reforestation activities could also trigger this policy depending on the methods selected to manage pests. The project will promote integrated pest management and the ESMF contains screening mechanisms to evaluate the use of pesticides, ensuring their responsible management and avoiding and mitigating associated environmental or health impacts. A stand-along pest management plan is not needed.

62. Physical Cultural Resources OP/BP 4.1. This policy is triggered on a precautionary basis, as project interventions are not anticipated to have a negative impact on any sites with the presence of physical cultural resources, including sites and areas of cultural and religious value to local communities. The ESMF includes provisions regarding how to protect known physical cultural resources and how to address chance finds.

63. Projects on International Waterways (OP/BP 7.50). This policy is not triggered as the project will not finance activities involving the use or potential pollution of international waterways

64. Safety of Dams (OP/BP 4.37). This policy is not triggered as the project will neither support the construction or rehabilitation of dams nor will it support other investments which rely on services of existing dams.

65. Projects in Disputed Areas (OP/BP 7.60). This policy is not triggered as the project will not finance activities in disputed areas as defined in the policy.

G. Other Safeguard Policies (if applicable)

H. World Bank Grievance Redress

66. Communities and individuals who believe that they are adversely affected by a World Bank (WB) supported project may submit complaints to existing project-level grievance redress mechanisms or the WB's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns. Project affected communities and individuals may submit their complaint to the WB's independent Inspection Panel which determines whether harm occurred, or could occur, as a result of WB non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank's attention, and Bank Management has been given an opportunity to respond. For information on how to submit complaints to the World Bank's corporate Grievance Redress Service (GRS), please visit *http://www.worldbank.org/en/projects-operations/products-and-services/grievance-redress-service*. For information on how to submit complaints to the World Bank Inspection Panel, please visit www.inspectionpanel.org.

VII. RESULTS FRAMEWORK AND MONITORING

Results Framework

COUNTRY : Peru

Integrated Forest Landscape Management Project in Atalaya, Ucayali

Project Development Objectives

The project objective is to strengthen the capacity of forest dependent communities and enterprises to sustainably manage and use forest landscapes, in the Raimondi, Sepahua and Tahuanía districts of the Atalaya province.

Project Development Objective Indicators

Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection
Name: Land area under sustainable landscape management practices	✓	Hectare(Ha)	0.00	380500.00	Bi-annual reports	MINAM and ARA databases	MINAM
Description: The indicator measures, in hectares, the land area for which new and/or improved sustainable landscape management practices have been introduced. Land is the terrestrial biologically productive system comprising soil, vegetation, and the associated ecological and hydrological processes; Adoption refers to change of practice or change in the use of a technology promoted or introduced by the project; Sustainable landscape management (SLM) practices refers to a combination of at least two technologies and approaches to increase land quality and restore degraded lands for example, agronomic, vegetative, structural, and management measures that, applied as a combination, increase the connectivity between protected areas, forest land, rangeland, and agriculture land.							
Name: Target population of forest communities with use or ownership rights		Number	0.00	1500.00	Bi-annual reports	MINAGRI and SUNARP databases	MINAM

Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection
registered							
Description: Examples of ownership rights registered includes: (i) land holdings registered, demarcated and titled; (ii) forest management permits granted; (iii) participatory territorial zoning plans registered.							
Name: Land users adopting sustainable land management practices as a result of the project (disagregated by gender)		Number	0.00	2300.00	Bi-annual reports	MINAM and ARA databases	MINAM
Description: Land users (number of households) adopting sustainable land management projects includes beneficiaries that receive general technical assistance and capacity development, as well as those who participate in the Incentive Program.							
Name: Share of target beneficiaries satisfied with their participation in forest and land-use decisions that affect them (disagregated by gender)		Percentage	0.00	80.00	Baseline, mid-term, and end of project	Satisfaction survey.	MINAM
Description: Corporate results indicator. Project beneficiaries considered "satisfied" according to the criteria detailed in the Operations Manual and measured by a satisfaction survey. The results response will be informed back to beneficiaries (feedback loop). Indicator will be disaggregated by gender.							
Name: Index of forest entrepreneurship		Percentage	0.00	60.00	Bi-annual reports	To be defined. Preliminarily, a panel survey using a sample.	MINAM

Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection
Description: Index of forest entrepreneurship measures the percentage of beneficiaries who move from one level of organization to the next, based on the following dimensions: (i) establishment and organization, (ii) number of value chains, (iii) market diversification, and (iv) production volume. Indicator will be disaggregated by type of beneficiary.							

Intermediate Results Indicators

Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection
Name: Forest area under monitoring and surveillance		Hectare(Ha)	0.00	380500.00	Bi-annual reports	MINAM databases	MINAM
Description: Area monitored by Community Control and Oversight Committees.							
Name: Life plans approved by comunity		Number	0.00	30.00	Bi-annual reports	MINAM databases	MINAM
Description:							
Name: Number of incentive projects under implementation		Number	0.00	50.00	Bi-annual reports	MINAM databases	MINAM

Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection
Description: Number of incentive projects, such as agroforestry, silviculture, ecotourism, and other landscape management measures, under implementation.							
Name: Percentage of registered questions and grievances, related to project benefit delivery, that are addressed		Percentage	0.00	85.00	Bi-annual reports	Grievance Redress Mechanism	MINAM
Description: Grievances and questions registered includes all grievances registered in project's Grievance Redress Mechanism. Addressed means that grievances are addressed on time and in a manner according to the Operations Manual.							
Name: Net greenhouse gas emissions		Number	0.00	3108737.00	Baseline, mid-term, end of project	MINAM's monitoring, reporting, and verification system	MINAM
Description: Corporate results indicator.							

Target Values

Project Development Objective Indicators

Indicator Name	End Target
Land area under sustainable landscape management practices	380500.00
Target population of forest communities with use or ownership rights registered	1500.00
Land users adopting sustainable land management practices as a result of the project (disagregated by gender)	2300.00
Share of target beneficiaries satisfied with their participation in forest and land-use decisions that affect them (disagregated by gender)	80.00
Index of forest entrepreneurship	60.00

Intermediate Results Indicators

Indicator Name	End Target
Forest area under monitoring and surveillance	380500.00
Life plans approved by comunity	30.00
Number of incentive projects under implementation	50.00
Percentage of registered questions and grievances, related to project benefit delivery, that are addressed	85.00
Net greenhouse gas emissions	3108737.00

Intermediate Results Indicators	End Target
Forest area under monitoring and surveillance	380,500 ha
Life plans developed, approved and implemented by comunity	30
Number of households implementing incentive projects	2,500
Questions / concerns addressed according to service standards	85%
Reduction in greenhouse gas emissions	3,108,737 tCO2-e

ANNEX 1: DETAILED PROJECT DESCRIPTION

COUNTRY : Peru
Integrated Forest Landscape Management Project in Atalaya, Ucayali

1. **Component 1. Institutional Strengthening for Forest Landscape Management and Conservation**

2. **Sub-component 1.1. Provision of land tenure rights and promoting community-level land-use planning.** The objective of this sub-component is to work with national government agencies (e.g., Ministry of Agriculture and Irrigation [MINAGRI], Property Registry Agency [SUNARP]), sub-regional government agencies (e.g., regional and municipal land regularization and forestry agencies), and indigenous and other forest dependent community organizations to support local efforts to secure forest land ownership and use (e.g., forest concessions). In particular, this component will support the registering of indigenous peoples located in the three districts, in the National Registry of Native Communities, through the provision of technical and legal assistance to native communities. Recognition of a native community in the National Registry of Native Communities as a legal entity is a prerequisite for initiating the land titling process. Registration offers communities legal security, use of lands, and ancestral rights to native lands. The component will also finance the demarcation and titling process, which establishes the geographic location and physical boundary for native communities' land and formally registers title for native communities, by covering the costs charged by the respective entities (e.g., regional agricultural offices) to carry out these processes.

3. Under the project, consultants will be contracted to support indigenous communities with titling and demarcation processes in accordance with local legislation. Communities prioritized for recognition include Matotencabo and Milagros, while Tierra Prometida has been prioritized for land title. Twenty (20) communities are expected to be provided support with demarcation.

4. **Sub-component 1.2. Strengthening enabling conditions for forest governance.** This sub-component aims to foster reduced forest-related crimes and illegal activities and to ensure compliance with sustainable forest management practices, through improving information management, increasing institutional transparency and accountability across relevant institutions, and building the skills base and capacity of forest stakeholders around sustainability principles. Activities will support Regional Environmental Authority (*Autoridad Regional Ambiental,* ARA) personnel, responsible for law enforcement within forest areas, in improving the prevention, inspection, and detection of crimes and illegal activities in forested areas.

5. Support will be provided in strengthening the planning, operation, and coordination of the Community Control and Oversight Committees *(Comités de Vigilancia y Control Comunitario)* responsible for oversight and surveillance within the indigenous communities, in coordination with corresponding environmental and forestry authorities (Forest Resources Supervisory Agency (OSINFOR), ARA, Attorney General's Office for Environmental Matters (FEMA), National Forest Service (SERFOR), and others).

6. This sub-component will also foster citizen participation in the Municipal Environmental Commission (*Comisión Ambiental Muncipal,* CAM) and Regional Environmental Commissions (*Comisión Ambiental Regional, CAR)* to develop a common vision for landscape management. This common vision is expected to contribute to more sustainable land-use decisions and also support the incorporation of this vision into native communities' life

plans.[4] The project will encourage the participation of women, youth, and other vulnerable groups in these Commissions and planning exercises. In particular, goods and consultants' services financed under the project will help strengthen the CAM and CAR in carrying out their forest management responsibilities.

7. **Component 2. Strengthening sustainable forest landscape management and use.** This component provides grant financing to communities in three selected districts of the Atalaya province to implement rural production, land management, and ecotourism investments in forest landscapes. Technical assistance for planning, monitoring, and evaluating these investments is also provided.

8. **Sub-component 2.1 Investing in forest landscapes.** This component aims to promote the development of forest landscape investments and businesses, by providing small-scale grants at the community level that contribute to sustainable forest management, food security, and income generation. Examples of eligible investments include investments in agroforestry, ecotourism, and timber and non-timber forest products. Specifically, financing will be provided for strengthening community or enterprise management and technical capacities, equipment and tools, minor infrastructure, and market access. Grant beneficiaries include: (i) indigenous communities, which in accordance with Decree No. 20653 recognizes the property rights of indigenous communities, with property rights (in accordance with Decree No. 22175) limited to agricultural and fishing lands; and (ii) small forest users who have forest usage rights for agroforestry, private plots with forests, and small and medium-sized enterprises (ecotourism, as well as timber and non-timer products). To be eligible for these small-scale, incentive grants, community enterprises or households must have, as applicable, forest rights, title to land, and planning tools (e.g., a life plan) that identify the value chain to be supported. In addition, they must not currently be the recipient of other types of conservation support, nor have any outstanding fines or sanctions against them by the respective forest or environmental authority. In addition, investment plans must ensure women's participation (at least 20% of a plan's beneficiaries should be women), as well as a positive impact on the environment.

9. *Budget constraints and beneficiary contribution requirements.* Indigenous communities will prioritize investments based on a fixed budget, through the preparation of a life plan that identifies one or several incentive projects. Incentive plans should not exceed US$150,000 per community, or US$2,000 per household (see table below). Incentive grant financing will require beneficiary co-financing of 30% from small forest users and 20% from indigenous communities. In the case of small forest users, 10% of co-financing should be provided in cash, with the remaining 20% in-kind.

Financing by beneficiary group

Type of investment	Indigenous Communities	Small Forest Users
Timber products	Up to US$2,000 per household More than 50 beneficiaries in an investment plan	Not eligible

[4] Community life plans outline a community's development plans for a particular areas, including information on land-use patterns, hunting and fishing grounds, and areas of cultural importance, These layers of information are digitized and returned to communities, where they are used as strategic tools for developing sustainable resource management plans.

	Commitment of conserving more than 20,000 ha of forest or 400 ha per household	
Non-timber products	Up to US$ 2,000 per household More than 20 beneficiaries Commitment of conserving more than 5,000 ha of forest or 250 ha per household	Up to US$ 2,000 per household More than 20 beneficiaries Commitment of conserving more than 5,000 ha of forest or 250 ha per household
Ecoturismo	Up to US$2,000 per household More than 10 beneficiaries Commitment of conserving more than 5,000 ha of forest or 500 ha per household	Hasta US$ 2 000 por familia beneficiaria More than 10 beneficiaries Commitment of conserving more than 5,000 ha of forest or 500 ha per household
Agroforestry	Up to US$2,000 per household More than 10 beneficiaries Commitment of conserving more than 5,000 ha of forest or 500 ha per household	Up to US$2,000 per household More than 30 beneficiaries Commitment of conserving more than 300 ha of forest or 10 ha per household
Other	Up to US$2,000 per household More than 10 beneficiaries Commitment of conserving more than 500 ha of forest or 50 ha per household	Up to US$2,000 per household More than 50 beneficiaries Commitment of conserving more than 500 ha of forest or 10 ha per household

10. **Sub-component 2.2 Strengthening technical and business capacities of forest communities and enterprises to better manage forests.** Under this sub-component, local technical advisors will support communities in developing and strengthening investment plans, optimizing processes, and conducting seminars to share experiences with other communities. The sub-component also aims to support communities in organizing and developing forest enterprises and community associations, and provide guidance on accessing markets for their products (timber and non-timber), and alliances with the private sector, in an effort to improve the profitability.

11. *Project orientation.* Activities will include a project orientation phase to share project goals, approaches, and activities with project partners and key stakeholders, such as line ministries, local government, local NGOs and community-based organizations.

12. *Knowledge and skills.* A program will be implemented to improve knowledge and skills in key topics such as environmental assessment and monitoring, forest conservation and management, integrated pest management, business development and marketing, gender, among others. Activities will include practical training for project beneficiaries, community based organizations and groups, local government specialists, and training courses, workshops, and seminars for project implementing partners and stakeholders.

13. *Dissemination and networking.* Dissemination will be supported through a focus on exchange and learning between project sites and with similar initiatives. The project will support the documentation, dissemination, and knowledge exchanges of successful project tools and approaches for replication and support. The project will generate a number of practical, how-to tools for various audiences, e.g., women, forest enterprises, etc. that will be shared widely. Annual project review meetings will be held to share results among project stakeholders.

14. **Component 3. Project Management, Monitoring, and Evaluation.** This component will finance the operating costs of project management functions to be carried out by the PCU within MINAM for both Components 1 and 2. Key functions include procurement, financial management, coordination, reporting, monitoring and evaluation.

15. Financing will be provided for fixed or long-term specialists in financial management, monitoring and evaluation, coordination, and technical assistance in forest management, agronomy, business development and marketing, social development, and in other areas as per approved work and procurement plans. The project will support coordination with the overall country FIP program, including participation and contributions to programmatic monitoring and evaluation and knowledge management. The project will support equipment, incremental operating expenses (including travel), and partial operating costs for the Regional Environmental Authority participating in the project.

ANNEX 2: IMPLEMENTATION ARRANGEMENTS

COUNTRY : Peru
Integrated Forest Landscape Management Project in Atalaya, Ucayali

Project Institutional and Implementation Arrangements

Project implementation. The project follows the concept of community-driven development with beneficiaries taking responsibility for the choice, design and management of investments. Experienced national organizations will facilitate community mobilization, participatory planning, investment plan development and implementation, and will help build the administrative and technical capacities of these groups. The contracted local organizations / NGOs will coordinate with local government to provide these services as needed.

Project management.

A Consultative Committee will provide strategic oversight, monitoring project advancement and inter-institutional coordination with participating agencies, such as MINAM and MINAGRI. The Consultative Committee will also monitor project compliance with environmental and social safeguards, and propose adaptive management methods to optimize social and environmental management, This Committee will meet two times per year. The Consultative Committee will be comprised of a Committee President (the head of MINAM's National Program of Forest Conservation for Climate Change Mitigation Department), a Technical Secretary (the PCU Project Coordinator), and representatives from MINAM, MINAGRI, the Ministry of Culture, GORE, MEF, AIDESEP and CONAP, civil society, the private sector, academia, and local government.

MINAM will have overall responsibility for project management. A Project Coordination Unit (PCU) within MINAM has been established to oversee project implementation, which will receive administrative and financial management support from MINAM's Administrative Unit, including the Areas of Administration and Finance, Planning and Budget, Legal Advisory, and Communications. In addition, the PCU will coordinate with MINAM's Administrative Unit and the Technical Coordination Unit within MINAM's National Program of Forest Conservation for Climate Change Mitigation Department in the implementation of the project's components. Specialists (consultants) will be contracted to support the PCU in the areas of financial management, procurement, technical oversight, among others, exclusively for the project's implementation.

The PCU will be responsible for implementation planning, procurement, supervision, and monitoring and evaluation. The Regional Environmental Authority will provide the PCU additional project oversight support at the local level. In particular, the Regional Environmental Authority will support the PCU with safeguards oversight and will include technical and business specialists to support the implementation of Component 2.

The project will be implemented based on a Project Operational Manual (POM), which will be fully prepared by project effectiveness. The POM will include: (i) the project's overall operating, fiduciary, and decision-making procedures; (ii) incentive fund guidelines; (iii) guide to project monitoring and evaluation. The POM may be amended by mutual agreement between the PCU in MINAM and the World Bank.

Financial Management

MINAM's PCU has experience implementing projects financed by external financed operations[5] such as CAF; however, PCU staff has limited experience implementing WB financed projects and timely staffing of qualified and experienced professionals for the project will assure an effective operation of the project.; (ii) similar to other projects implemented by MINAM's PCU, current project comprises decentralized arrangements, carry out "rendición de cuentas" and the use of the country FM information system SIAF, through the involvement of indigenous communities and small forest users -with different level of capacity-, which will be in charge of incentive project implementation[6] in the Atalaya province[7]under Subcomponent 2.1 including procurement, contract management and processing of payments; (iii) MINAM's PCU has controls, instruments and monitoring tools for incentive project implementation; however, its procedures and tools (information systems) for controlling, reporting and effectively monitoring implementation of incentive project requires to be strengthened, including those arrangements to quantify/measure and report of communities and small forest user's contributions (in cash and in-kind). Given this situation, some process and mechanisms are being designed to adequately strengthen incentive project monitoring and assure timely and reliable financial information on the project as whole. Other characteristics of project includes different financing sources, which demands clear co-financing arrangements (i.e on a parallel basis or joint basis); and (ii) interaction with several actors including ministries and central and regional governmental agencies which demands close coordination. Based on the above-mentioned aspects, the FM risk rating is rated as Substantial.

At this stage, there has been important progress on the definition of FM arrangements; however, it is still necessary to complete definition of operational and administrative mechanisms for controlling, reporting and effectively monitoring implementation of incentive projects; and agreed on the final content and form of financial reporting (including disbursements) for the whole project.

On the basis of the risks defined, there are some preliminary mitigation measures to be completed by appraisal:
(i) Draft financing agreement that reflects financial management roles and responsibilities of incentive project beneficiary and MINAM in the implementation of incentive projects.
(ii) Prepare a simplified guideline for incentive project beneficiaries, including specific procedures to monitor incentive project's budget execution and financial reporting.
(iii) Complete definition of project financial statements and complementary reports at incentive project level.
(iv) Project Operational Manual (POM) reflects the design of financial management arrangements designed for the whole project.
(v) TORs of project FM staff to be recruited will need to be reflected in the POM.

Said arrangements are not yet in place, and there is still need to work on detailed operational arrangements applicable for WB-financed project, that can adequately support project implementation. As progress is reached in the completion of the above described actions, the FM team will be able to conclude on the acceptability of the proposed arrangements.

Organization and staffing. MINAM's PCU is a well-organized entity with technical and administrative autonomy. The Budgeting and Planning Unit of the PCU will be responsible for the budgeting recording of the credit and

[5] *MINAM CAF and TDC and Ministerial Resolutions approving mechanisms for an adequate rendicion de cuentas (RM 132-2016).*
[6] *Small-scale incentive grants to indigenous communities and small forest users*
[7] *Raimondi, Sepahua and Tahuani districts of the Atalaya Province.*

grant. The Administrative and Finance Unit (AFU) of the PCU will be responsible of the financial management and disbursement aspects of the project including: accounting, internal control, funds flow, financial reports, and auditing. The AFU has qualified and experienced staff in local norms; and has acquired experience implementing Bank funds8. The PCU has hired a fiduciary specialist, with experience in financial management and implementation of incentive projects. For the new project, a financial management specialist and analyst, full time dedicated for the project implementation would be hired. This professional and other key project staff would be financed by the grant proceeds. The FMS would prepare the project financial reports, withdrawal application of funds of the project, provide hands on training to incentive projects and monitor their implementation. Detailed roles and responsibilities and TORs will need to be reflected in the Operational Manual.

Programming and Budgeting. As in other projects, the budget of the credit and grant will follow general government procedures regulated by the Annual Budget Law established by the Ministry of Finance. MINAM's PCU will ensure that credit and grant proceeds be incorporated on time into the Budget of MINAM upon legal agreements are signed.

The Annual Budget Law[9] consents the transfer of public proceeds to private parties, such as indigenous communities and small forest users with social specific purpose. This Law[10] also spells out the main documentation required by private parties to support expenditures incurred against transfer of funds from public resources. At incentive project level, MINAM will monitor the preparation and monitoring of budgets prepared for each incentive project and respective tranches foreseen under the incentive project.

The PCU will prepare the project annual operating plan (POA) and project budget to be incorporated into MINAM's institutional budget, and procurement planning. MINAM's PCU annual budget, including the project will be approved by MEF. Project budget execution will be processed and monitored through the SIAF information management system. The programmatic structure used by SIAF allows the recording of project transactions classified by source of financing, component, and type of expenditure. A matrix with the budgeting structure to be used under the project and linked to project components needs to be submitted to be included in the Project Operational Manual.

Accounting and Information System. As in other public institutions of Peru, MINAM's PCU must comply with local regulations in relation to accounting policies and procedures including the use of the governmental financial information system (SIAF) and the General Chart of Accounts. The project will benefit from the use of SIAF to process payments, including disbursement to incentive projects.

Under those arrangements project transactions would be recorded and accounted for as part of MINAM's PCU general accounting, both for MINAM's centrally managed expenditures and for disbursements/advances made to incentive projects. Project transactions will follow the accumulative accounting basis, while preparation of financial statements will follow the cash basis of accounting. SIAF would be complemented with Excel spread sheets to control advances to incentive projects and disbursement number to collect information on the use of the funds at incentive project level, or to provide basic information for monitoring purposes.

Keeping with current accounting practice, advances to incentive projects are considered as expenditures in SIAF

[8] *Peru Strategic Climate Fund – Forest Investment Program Grant No. TF0A4636.*
[9] Articulo 60 de la Ley 28411
[10] Articulo 60.3

and monitoring of incentive projects is prepared manually in Excel, and it therefore may constitute a cumbersome process and may hinder the timeliness and integrity of the information. In order to address project information needs, MINAM has worked on the design of key mechanisms, procedures and tools for recording, control and monitoring of incentive project implementation, including specific reporting requirements from incentive project's beneficiary on the use of funds under format agreed with the Bank and consolidated reports on incentive project implementation.

Internal Controls. MINAM is regulated by its "Normative of organization and Function" which describes internal control procedures and roles and responsibilities. Procedures for approval and processing of payment to vendors will require the approval of the Director of the MINAM's PCU. These procedures are complemented by key controls, instruments and monitoring tools for incentive project implementation. They provide for clear roles and responsibilities at MINAM level and organization level, adequate segregation of duties in terms of authorization and recording of and approval of payments and disbursements. Additionally, MINAM's PCU would define standardize financial reporting at the incentive project level and minimum requirements from the incentive project beneficiary to monitor incentive project execution. These mechanisms will be reflected in the Project Operational Manual, to be reviewed by Appraisal.

According to MINAM's UPG, the beneficiary in charge of incentive project implementation would have low or null capacity, therefore they will determine the minimum FM conditions that need to be in place before financing to an incentive project is approved. Also, MINAM's PCU is conscious that incentive project beneficiary will need close accompanying during incentive project implementation and has considered the development of a simplified fiduciary guideline to facilitate incentive project implementation, including requirements for disbursements of funds, records keeping (i.e., receipts, invoices, etc.) and requirements for preparation of reports to document in-kind contributions, project expenditures and control execution of incentive project's budget.

Internal Audit. The MINAM's organizational structure includes an Internal Control Office (OCI), which reports to the General Controller's Office of Peru (CGR). OCI may play a role in ex-post internal control on project transactions. On the basis of the process and procedures mentioned above, the internal control environment for the project is reliable and provides an adequate control framework for processing project transactions. Detailed processes and procedures designed for the project will be reflected in the project operational manual to be ready before Appraisal.

Project Financial Reporting. MINAM's PCU will prepare project financial statements, using the Module of Project Execution (MEP) of SIAF from information obtained from SIAF system.

a) *At Project level.* *On a semiannual basis,* MINAM's PCU would prepare interim financial statements/reports (IFRs), issued not later than 45 days after the end of each calendar semester, following formats agreed with the Bank. The IFRs would include: i) sources and uses of funds, expenditures classified by project category, and cash balances; ii) a statement of investments by component and subcomponent, reporting the prior and current semester and the accumulated operations against ongoing plans, as well as footnotes explaining the important variances; iii) a incentive project Statement which shows amounts disbursed to communities, documented and outstanding balances, classified by age, to allow for timely monitoring; iv) explanatory notes to the financial statements; and Designated Account reconciliation reconciled with bank account statement. These reports would include credit and grant proceeds as well as local counterpart funds (contributions from incentive project's beneficiary in cash and in-kind). These reports would be prepared in local currency and US dollars. *On an annual basis,* MINAM's PCU will also prepare project financial statements

including cumulative figures, for the year end of the end of the calendar year. The final form of the project financial statements and complementary reports are still under review.

b) *At incentive project level.* Beneficiary will prepare simplified financial reports including: a) a report that reflects the funds received, expenditures classified by main activity and cash balance reconciled with bank account statement; b) report that reflects in kind contribution (form under definition). This information will be prepared by the them on a quarterly basis, when documenting expenditures and requesting new disbursement of funds. It is still necessary to discuss administrative and operational mechanisms to be followed by MINAM's PCU to measure, approve and record in-kind contributions from beneficiaries under incentive projects of Subcomponent 2.1.

Audit Arrangements. The audit report on project financial statements, including management letter should be submitted to the Bank, within six months of the end of each annual period. The audit should be conducted by an independent audit firm acceptable to the Bank and under terms of reference approved by the Bank. The selection of the audit firm should be performed through the General Audit Comptroller Office of Peru. Audit cost would be financed out of the grant proceeds (TBC). The scope of the audit would be defined by the audit terms of reference (TOR) approved by the Bank and based on project specific requirements and responding, as appropriate, to identified risks and compliance with agreed process and procedures, beneficiaries' responsibilities and a sample of incentive projects. Audit requirements would include the following: i) an opinion on the project financial statements (Statement of Sources and Uses of Funds, Statement of Cumulative Investments and notes to the financial statements). The auditors will also prepare a management letter regarding the internal controls of the project. In accordance with WB Access to information policy, the audited financial statements of the project will be made publicly available. In addition to these arrangements, the Bank's team will analyze the pertinence of requesting an external recurring audit at incentive project level.

Funds Flow and Disbursement Arrangements:
As in other projects in Peru, the Bank will disburse credit and grant proceeds using the disbursement methods of advance, reimbursement and direct payment. Under the advance method, MINAM's PCU will open a Designated Account -by financing source- in the Banco de la Nación. Funds deposited into each DA as advances, would follow Bank's disbursement policies and procedures described in the corresponding legal agreement and Disbursement and Financial Information Letter (DFIL). Funds deposited in each DA would be withdrawn to a local currency bank account, either to process payments for activities directly carried out by MINAM11 or to process advances of resources to incentive projects12 as shown in the diagram. It has been agreed the credit will finance incentive projects under Subcomponent 2.1 and the credit and grant will finance different activities under Component 1, 2 and 3, both on the basis of a parallel financing.

*Disbursement of funds from WB to MINAM's PCU***.** The ceiling for each Designated Account will be variable, where advances to the DAs would be made based on quarterly forecasts of planned project expenditures prepared by MINAM. To this end an interim financial report has been designed, and it would include: (i) three-month forecasts broken down by cost category (to request advances to each DA); and (ii) financial report (IFR) summarizing the sources, uses of funds, and advances to incentive projects with a reconciliation of DA accounts (to document expenditures against DA). Specific supporting documentation and interim financial report form will be established in the DFIL. Documentation of eligible expenditures paid out from each DA is expected to be at

[11] *Components 1, 2 (except 2.1) and 3*
[12] *Subcomponent 2.1*

least on a quarterly basis or earlier.

Disbursement from MINAM's PCU to Incentive Projects. The incentive project consists of incentive plans to indigenous communities and small forest users to promote the development of forest landscape investments and businesses. The project would comprise approximately 50 incentive plans and should not exceed US$150,000 per incentive project. Each incentive project representative will sign a financing agreement with MINAM's PCU including a financing plan that identifies the activities to be financed and disbursement schedule. The incentive project beneficiary will open an exclusive bank account to receive incentive project financing from the credit. Disbursement schedule to incentive project will be based on a lump sum and considering incentive project physical progress. Funds for the incentive project will be identified with a specific project code and account in SIAF. Counterpart funding (at least 20% in cash) will be also deposited in the exclusive bank account opened by the incentive project beneficiary. Payments to suppliers/contractors will be made from the exclusive bank account only for incentive project purposes. On a periodic basis (quarterly), the incentive project beneficiary will report to MINAM on the use of the funds, through a simplified financial report to be included in the project operational manual and would request a new disbursement of funds.

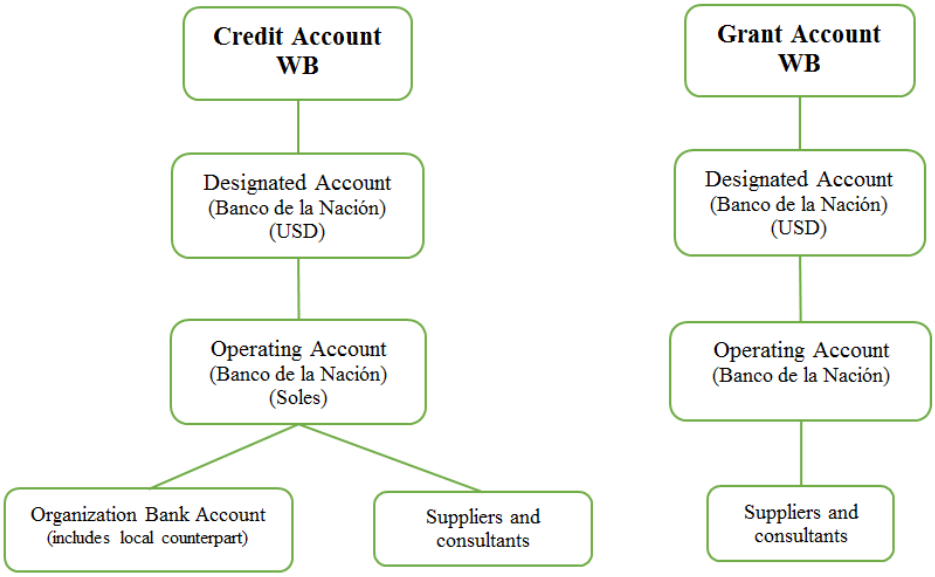
Table of Credit proceeds

Category	Amount of the Credit Amount (in U.S millions)	Percentage of Expenditures to be Financed (inclusive of taxes)
1. Incentive projects under Subcomponent 2.1	6.4	100%
TOTAL AMOUNT	6.4	

Table of Grant proceeds

Category	Amount of the Grant Amount (in U.S millions)	Percentage of Expenditures to be Financed (inclusive of taxes)
1. Consultant's services, Goods, Training, Non-consulting Services and Operating Costs under Component 1 and Subcomponent 2.2	4.6	100%
2. Consultant's services, Goods, Training, Non-consulting Services and Operating Costs under Component 3	1.2	100%
TOTAL AMOUNT	5.8	

Fund flow diagram follows:



Supervision. Financial Management supervision will be done using a risk based approach and include on-site and off-site supervision. On site supervision mission, will be carried out twice a year to the extent possible during the first year and later frequency will be calibrated based on the project performance. Off-site supervisions will comprise desk reviews of interim financial reports and audited financial statements.

Procurement ***(this section will be updated once the Procurement Plan and PPSD are completed)***

Procurement will be conducted according to the WB Group's Procurement Regulations for IPF Borrowers, issued in July 2016, for the supply of civil works, goods, consultants and non-consultants' services. The World Bank's Standard Procurement Documents will govern the procurement of World Bank-financed Open International Competitive Procurement. For procurement involving National Open Competitive Procurement, and other methods, the documents will be agreed with the Bank.

Procurement activities will be undertaken by the Ministry of Environment (MINAM) through its Executing Unit -No2 - Programa Nacional de Conservación de Bosques para la Mitigación del Cambio Climático- (PCU). Procurement activities under Sub component 2.2 will be implemented by the beneficiaries of incentive projects, following a Community-Driven Development approach.

A full assessment of the PCU's capacity to implement procurement activities was carried out to verify that the agreed arrangements have been fulfilled. The analysis concluded that the PCU has the adequate capacity to implement the procurement activities. However, it is necessary to complete the procurement team per the structure proposed in the project implementation arrangements. The Operational Manual will include a clear description of the procedures and responsibilities related to the procurement activities, including contract management.

Risk mitigation plan. The following table summarizes the mitigation actions proposed for the procurement-related

risks:

Table 5. Procurement improvement action plan

Risks - Areas for Improvement	Mitigation Actions	Responsible	When
A PPSD and a project procurement plan	A comprehensive PPSD and a detailed procurement has been completed.	PCU with the support of the Bank	Before negotiations
Responsibilities related to the procurement activities	Preparation of the Project Operational Manual with a clear definition of the processes, roles, and responsibilities of the staff related to the implementation of the procurement activities. With respect to the execution of the Sub Component 2.2 under CDD approach, the Project Operational Manual shall include: - Capacity assessment methodology for the beneficiaries, which will be conducted by the PCU. - Eligible expenditures - Procurement methods that will apply - Simplified Templates (procurement plan, request for quotations, contracts, etc.) - Supervision arrangements - Audit arrangements	PCU	Before negotiations
Lack of staff with expertise in procurement processes with the Bank's procedures	The PCU will strengthened the capacity of procurement team in accordance with the implementation arrangements of the project.	PCU	By effectiveness
Part of the procurement activities will be implemented through beneficiaries	The agreements to be signed between the PCU and the beneficiaries shall include a statement in which the beneficiaries agree that the procurement activities will be carried out in accordance with the procedures set forth in the Project Operational Manual. The PCU will conduct training to the beneficiaries	PCU	Project implementation

A Project Procurement Strategy for Development (PPSD) will be carried out and will identify the appropriate selection methods, market approach, and type of review by the World Bank, as follows:

Civil works, goods and non-consulting services will be procured following Request for Bids, Request for Quotations, and Direct Selection methods. Under the open international competitive procurement approach, the World Bank's Procurement Standard Documents will apply. When approaching the national market, the procurement documents will be agreed with the World Bank.

Consulting services will be procured following Quality and Cost-Based Selection, Fixed-Budget-Based Selection, Least-Cost-Based Selection, Quality-Based Selection, Consultant's-Qualification-Based Selection, Direct Selection, and Individual Consultants methods. Under the International Market Approach, the World Bank's Request for Proposals standard document will apply. When approaching the national market, the procurement documents will be agreed with the World Bank.

Procurement under Sub Component 2.2, will be conducted by the beneficiaries. The eligible expenditures will exclusively comprise (TO BE UPDATED BASED ON TECHNICAL DEFINITIONS) following the CDD approach, which will include RFQ and local competitive bidding. The PCU will be responsible for monitoring and supervising the procurement activities conducted by the beneficiaries.

The PCU will also prepare an acceptable Procurement Plan in the new Systematic Tracking of Exchanges in Procurement (STEP).

In addition to the prior review, supervision to be carried out from Bank offices, the capacity assessment of the implementing agencies has recommended annual supervision missions in the field to carry out the post review of procurement actions.

ANNEX 3: IMPLEMENTATION SUPPORT PLAN

COUNTRY : Peru
Integrated Forest Landscape Management Project in Atalaya, Ucayali

Strategy and Approach for Implementation Support

In order to facilitate the achievement of the PDO, the partnership between the Government and World Bank, and other stakeholders (e.g., civil society and indigenous peoples organizations, development partners) requires systematic and sustained implementation support, covering fiduciary, technical, and analytical aspects as well as coordination needs. Additionally, implementation support will have a strong focus on mitigation measures to address key risks identified.

Given the diversity of activities that the project supports, the task team will require a corresponding range of skills covering private sector development, market development, financial instruments, forestry management, sustainable land management, environment management, land titling and registration, general agriculture, and social development. The expertise should have sufficient versatility to cover operational and technical aspects of project activities, as well as policy issues. The team will also require periodic expertise in communications to support project dissemination activities. The team will additionally support MINAM in monitoring and evaluation of results, both in design and implementation, and making adjustments, as needed. Further, the multitude of activities by other partners on forest landscape management and climate change will necessitate frequent dialogue to maximize complementarities, and capture lessons learned, incorporate knowledge and information from analytical work. The task team will conduct missions on at least a bi-annual basis to review implementation progress, provide recommendations and guidance, and agree on the action plan/next steps. More frequent interaction will take place through videoconferences.

During implementation, the Bank will supervise the project's financial management arrangements in the following ways: (a) review the project's semiannual Interim Financial Reports and annual audited financial statements and any remedial action recommended in the auditor's Management Letter; and (b) during the Bank's on-site supervision missions, review the following key areas: (i) project accounting and internal control systems; (ii) budgeting and financial planning arrangements; (iii) disbursement management and financial flows, including counterpart funds, as applicable, and (iv) any incidence of corrupt practices involving project resources.

With respect to procurement, the Bank will undertake supervision through a combination of prior and post reviews. A dedicated procurement specialist will meet with clients (MINAM) on a regular basis to ensure understanding of procurement guidelines and procedures. Implementation support missions will be geared towards: (i) reviewing procurement documents; (ii) providing detailed guidance on Bank procurement guidelines; and (iii) monitoring of procurement processes against the detailed procurement plan and discussing changes to the procurement plan as needs arise.

On safeguards compliance, the team will provide support to ensure proper implementation and monitoring of the project's ESMF. The team will also provide support to ensure proper implementation of social aspects such as gender and citizen engagement. Regular monitoring will be done by the Bank's environmental and social development specialists.

Implementation Support Plan and Resource Requirements

The Implementation Support Plan will be reviewed at least once a year to ensure that it continues to meet the implementation support needs of the project (for instance, need for technical skills.

Time	Focus	Skills Needed	Resource Estimate	Partner Role
First twelve months	- Financial management: functioning accounting systems, training, ensuring funds flow arrangements for CDD - Procurement: contracting facilitation support, training - Establishing M&E system	- Financial management and procurement with experience in CDD - Sustainable forest management - Business development and marketing - Social development and participatory processes - Monitoring and evaluation	$80,000	
12-48 months	- Project implementation - Procurement - Financial Management - Safeguards compliance - M&E	- Financial management and procurement with experience in CDD - Sustainable forest management - Business development and marketing	$160,000	

		- Social development and participatory processes - Monitoring and evaluation	
48 months to completion	-Project Implementation - Procurement - Financial Management - Safeguards Compliance - M&E	- Financial management and procurement with experience in CDD - Sustainable forest management - Business development and marketing - Social development and participatory processes - Monitoring and evaluation	$80,000

Peru Integrated Forest Landscape Management Project in Atalaya, Ucayali

Annex 4. Economic Analysis

Introduction

1. **The significance of ecosystems is seldom adequately recognized in economic markets, government policies or land management practices.** The tendency to underestimate the value of ecosystems is related, for the most part, to their "public good" quality. Ecosystems and the services they provide are owned by all and, thus, protected by none. They generate shared benefits and so encourage free riding. Being publicly provided, they are under-priced or un-priced and thus tend to be over-used and abused. Since the benefits are shared and ownership is collective, there is a tendency to free-ride on contributions for the provision of these goods. Collectively, these features lead to pervasive degradation of ecosystems as a consequence of systemic market failures.[13]

2. **This annex presents an analysis of the Project's economic and financial benefits.** By estimating the (partial) values of changes to ecosystem services, one can compare the economic and financial benefits at different degrees of Project achievement by considering various interventions.[14,15]

Without – project situation

3. **For this analysis a "business-as-usual" (BAU) baseline case is used that assumes that future development trends follow those of the past and no changes in policies will take place.** This approach follows recommendations by the IPCC and the FAO (2011) and uses past trends to model the BAU- or without-project scenario. The approach is more sophisticated than a no change scenario but less complex than a future trends scenario would have been. The past trends scenario supposes that the changes in land use and practices will evolve in the same way as they have in the past. In developing countries land-use patterns are changing very quickly so it is more relevant to use recent past trends than long term past trends in this case. Therefore, this analysis uses recent trends instead of long-term trends are used because the recent changes seem to be more representative of the current evolution. In the BAU scenario it is assumed that the average deforestation rate of 0.5% is maintained.

Economic Benefits generated by the Project

4. **The Project would generate a diverse portfolio of economic benefits ranging from direct use-values to indirect, non-use values.** A direct use value is, for example, the use of forest products, while a commonly referred to indirect, non-use value is related to the mere existence of virgin tropical rain

[13] http://www.esa.org/education_diversity/pdfDocs/ecosystemservices.pdf

[14] Nunes, P.A.L.D. and J.C.J.M. van den Bergh. "Economic Valuation of Biodiversity: Sense or Nonsense?" *Ecological Economics*, 2001, vol. 39, issue 2, pp. 203-222.

[15] Ecosystem valuation is a difficult and controversial task, and economists have often been criticized for trying to put a "price tag" on nature. However, agencies in charge of protecting and managing natural resources must often make difficult spending decisions that involve tradeoffs in allocating resources. These types of decisions are economic decisions, and thus are based, either explicitly or implicitly, on society's values. Therefore, economic valuation can be useful, by providing a way to justify and set priorities for programs, policies, or actions that protect or restore ecosystems and their services. http://www.ecosystemvaluation.org/1-02.htm

forests. The transition from direct use to existence values is characterized by a decreasing tangibility of these values. The total value of tropical rainforest is comprised of the sum of a large number of different values from each value category.

5. **For this *ex-ante* economic analysis, only carbon storage benefits are used for the quantitative economic assessment of project feasibility.** These values have been chosen for the economic analysis due to the objectives of the Project and because these benefits are commonly referred to as the core environmental benefits of the Amazon basin rainforest. Accordingly, the associated economic benefits have been assessed in several studies that allow relying on a broad set of data for this economic assessment. Other economic benefits as listed in figure 1 are additional and will considered in the qualitative discussion of Project feasibility, especially if quantitative simulation results indicate a borderline economic feasibility of the Project.

Figure 1. Selected Environmental Values of Forest Resources

Use Values			Non-Use Values
1. Direct Use	**2. Indirect Use**	**3. Option**	**4. Existence**
Wood products (timber, fuel)	Watershed protection	Future direct and indirect uses	Biodiversity (wildlife)
Non-wood products (food,	Nutrient cycling		Culture, heritage
Educational, recreational & cultural uses	Air pollution reduction		Intrinsic worth
Human habitat	Micro-climatic regulation		Bequest value
Amenities (landscape)	Carbon storage		

Bishop (1999)

Quantification of Carbon Benefits

6. Given the existence of a wide variety of different geographical features in the Amazon forests, it is especially difficult to quantify its forest carbon stock. Estimates for density cover a range between 70 and 120 tons of carbon per hectare (tC/ha) (Rovere, 2000); 191 tC/ha (Fearnside, 1997); or 150 tC/ha (Andersen et al., 2001). Considering that in the transitional areas (with less biomass) deforestation is more pronounced, the latter probably represents the best average density of the region. A carbon stock of 100 tC/ha was assumed as the base value for tropical forest area.

7. **The quantification of carbon benefits applied for this economic analysis follows an extremely conservative approach.** It only assumes avoided carbon emission as a result from enhanced forest conversation compared to the "without project" situation, but it does not assume enhancing overall carbon stocks, e.g. in areas where currently degradation of forest may be present. As explained further below, these incremental carbon benefits are only modeled over a period of 15 years, although it can be expected that project impacts will last for a loner time period. Consequently, the absolute carbon benefits of this EA may differ from other carbon assessment undertaken for the project, which – most likely – will

exceed those modeled here. However, as this would only increase project benefits and economic returns of the project, it complies with the "threshold" approach taken for this analysis (compare also section (e) Methodology below).

8. **The valuation of project carbon benefits requires the assignment of a dollar value per ton of carbon. In the original economic analysis, the carbon price was aligned with the price of carbon on global carbon markets.** The reasoning was that as the assigned carbon value serves as a shadow price that should reflect a market value if all associated values could be marketed, recent carbon price developments can be used as a conservative proxy-measure to estimate a shadow price. In this regard, a baseline value of 7.7US$/tCO2 was assumed. In order to deviate as little as possible from the original analysis the price of one US$ was maintained. However, in this context, the market price of carbon does not reflect the social value of carbon storage of forests. Sensitivity analysis of a benefit value change of -20% to +20% of this value was applied.

9. **Carbon storage values of tropical forests are different from climate regulation benefits.** Climate regulation benefits are additional values provided by forest ecosystems. For a case study in Cameroon, TEEB (2009) states that associated values range between US$842 and US$2,265 per hectare per year (ha/year). Pearce *et al.* (2001) state values for the same service to range from US$360 to US$2,200 per ha/year. However, as the current assessment focuses on carbon storage benefits only, these values are not considered in the analysis.

Project costs

10. Project costs are approximated using the investment costs of the Project totaling US$12.2 million. A total Project duration of 15 years was assumed, with a linear disbursement of Project investments over the first 5 years following the disbursement projections as stated in the PAD.

Methodology

11. **A threshold analysis identifying the break-even point where the Project's net benefits equal net costs is applied.** Sensitivity analysis is applied for the key simulation parameters, notably discount rate, benefit assessment, and the inclusion or exclusion of water body-related benefits. Quantitative results will be contrasted with qualitative benefits to arrive at overall project feasibility.

12. **A 15-year period is assumed to assess the economic feasibility of the Project.** While Project costs are only assumed for the first five years of the Project, according to the projected disbursements, benefits are assumed to be generated beyond the lifetime of the Project. To harmonize project benefits and costs through the calculation of a present value of costs and benefits, a discount rate needs to be determined. Given the often significant impact of the choice of the discount rate on economic analysis outcomes, and the common difficulty in determining discount rates reflecting economic discounting behavior, a sensitivity analysis is applied considering discount rates of 5%, 10%, 15%, and 20%.

13. **In addition to testing the impact of different discount rates on simulation results, other sensitivity analyses are applied that account for possible variations in key input parameters to test the robustness of simulation results.** Although all assumed benefit values are already lower-bound

estimations, changing Project impacts are simulated by applying increment variations in the benefit value of -20%, -10%, +10%, and +20% for the "with-" and the "without-" Project situation

Results

Simulation results are summarized, which represent different deforestation increments between the "with-" and "without-" Project scenario.

Sensitivity Analyses for Net Present Value and Economic Rate of Return					
	Benefit Changes				
Discount Rate	**-20%**	**-10%**	**0%**	**10%**	**20%**
5%	1,232,356	2,718,356	4,205,087	5,691,453	7,177,819
10%	-1,651,325	-682,742	285,842	1,254,425	2,223,008
15%	-3,080,597	-2,420,688	-1,760,778	-1,100,869	-440,960
20%	-3,744,924	-3,276,680	-2,808,437	-2,340,194	-1,871,951
ERR	*5.83%*	*7.48%*	*9.02%*	*10.46%*	*11.81%*

*NPV: all values stated in US$ million.

Overall, results show positive simulation outcomes for the Project, thus confirming economic feasibility. Only for situations in which combined input parameters are set at very "extreme" values in terms of Project impacts, coupled with higher-bound discount rates that reduce future project impacts, does the analysis yield negative results. For example, this is the case at 15% discount rate (and higher), a benefit reduction of 10% and more.

Discussion

This *ex-ante* economic efficiency analysis conducted for the Project results in positive economic impacts and supports the Project from an economic viewpoint. The results of the quantitative simulations are also robust across a range of sensitivity analyses assuming significant changes in discount rates and key simulation parameters notably benefit vale parameters. Throughout the analysis, it was emphasized that benefit assumptions were always done conservatively, using lower-bound values, especially as regards non-market benefits, such as watershed and carbon benefits, but also as regards existence values. Especially absolute carbon benefits estimated in tCOe for the project are likely to be under- rather than overestimations, which is further magnified by applying very low assumptions for the opportunity costs of carbon and not including broader climate regulation benefit values. All of these would have resulted in significantly higher simulation results across all assumed parameter changes, hence underlying the robustness of the economic rationale of the project even in the undesired scenarios where project benefits would have to be downgraded in the course of project implementation.

Analyzing the Project impacts in the broader economic context of Peru implies that the Project will pilot and catalyze important development momentum for the sustainable management of natural resources in the Amazon region beyond the specific project. Given the increasing pressure on natural resources

(e.g. though ranching, mining, and population pressure) and growing ecosystem stress through climate change, the Project investments and associated achievements are highly relevant in today's context. The existence and ecosystem values generated by the Amazon rainforest are of outmost importance for the region's economic, social, and environmental stability and incremental for global, regional, and local weather and climate regulation.

Though not included in the assessment, probably one of the most important impacts of the Project relate to the capacity building of government institutions at central and regional levels. Enhanced capacity of government institutions will improve public service delivery, thus leading to numerous benefits and positive economic impacts. Given the ongoing challenges faced in natural resources management—not least due to climate change—improvements in the functioning of public institutions cannot be underestimated, particularly in a "with-" and "without-" Project scenario. Enhanced functioning of government institutions should also facilitate the implementation of future projects and investments that can build on this Project's envisioned achievements. Similar considerations apply to knowledge generation and management to be achieved by the Project.

In summary, based on this economic evaluation, it is concluded that the Project will result in significant positive development impacts. The consideration of only a few of those impacts in the quantitative analysis sufficed to yield positive economic results. The assessment focused only on part of the area the Project is anticipated to create impacts and did not include other secondary impacts, such as broader capacity building. This demonstrates that investments in biodiversity conservation in the Amazon rainforest contribute significantly to the economic development ambitions of countries such as Peru, since they generate and safeguard important direct environmental services that are important at local, regional, and global levels.

Global project benefits. Preserving forests in Atalaya will generate both biodiversity and climate mitigation benefits. While biodiversity benefits cannot be easily quantified, climate mitigation benefits can, based on the reduction of deforestation and, hence, of emissions of GHGs. At a global level, deforestation is estimated to contribute about 15% of total GHG emissions.16

[16] For a review of the most recent data on emissions from deforestation, see van der Werf, G.R., D.C. Morton, R.S. DeFries, J.G.J. Olivier, P.S. Kasibhatla, R.B. Jackson, G.J. Collatz, and J.T. Randerson. 2009. "CO_2 emissions from forest loss." *Nature Geoscience*, **2**(11):737–738. Earlier estimates placed emissions from deforestation at around 20 percent of total emissions.

Annex 5: Drivers of Deforestation and Theory of Change

Peruvian Amazon: About 60% of Peru's land mass is covered by the Amazon forest, which expands over 66 million ha in Peru alone and constitutes 90% of all forest in the country. The entire Amazon ecosystem extends over nine countries, with the Peruvian portion being 15% of this largest contiguous forest system in the world. These large tracts of primary forest provide a wealth of global and local ecosystem services, including biodiversity conservation, carbon storage, water services, and climate regulation.

The Peruvian Amazon is home to 1,200 indigenous communities or 330,000 indigenous peoples, who live in collectives of families comprising on average 20-30 families or around 130 people that are linked by language and culture, and inhabit more than 11 million ha. The main economic activities are fishing, corn and rice cultivation, as well as wood extraction. Socio-economic indicators for indigenous communities are well below the national average with high rates of poverty, illiteracy, etc. Major drivers include illegal logging, small-scale as well as commercial agricultural expansion, and – in some areas - gold mining (more on drivers further below).

Land tenure: Economic development and tenure security have been interlinked themes in the Peruvian government's approach for several decades and continue being the main focus today. Over time three laws have guided titling of indigenous communities in Peru:

i) the 1974 Las of the Agricultural Development of Indigenous communities of the Rainforest and Rainforest Border, which provided a legal basis for granting indigenous communities rights to land;

ii) the 1978 Law of Indigenous Communities stets out detailed procedures for granting communities legal title by first recognizing communities as a legal entity and then awarding title; and

iii) the International Labor Organization's (ILO) Convention 169 on Indigenous and Tribal Peoples in Independent Countries, which Peru ratified in 1994. As energy exploration expanded in the Amazon in the 1990, the government granted formal title to several indigenous communities to comply with the convention.

However, the process of titling is complex, costly, and lengthy as it involves several legal, bureaucratic and technical steps starting with a desk review phase involving multiple public entities, followed by a phase of field work with community consultations and physical demarcation of the community's territory with stone markers, as well as a classification of land for different use according to suitability for agriculture, forestry, and forest protection, and subsequently a processing phase during which maps and field reports are prepared by the Regional Agrarian Agency of the Ministry of Agriculture, which need to be approved by the community. An important aspect of the titling process is in Peru that land is categorized as per suitability for different land use, i.e. suitable for agriculture and ranching, suitable for forestry. The community owns only the land suitable for agriculture and ranching, while the state owns the land suitable for forestry, but cedes the rights to the community.

Drivers of Deforestation: Thus far, no comprehensive, spatially explicit assessment of the drivers of deforestation and forest degradation has been completed for the entire Peruvian Amazon. Nonetheless, existing case studies show that shifting cultivation is a principal driver as small-scale agriculture tends to rotate around due to shallow, acidic, and quickly depleted of soil nutrients. Illegal logging is often conducted by small- and medium-scale independent contractors who harvest timber in indigenous

communities. There are several incentives for small contractors to target indigenous lands, which include proximity to river transport (as indigenous land is often alongside rivers), and availability of high-value standing timber (as many forest concessions have already undergone selective logging for high value species, while indigenous lands have not yet).

Because most of the logging in the Peruvian Amazon is selective, its direct effects on deforestation are mostly limited to associated roads, skid trails, and tree-fall gaps. However, opening up access with roads is often an indirect cause for more direct drivers to follow, such as non-commercial and commercial agriculture.

Forest Governance: In 2000, a new Forest and Wildlife Law was adopted in Peru and aimed to promote sustainable timber extraction by designating new and existing institutions as forest management units requiring these institutions to obtain permits and authorization defining the scope and nature of their extractive activities, and setting up a system for enforcing compliance with these permits and authorizations. The new law mainly offers two options for forest management: large (5,000-40,000 ha), new, long-term (up to 40 years) forest concessions that are awarded through a public tender process and smaller, existing management units with title, including indigenous communities, small private land holders, and non-indigenous river communities. Both types need to draw up and obtain approval for general forest management plans, which identify the total quantity and type of trees to be harvested over a 5-year period and more specific annual operating plans identifying the exact location, size, and type of individual trees to be harvested each year.

Permits for extraction are expected to align with the annual operating plans, as well as permits for timber transportation to markets. However, due to the large expanse of the Peruvian Amazon, timber extraction is rarely monitored at site by the only 29 local offices from the General Directorate of Forestry and Wildlife responsible for monitoring and enforcement. Instead, inspection mainly happens along checkpoints on main transportation routes, such as the river to Pucallpa, the main processing and export center in the Ucayali region.

Theory of Change: The following describes the theory of change and causal chain between the proposed project interventions and the ultimate project impact on forest conservation.

Awarding land title to indigenous communities entails many steps as described above, including, first a community dialogue internally and subsequently with other stakeholders involved in the process, such as government agencies and NGOs that may assist in the titling process, and finally a physical demarcation process that awards the boundaries to land title, before the bureaucratic process of awarding title. There are several outcomes of titling indigenous communities that lead to reduced deforestation and forest degradation:

1) While regulations prohibit timber harvesting without permit, regulatory monitoring and enforcement are weak. Illegal logging and clearing happen particularly in areas were land tenure is not well defined as the culpability can’t be easily pinned on anyone. Further, without legal title, a community managing a forest area don’t have the legal backing to register a formal complaint with regulators about illegal encroachment to their lands. Titling indigenous communities that manage their forests can address both of these problems as it enhances formal regulatory pressure and accountability on those who are engaging in illegal deforestation.
2) Similar to improved formal regulatory pressure, informal regulatory pressure can equally reduce deforestation, as NGOs and the press can enhance information pressure on community leaders and by giving communities legal standing to complain to NGOs and other non-state actors about illegal activities.

3) Through the structured titling process, community governance is often enhanced. For example, the community meetings over the titling process can also enhance internal community dialogue and consensus on management of other areas, including effective forest management. Furthermore, the dialogue between the community and external stakeholders involved in the titling process (public entities, NGOs, etc.) can enhance community governance capacity. Finally, the physical demarcation can help focus community governance related to forest resources management.
4) Since titling is an iterative process of interactions between government entities and the community, it can have positive effects on community access to other support and resources, including eligibility to government programs, such as conservation cash transfers as well as support for livelihood activities, which in turn can reduce deforestation pressure.
5) Likewise, titling can also facilitate interactions between communities and private sector entities such as creditors as well as input providers (i.e. for technical assistance on a for coffee or cacao producers) and make it easier for communities to access credit for investments to intensify agriculture or improve silviculture.
6) Along the same lines, titling can enhance indigenous communities' livelihoods, thus reducing pressure on forests. Through better internal governance, better interactions with public and non-public actors, and thus better access to technical as well as financial services, livelihoods can be improved, production systems intensified, thus reducing communities' reliance on shifting agriculture or selling off timber to timber harvesting operators.

Research Evidence: Recent research in the Peruvian Amazon (see Allen Blackman et all, 2017) confirms the above theory of change. Results show that titling significantly reduces both forest degradation (disturbance) and deforestation (clearing) – at least in the short term - when formal land titles are awarded. More specifically, *Blackman et all* analyzed the effect of recent land titling between 2002-05 on forest impact using satellite imagery and found that titling reduced deforestation by more than three-quarters and degradation by about two-thirds in a 2-year window from the year the title was awarded, suggesting clearly that awarding formal land title to indigenous can advance forest conservation. The research underlines that the improved local governance improvements are critical intermediary impacts contributing to reduced deforestation, as indirect impact through improved livelihood activities only would have presumably resulted in a less immediate effect on deforestation with more of a lag between titling and impact on forest cover change.
These results support ongoing trends in developing countries that are increasingly decentralizing forest governance by granting indigenous groups and other local communities formal legal title to land. By one estimate, almost a third of all developing country forests are now managed by local communities, which is well over twice the amount currently found in protected areas. In Latin America and the Caribbean countries alone, title to at least 100 million ha of forest have been awarded to local communities until 2000, with trends continuing thereafter (but not complete data available).

On the flipside, weak property rights can promote deforestation and forest degradation in several ways; e.g. by enabling landless migrants to colonize frontier forest areas (as is also seen in Atalaya with migration from the Andes), by undermining community forest management with actions from powerful private sector actors, by tipping land user's preferences for productive activities with quick but often unsustainable returns (clear cut), and by creating incentives for squatters to clear forests to establish

agricultural user rights and/or to block competing land right claims by other actors, and by preventing land users from participating in payments for environmental services schemes. In principle, granting title to indigenous communities can mitigate these challenges.