FOREST MANAGEMENT TO REDUCE DEFORESTATION AND DEGRADATION IN SHIPIBO CONIBO AND CACATAIBO INDIGENOUS COMMUNITIES OF UCAYALI REGION

Document Prepared by Association for Research and Integral Development – AIDER

Project Title	*Forest Management to reduce deforestation and degradation in Shipibo Conibo and Cacataibo indigenous communities of Ucayali region*
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CONTENT

1 PROJECT DETAILS

1.1 Summary Description of the Project

The project is developed in 7 native communities belonging to the Shipibo Conibo and Cacataibo ethnicity, which grouped occupy an area of 127,004.0 hectares of forest. This communities are politically located in the district of Irazola, Masisea, Calleria and Iparia in Padre Abad and Coronel Portillo provinces in the department and region of Ucayali, and in the district of Codo de Pozuzo, Puerto Inca and Tornavista in Puerto Inca province in the department and region of Huánuco.

The purpose of the project is to conserve the forests of these communities against the deforestation and degradation advance. It is proposed to reduce the pressure to change the land use in the project area with 4 components: proper use of communal land, capacity building for the management of natural resources, project finance and market linkages and finally strategic alliances. These actions are intended to prevent the advance of deforestation. To this will be performed partnerships and permanent coordinations with institutions that currently are conducting conservation activities in the area.

Also, the system control and monitoring of communities will be strengthened through the establishment and operation of a community monitoring, representing a strategy of community participation.

With these actions, the project hopes to avoid an annual average net emissions of **564,818.5 tCO_2-e** according to the reference scenario projected for the first 10 years.

The project includes benefits for the population involved as well as for the conservation of biodiversity, beyond the benefits of reducing GHG emissions. The project has applied the standards of Climate, Community & Biodiversity Association (CCBA).

1.2 Sectoral Scope and Project Type

Sectoral Scope 14 - Agriculture, Forestry and Other Land Use.

AFOLU project category: Reducing Emissions from Deforestation and Degradation (REDD+).

Type of activity: Avoiding Unplanned Deforestation and Degradation (AUDD)

1.3 Project Proponent

Under the framework of the RED-PD 033/11 Rev.3 (F) project "Enhancement of ecosystem services in managed forests of 7 native communities in the Ucayali region", the PDD was elaborated by Association for Research and Integral Development – AIDER with funding of the INTERNATIONAL TROPICAL TIMBER ORGANIZATION (ITTO). This project was canalized by the Peruvian government under the General Forestry and Wildlife Direction, who also facilitated the management.

The 7 native communities and the NGO Association for Research and Integral Development – AIDER would be the project proponents.

Table 1. Description of the project proponents

Organization name	Calleria Native Community
Contact person	Carolina Barbarán Reategui
Title	Communal chief
Address	Callerio River
Telephone	(+51 61) 81-1495
Email	-

Organization name	Curiaca Native Community
Contact person	Jorge Vásquez Barbarán
Title	communal chief
Address	Ucayali River - Caco Brook
Telephone	(+51 61) 811497 / 813875
Email	-

Organization name	Sinchi Roca Native Community
Contact person	Javier Panduro Mera
Title	Communal chief
Address	San Alejandro River
Telephone	-
Email	-

Organization name	Pueblo Nuevo Native Community
Contact person	Coquito Elmer Silvano Linares
Title	Communal chief
Address	Ucayali River - Quebrada Caco
Telephone	(51 61) 84-0004
Email	-

Organization name	Puerto Nuevo Native Community
Contact person	Merino Agreda Torres
Title	Communal chief
Address	San Alejandro River
Telephone	-
Email	-

Organization name	Flor de Ucayali Native Community
Contact person	Daniel Lomas Guimaraes
Title	Communal chief
Address	Ucayali River
Telephone	(+51 61) 968 170 451
Email	-

Organization name	Roya Native Community
Contact person	Pablo Maynas Rengifo
Title	Communal chief
Address	Ucayali River
Telephone	-
Email	-

Organization name	Association for Research and Integral Development - AIDER
Contact person	Jaime Nalvarte Armas
Title	Executive director
Address	Dirección: Av. Jorge Basadre 180 Oficina 6 – San Isidro. Lima, Perú
Telephone	Teléfono: (511) 421 5835
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1.4 Other Entities Involved in the Project

In the case of this project AIDER and the 7 Native Communities of the Department of Ucayali, are the only institutions involved.

1.5 Project Start Date

The project start date is July 1, 2010, date on which the activity of community forest management starts, activity corresponding to component "Appropriate environmental use of communal land" of the REDD + project strategy.

1.6 Project Crediting Period

Project crediting period: July 1, 2010 to June 30, 2030, a total of 20 years.

The baseline will be renewed every 10 years after the start of the project. The first reduction period of quantified GHG emissions will be of 10 years (beginning July 1, 2010 to June 30, 2020).

1.7 Project Scale and Estimated GHG Emission Reductions or Removals

Project Scale	
Project	
Large project	√

The reduction of GHG emission estimated annually and generated by the project are shown in the following table and are only for the first reference period 2010-2020 (10 years).

Years	Estimated GHG emission reductions or removals (tCO_2e)
2010-2011	325,198.9
2011-2012	257,163.3
2012-2013	323,780.4
2013-2014	419,690.5
2014-2015	453,659.6
2015-2016	548,493.9
2016-2017	731,077.5
2017-2018	783,397.2
2018-2019	854,590.2
2019-2020	951,133.2
Total estimated ERs	**5,648,184.7**
Total number of crediting years	**10**
Average annual ERs	**564,818.5**

1.8 Description of the Project Activity

At the time that the PDD was elaborated, there did not exist yet a national or regional regulation that helps to standardize technical aspects of REDD+, only exist initiatives from part of the national state and also sub-regional initiatives that are still in development processes. The project proponents are committed to follow the national and sub-national policies and the different regulations and/or control standards that can be developed in the future. Also the project is not located within a jurisdictional REDD+ program.

The project will achieve avoid unplanned deforestation, which will be presented in the reference scenario through the implementation of the REDD+ strategy; which is comprised four components described below:

- ✓ **Suitable environmental use of communal land:** Having as base the microzoning of the communal land and the land-use regulation of it, this component will promote economic and food security activities compatibles with the appropriate use of the communal territories, taking into account the capabilities and activities of interest of the identified deforestation agents.

  This way the displacement of activities will be significantly reduced, and production of leakage potentially attributable to REDD+. For this component has been established the following activities:

  - Participatory realization of the microzoning of the 7 native communities, 1:20,000 scale. Land use and vegetation.
  - Develop agroforestry systems, silvopastoral and good livestock practices.
  - Improve traditional agricultural areas in association with temporary and permanent crops.
  - Improve and implement agricultural techniques with purposes of food and commercial security.
  - Promote community forest management (timber and non-timber).
  - Forest enrichment with forest species.
  - Develop ecological tourism activities in communities with potential.

- ✓ **Creating capabilities for administration of natural resources:** Beign the REDD+ project a long-term process, is key for the sustainability of the REDD+ strategy the development of the capacities of the community people; because they are who will be responsible for the execution of the production and food security activities, the distribution of benefits, and the responsibility to achieve the objectives of the REDD+ project.

  This component will have different activities ranging from awareness to governance; all focused to achieve in the community people skills for proper management of their natural resources. The activities to be developed are:

- Design and implement the participatory training plan and manuals about productive and environmental aspects of the communities based in the methodology of field schools.

- Implement a communication strategy to sensitize the population on climate change and the conservation and management of natural resources (fire control, WPS), others.

- Increased organizational and administrative capacity of the authorities and community members in the management of natural resources.

- Promotion of forestry and local governance in the 07 native communities for the proper administration of natural resources.

- Strengthen indigenous organizations to the understanding of REDD+ and WPS.

- Train the key stakeholders in preventive measures to reduce illegal loggers / mining and coca in communal boundaries.

- Reactivate and implement the community groups for the control and surveillance of communal land and natural resources.

- Border establishment and placing of milestones in communal boundaries.

- Promote the solution of intercommunal conflicts and within the community for the use of communal land and natural resources.

✓ **Project finance and articulation with the market:** This component will have activities orientated to the search of funidng, througth the articulation of the fair markets, strengthen financial capacity (credit search, formulation of productive projects, etc.), and the associativity with companies and/or community organizations. For this have been established the following activities:

- Articulate agricultural and forest products in the local and national market.

- Strengthen the financial capacity of organized groups for management.

- Organize groups of producers and associate them.

✓ **Technical assistance and supervision in Native Communities by the State:** Finally and to complement the search of sustainability in other activities of the REDD+ strategy; with this component will be looked to achieve strategic alliances between the communities and the state, to generate technical cooperation and training.

In this way, the state will not only support the development of strategic activities, but also, will get involved in the implementation of the REDD+ project, implemented by 7 Native Communities. Under this context the following activities will be developed:

- Generatre strategic alliances between communities and the state to strengthen the management of natural resources.

- Train the community through the intervention of representatives of the state.

Through the joint implementation of these 4 components, the pressure by land and resources use on the project area will be reduced, producing benefits for the community families; also for biodiversity (the benefits for local people and biodiversity have been developed according to the standards of the Climate, Community & Biodiversity Association).

In the Annex II "REDD+ srategy for the Native Communities of Calleria, Curiaca, Flor de Ucayali, Pueblo Nuevo, Puerto Nuevo, Sinchiroca and Roya" is described each activity established within the components of each native community.

In Table 2, project activities during the crediting period of the project (2010-2030) are described.

Table 2. Timeline of the project

Activities	Years																			
	2010-2011	**2011-2012**	**2012-2013**	**2013-2014**	**2014-2015**	**2015-2016**	**2016-2017**	**2017-2018**	**2018-2019**	**2019-2020**	**2020-2021**	**2021-2022**	**2022-2023**	**2023-2024**	**2024-2025**	**2025-2026**	**2026-2027**	**2027-2028**	**2028-2029**	**2029-2030**
Carbon																				
Startrig date	x																			
Validation				x																
Registry				x																
Monitoring		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Reassessment of the baseline scenario and VCS-PD update																				
Final Date																				
Component 1. Suitable environmental use of communal territory																				
1.1 Participatory realization of the microzoning of the 7 native communities, 1:20,000 scale. Land use and vegetation.				start	x															
1.2 Develop agroforestry systems, silvopastoral and good livestock practices.				start		x	x	x	x	x	x	x	x	x			x			
1.3 Improve traditional agricultural areas in association with temporary and permanent crops.					start	x					x					x				
1.4 Improve and implement agricultural techniques with purposes of food and commercial security.					start	x	x		x	x		x	x		x			x		
1.5 Promote community forest management (timber and non-timber).	start	x	x	x	x	x	x	x	x	x	x	x	x	x						
1.6 Forest enrichment with forest species.				start	x		x		x		x		x		x					
1.7 Develop ecological tourism activities in communities with potential.					start	x		x												
Component 2. Creating management capabilities of Natural Resources																				

2.1 Design and implement the participatory training plan and manuals about productive and environmental aspects of the communities based in the methodology of field schools.					start	x				x					x					
2.2 Implement a communication strategy to raise awareness on climate change and the conservation and management of natural resources (fire control, WPS), others.					start	x				x					x					
2.3 Increased organizational and administrative capacity of the authorities and community members in the management of natural resources.				start		x					x					x				
2.4 Promotion of forestry and local governance in the 07 native communities for the proper administration of natural resources.				start			x			x			x			x			x	
2.5 Strengthen indigenous organizations to the understanding of REDD+ and WPS.				start	x															
2.6 Train the key stakeholders in preventive measures to reduce illegal loggers / mining and coca in communal boundaries.					start	x					x					x				
2.7 Reactivate and implement the community groups for the control and surveillance of communal land and natural resources.				start	x	x	x	x	x	x	x	x	x							
2.8 Border establishment and placing of milestones in communal boundaries.				start			x			x			x			x			x	
2.9 Promote the solution of intercommunal conflicts and within the community for the use of communal land and natural resources.				start					x											
Component 3. Project finance and market linkages																				
3.1 Articulate agricultural and forest products in the local and national market.					start	x		x						x						
3.1 Strengthen the financial capacity of organized groups for management.						start	x	x						x						
3.1 Organize groups of producers and partners.					start									x						
Component 4. Technical assistance and supervision in Native Communities by the State																				

4.1 Generatre strategic alliances between communities and the state to strengthen the management of natural resources.					start															
4.1 Train the community through the intervention of representatives of the state.					start	x	x		x	x		x	x			x				

1.9 Project Location

The project area is politically located in the Irazola, Masisea, Calleria and Iparia districts, in Padre Abad and Coronel Portillo provinces in the department and region of Ucayali, and also in the districts of Codo de Pozuzo, Puerto Inca and Tornavista, in Puerto Inca province in the department and region of Huánuco. Comprising an area of 127,004.0 ha of forests in the 7 Native Communities. In the Annex VI are detailed the coordinates and points that delimits the project area and the exclusion within the same area. There are also in a KML format.

The location of the project boundaries was conducted using Landsat 5 TM images and GPS Garmin Oregon 550 equipment. The GPS equipment error is ± 3 m.

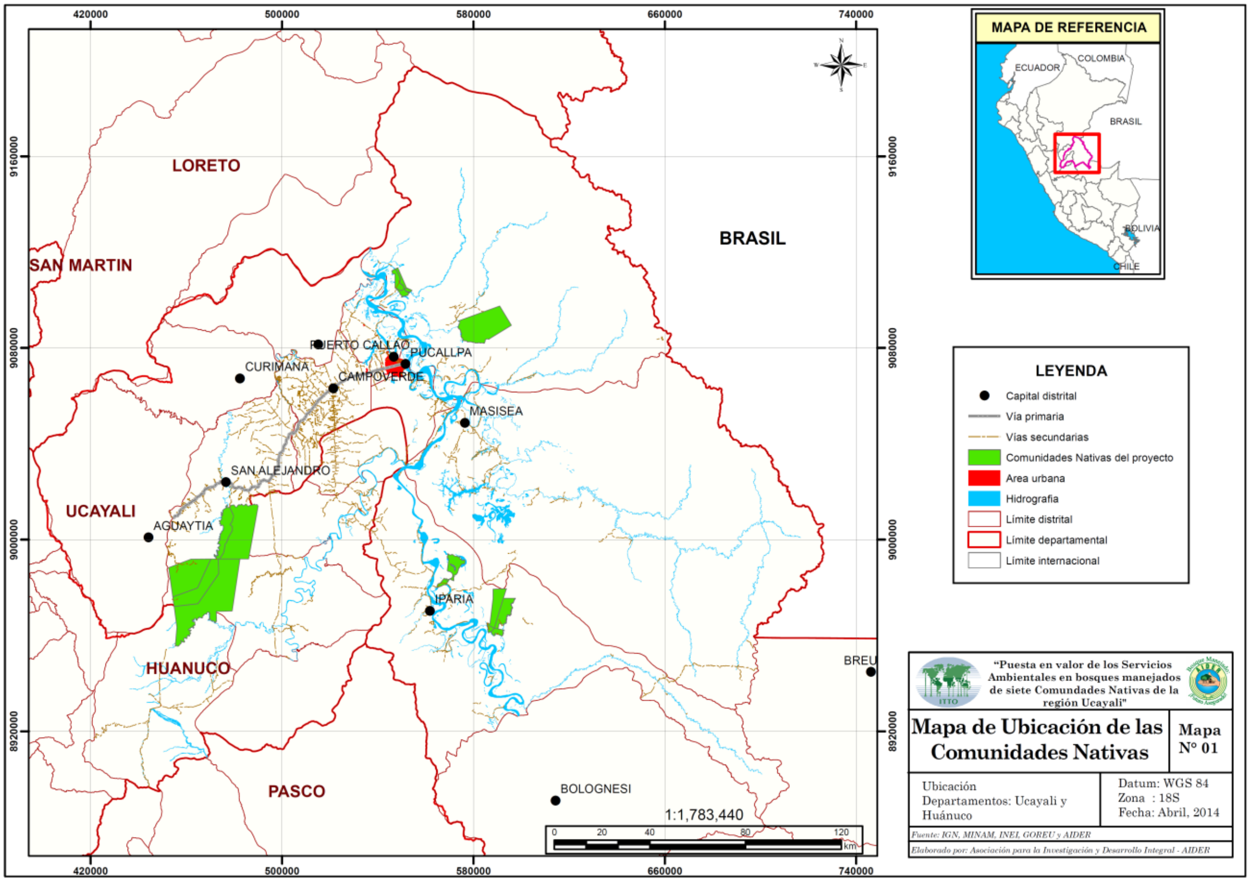

Figure 1. Map of geographical location area of the 7 native communities involved in the project

Table 3. Project areas for each native community

Native Community	Total surface (he)
Callería	3,718.8
Curiaca	5,901.9
Flor de Ucayali	19,650.2
Pueblo Nuevo del Caco	4,422.4
Puerto Nuevo	61,517.5
Roya	4,165.8
Sinchi Roca	27,627.4
Total	**127,004.0**

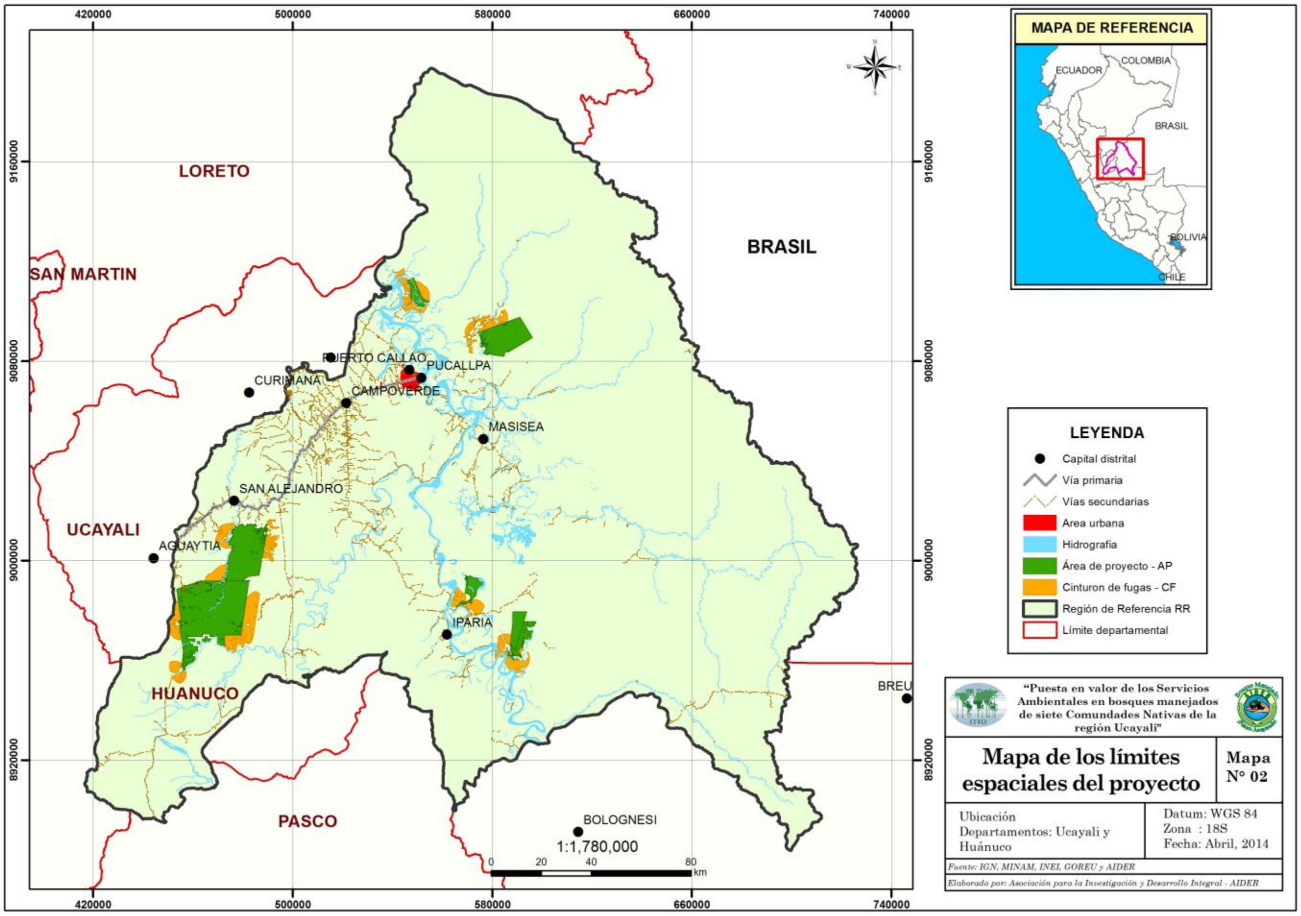

Figure 2. Map of the project area boundaries

1.10 Prior Conditions to the Project Initiation

In Peru, deforestation is driven by various extractive activities, being the primary ones the migratory agriculture, illegal logging and gold alluvial minning. Forest deforestation and degradation processes are drived by different variables, one of them opportunity cost, which promotes change from the forest use to agricultural to generate more incomes, being the biggest threat for forest conservation.

The present project is located in the forest of 7 native communities, in Ucayali and Huanuco regions. From the 100% of the project area surface, 68% is on Ucayali region and the 32% in Huanuco. Prior to the start of the project, the area was being deforested and degradated as a product of the diferent activities which had existed. The identified activities were migratory agriculture, illegal logging and livestock. For the case of migratory agriculture in Ucayali region are mainly originary settlers from any other place from the Amazonian lowlands and parts of the highest parts of the Andes. Timber illegal extraction is made by illegal loggers, which are usually the first to arrive in search of high-value timber to be extracted. Sometimes the formal permissions are requested before the resources are exploited and sometimes force is used and acts of violence are common.

Livestock is principally realized by settlers of Andean origins coming from the zones of Huanuco, Ayachuco, Junín and Tingo Maria. Migartion of this settler groups have been identified in the last 5 years. Systems of the amazon livestock production in general are characterized for the crussed cattle with diferents levels of crossbreed between criollo, cebúa and european. The food is mainly based on the use of feed by grazing (natural grass or "urco toro") called extensive system, for which slash and burn tracts of forest.

The establishment of pastures for livestock is characterized by the cultivation of native grasses and *Brachiaria* sp. Within districts of Tournavista, Honoria, Puerto Inca and Codo del Pozuzo that belong to the department of Huanuco, the establishment of pasture of the variety *Brachiaria* sp., is used to feed livestock and is one of the major crops that has been considerable increase in recent years.

1.10.1. Biophysical aspects

a. Climate, temperature and precipitation

The climate is warm, humid and rainy for most of the year, only in June appears a special weather phenomenon called "fríos de San Juan" where the temperature quickly goes down for a few days. Its annual precipitacion average reaches 2000mm which varies throughout the year, presenting relatively dry periods in July and August, and a heavy rainfall between November and March. The temperature ranges between 19.7 and 30.6 ºC, the highest recorded between May and August and minimum between December and March.

b. Hydrography

The department is crossed by numerous rivers which conform several watersheds with different volumes of water, which in some cases form the river traffic inside the región (Ucayali

River and tributaries) and in others, only to the outside of the región (Alto Huallaga, Purus and Alto Yurúa rivers).

The Ucayali River is flowing with an average speed of three knots, has a length of 1,771 km and a variable width; all the way has numerous islands and islets; follows a sinous course from south to north, and its waters are murky because of the sediments presence.

c. Ecology

According to Mapa Ecológico of Peru (INRENA 1994), the reference region has the following life zones:

Table 4. Life zones of the reference region

Living zones
Tropical Premontane rain forest (transition to Tropical wet forest)
Tropical Premontane moist forest (transition to Tropical moist forest)
Tropical moist forest
Tropical moist forest (transition to Tropical Premontane wet forest)
Tropical moist forest (transition to Tropical Premontane moist forest)
Tropical Montane wet forest
Tropical Premontane wet forest
Tropical Premontane wet forest (transition to Tropical moist forest)
Tropical Premontane wet forest (transition to Tropical Premontane rain forest)
Tropical wet forest
Tropical wet forest (transition to Tropical Premontane rain forest)
Tropical Lower Montane rain forest
Tropical Montane rain forest
Tropical Premontane rain forest

d. Biological diversity

For the biodiversity analysis there has been compiling different studies as: biodiversity registers of the area, Management Plans of the Native Communities, monitoring programs of activities, Environmental Impact Studies and documents generated by the Economic Ecological Zoning of the Ucayali region. To this, was added a fieldwork to gather information, interviews and analysis of the information obtained. All this resulted in the registration of flora and fauna in the project area, recording a total of 166 species of flora, primarily arboreal and with respect to wildlife, has reported a total of 257 species, with 55 amphibians, 44 reptiles, 57 mammals and 101 birds.

From the total recorded species of flora and fauna have been identified those that are in threat. Tables 5 and 6 shows the main species of endangered flora and fauna in the project area.

Table 5. Main species of threatened flora in the project area

SPECIES	FAMILY	D.S 043- 2006 AG
Fabaceae	*Amburana cearensis*	Vulnerable
Arecaceae	*Astrocaryum huicungo*	Near threatened
Meliaceae	Cedrela odorata	Vulnerable
Bombacaceae	*Ceiba samauma*	Near threatened
Cannabaceae	*Celtis iguanae*	En Peligro Critico
Moraceae	*Clarisia biflora*	Near threatened
Moraceae	*Clarisia racemosa*	Near threatened
Fabaceae	*Copaifera paupera*	Vulnerable
Euphorbiaceae	*Croton draconoides*	Near threatened
Sapotaceae	*Manilkara bidentata*	Vulnerable
Celastraceae	*Maytenus macrocarpa*	Near threatened
Bignoniaceae	*Tabebuia incana*	Vulnerable
Bignoniaceae	*Tabebuia serratifolia*	Vulnerable

Source: Own elaboration

Table 6. Main species of threatened fauna in the project area

ORDER	FAMILY	SPECIES	IUCN	DS. 004 -2014 MINAGRI
Anura	Aromobatidae	*Allobates trilineatus*	LC	-
Anura	Bufonidae	*Dendrophryniscus minutus*	LC	-
Anura	Bufonidae	*Rhinella margaritifera*	LC	-
Anura	Bufonidae	*Rhinella marina*	LC	-
Anura	Craugastoridae	*Oreobates quixensis*	LC	-
Anura	Craugastoridae	*Pristimantis altamazonicus*	LC	-
Anura	Craugastoridae	*Pristimantis buccinator*	LC	-
Anura	Craugastoridae	*Pristimantis carvalhoi*	LC	-
Anura	Craugastoridae	*Pristimantis diadematus*	LC	-
Anura	Craugastoridae	*Pristimantis ockendeni*	LC	-
Anura	Craugastoridae	*Pristimantis peruvianus*	LC	-
Anura	Craugastoridae	*Pristimantis ventrimarmoratus*	VU	-
Anura	Dendrobatidae	*Ameerega hahneli*	LC	-
Anura	Dendrobatidae	*Ameerega trivittata*	LC	-
Anura	Dendrobatidae	*Ranitomeya vanzolinii*	LC	-
Anura	Hylidae	*Dendropsophus acreana*	LC	-
Anura	Hylidae	*Dendropsophus leali*	LC	-
Anura	Hylidae	*Dendropsophus leucophyllatus*	LC	-
Anura	Hylidae	*Dendropsophus marmoratus*	LC	-
Anura	Hylidae	*Dendropsophus parviceps*	LC	-
Anura	Hylidae	*Dendropsophus rhodopeplus*	LC	-
Anura	Hylidae	*Dendropsophus sarayacuensis*	LC	-

Anura	Hylidae	*Hypsiboas boans*	LC	-
Anura	Hylidae	*Hypsiboas cinerascens*	LC	-
Anura	Hylidae	*Hypsiboas fasciatus*	LC	-
Anura	Hylidae	*Hypsiboas lanciformis*	LC	-
Anura	Hylidae	*Hypsiboas punctatus*	LC	-
Anura	Hylidae	*Osteocephalus planiceps*	LC	-
Anura	Hylidae	*Osteocephalus taurinus*	LC	-
Anura	Hylidae	*Phyllomedusa vaillantii*	LC	-
Anura	Hylidae	*Scinax funereus*	LC	-
Anura	Hylidae	*Scinax pedromedinae*	LC	-
Anura	Hylidae	*Scinax ruber*	LC	-
Anura	Hylidae	*Trachycephalus venulosus*	LC	-
Anura	Leiuperidae	*Edalorhina perezi*	LC	-
Anura	Leptodactylidae	*Leptodactylus andreae*	LC	-
Anura	Leptodactylidae	*Leptodactylus leptodactyloides*	LC	-
Anura	Leptodactylidae	*Leptodactylus lineatus*	LC	-
Anura	Leptodactylidae	*Leptodactylus pentadactylus*	LC	-
Anura	Leptodactylidae	*Leptodactylus rhodomystax*	LC	-
Anura	Microhylidae	*Ctenophryne geayi*	LC	-
Anura	Microhylidae	*Hamptophryne boliviana*	LC	-
Caudata	Plethodontidae	*Bolitoglossa altamazonica*	LC	-
Anura	Aromobatidae	*Allobates trilineatus*	LC	-
Anura	Bufonidae	*Dendrophryniscus minutus*	LC	-
Anura	Bufonidae	*Rhinella margaritifera*	LC	-
Anura	Bufonidae	*Rhinella marina*	LC	-
Anura	Craugastoridae	*Oreobates quixensis*	LC	-
Anura	Craugastoridae	*Pristimantis altamazonicus*	LC	-
Anura	Craugastoridae	*Pristimantis buccinator*	LC	-
Anura	Craugastoridae	*Pristimantis carvalhoi*	LC	-
Anura	Craugastoridae	*Pristimantis diadematus*	LC	-
Anura	Craugastoridae	*Pristimantis ockendeni*	LC	-
Anura	Craugastoridae	*Pristimantis peruvianus*	LC	-
Anura	Craugastoridae	*Pristimantis ventrimarmoratus*	VU	-
Anura	Dendrobatidae	*Ameerega hahneli*	LC	-
Anura	Dendrobatidae	*Ameerega trivittata*	LC	-
Anura	Dendrobatidae	*Ranitomeya vanzolinii*	LC	-
Anura	Hylidae	*Dendropsophus acreana*	LC	-
Anura	Hylidae	*Dendropsophus leali*	LC	-
Anura	Hylidae	*Dendropsophus leucophyllatus*	LC	-
Anura	Hylidae	*Dendropsophus marmoratus*	LC	-
Anura	Hylidae	*Dendropsophus parviceps*	LC	-
Anura	Hylidae	*Dendropsophus rhodopeplus*	LC	-
Anura	Hylidae	*Dendropsophus sarayacuensis*	LC	-
Anura	Hylidae	*Hypsiboas boans*	LC	-
Anura	Hylidae	*Hypsiboas cinerascens*	LC	-
Anura	Hylidae	*Hypsiboas fasciatus*	LC	-
Anura	Hylidae	*Hypsiboas lanciformis*	LC	-

Anura	Hylidae	*Hypsiboas punctatus*	LC	-
Anura	Hylidae	*Osteocephalus planiceps*	LC	-
Anura	Hylidae	*Osteocephalus taurinus*	LC	-
Anura	Hylidae	*Phyllomedusa vaillantii*	LC	-
Anura	Hylidae	*Scinax funereus*	LC	-
Anura	Hylidae	*Scinax pedromedinae*	LC	-
Anura	Hylidae	*Scinax ruber*	LC	-
Anura	Hylidae	*Trachycephalus venulosus*	LC	-
Anura	Leiuperidae	*Edalorhina perezi*	LC	-
Anura	Leptodactylidae	*Leptodactylus andreae*	LC	-
Anura	Leptodactylidae	*Leptodactylus leptodactyloides*	LC	-
Anura	Leptodactylidae	*Leptodactylus lineatus*	LC	-
Anura	Leptodactylidae	*Leptodactylus pentadactylus*	LC	-
Anura	Leptodactylidae	*Leptodactylus rhodomystax*	LC	-
Anura	Microhylidae	*Ctenophryne geayi*	LC	-
Anura	Microhylidae	*Hamptophryne boliviana*	LC	-
Caudata	Plethodontidae	*Bolitoglossa altamazonica*	LC	-
Artiodactyla	Cervidae	*Mazama americana*	DD	*DD*
Artiodactyla	Cervidae	*Mazama nemorivaga*	LC	-
Artiodactyla	Tayassuidae	*Pecari tajacu*	LC	-
Artiodactyla	Tayassuidae	*Tayassu pecari*	VU	*NT*
Carnivora	Canidae	*Speothos venaticus*	NT	-
Carnivora	Felidae	*Leopardus pardalis*	LC	-
Carnivora	Felidae	*Panthera onca*	NT	*NT*
Carnivora	Felidae	*Puma concolor*	LC	*NT*
Carnivora	Felidae	*Puma yagouaroundi*	LC	-
Carnivora	Mustelidae	*Eira barbara*	LC	-
Carnivora	Mustelidae	*Galictis vittata*	LC	-
Carnivora	Mustelidae	*Lontra longicaudis*	DD	-
Carnivora	Procyonidae	*Nasua nasua*	LC	-
Carnivora	Procyonidae	*Potos flavus*	LC	-
Carnivora	Procyonidae	*Procyon cancrivorus*	LC	-
Chiroptera	Phyllostomidae	*Desmodus rotundus*	LC	-
Chiroptera	Molossidae	*Molossus molossus*	LC	-
Chiroptera	Noctilionidae	*Noctilio leporinus*	LC	-
Cingulata	Dasypodidae	*Dasypus kappleri*	LC	-
Cingulata	Dasypodidae	*Dasypus novemcinctus*	LC	-
Cingulata	Dasypodidae	*Priodontes maximus*	VU	*VU*
Didelphimorphia	Didelphidae	*Chironectes minimus*	LC	-
Didelphimorphia	Didelphidae	*Didelphis marsupialis*	LC	-
Lagomorpha	Leporidae	*Sylvilagus brasiliensis*	LC	-
Perissodactyla	Tapiridae	*Tapirus terrestris*	VU	*NT*
Pilosa	Bradypodidae	*Bradypus variegatus*	LC	-
Pilosa	Myrmecophagidae	*Myrmecophaga tridactyla*	VU	*VU*
Pilosa	Myrmecophagidae	*Tamandua tetradactyla*	LC	-
Primates	Atelidae	*Ateles chamek*	EN	*EN*
Primates	Atelidae	*Lagothrix lagotricha*	VU	*EN*

Primates	Cebidae	*Cebus albifrons*	LC	-
Primates	Cebidae	*Saguinus fuscicollis*	LC	-
Primates	Cebidae	*Saguinus mystax*	LC	-
Primates	Cebidae	*Saimiri boliviensis*	LC	-
Primates	Pitheciidae	*Callicebus brunneus*	LC	-
Primates	Pitheciidae	*Callicebus cupreus*	LC	-
Primates	Pitheciidae	*Pithecia monachus*	LC	-
Rodentia	Caviidae	*Hydrochoerus hydrochaeris*	LC	-
Rodentia	Cuniculidae	*Cuniculus paca*	LC	-
Rodentia	Dasyproctidae	*Dasyprocta fuliginosa*	LC	-
Rodentia	Dasyproctidae	*Myoprocta pratti*	LC	-
Rodentia	Dinomyidae	*Dinomys branickii*	VU	*VU*
Rodentia	Erethizontidae	*Coendou bicolor*	LC	-
Rodentia	Sciuridae	*Sciurus igniventris*	LC	-
Caprimulgiformes	Caprimulgidae	*Nyctidromus albicollis*	LC	-
Caprimulgiformes	Nyctibiidae	*Nyctibius grandis*	LC	-
Caprimulgiformes	Nyctibiidae	*Nyctibius griseus*	LC	-
Charadriiformes	Charadriidae	*Vanellus cayanus*	LC	-
Ciconiiformes	Ardeidae	*Ardea cocoi*	LC	-
Ciconiiformes	Ardeidae	*Bubulcus ibis*	LC	-
Ciconiiformes	Ardeidae	*Butorides striatus*	LC	-
Ciconiiformes	Ardeidae	*Egretta thula*	LC	-
Ciconiiformes	Ardeidae	*Pilherodius pileatus*	LC	-
Ciconiiformes	Ardeidae	*Tigrisoma lineatum*	LC	-
Columbiformes	Columbidae	*Geotrygon montana*	LC	-
Columbiformes	Columbidae	*Leptotila rufaxilla*	LC	-
Columbiformes	Columbidae	*Patagioenas cayennensis*	LC	-
Columbiformes	Columbidae	*Patagioenas plumbea*	LC	-
Columbiformes	Columbidae	*Patagioenas subvinacea*	VU	-
Coraciiformes	Alcedinidae	*Chloroceryle amazona*	LC	-
Coraciiformes	Alcedinidae	*Chloroceryle americana*	LC	-
Coraciiformes	Alcedinidae	*Chloroceryle inda*	LC	-
Cuculiformes	Cuculidae	*Crotophaga ani*	LC	-
Cuculiformes	Cuculidae	*Crotophaga major*	LC	-
Cuculiformes	Cuculidae	*Piaya cayana*	LC	-
Falconiformes	Accipitridae	*Elanoides forficatus*	LC	-
Falconiformes	Accipitridae	*Buteo magnirostris*	LC	-
Falconiformes	Cathartidae	*Cathrates aura*	LC	-
Falconiformes	Cathartidae	*Cathartes melambrotus*	LC	-
Falconiformes	Cathartidae	*Coragyps atratus*	LC	-
Falconiformes	Cathartidae	*Sarcoramphus papa*	LC	-
Falconiformes	Falconidae	*Daptrius ater*	LC	-
Falconiformes	Falconidae	*Herpetotheres cachinnans*	LC	-
Falconiformes	Falconidae	*Milvago chimachima*	LC	-
Galliformes	Cracidae	*Mitu tuberosum*	LC	*NT*
Galliformes	Cracidae	*Ortalis guttata*	LC	-
Galliformes	Cracidae	*Penelope jacquacu*	LC	-

Galliformes	Cracidae	*Pipile cumanensis*	VU	*NT*
Galliformes	Odontophoridae	*Odontophorus gujanensis*	NT	-
Gruiformes	Eurypygidae	*Eurypigia helias*	LC	-
Gruiformes	Psophiidae	*Psophia leucoptera*	LC	-
Gruiformes	Rallidae	*Aramides cajanea*	LC	-
Opisthocomiformes	Opisthocomidae	*Opisthocomus hoazin*	LC	-
Passeriformes	Cotingidae	*Lipaugus vociferans*	LC	-
Passeriformes	Corvidae	*Cyanocorax cyanomelas*	LC	-
Passeriformes	Dendrocolaptidae	*Xiphorhynchus obsoletus*	LC	-
Passeriformes	Emberizidae	*Ammodramus aurifrons*	LC	-
Passeriformes	Cotingidae	*Paroaria gularis*	LC	-
Passeriformes	Cotingidae	*Oryzoborus angolensis*	LC	-
Passeriformes	Cotingidae	*Volatinia jacarina*	LC	-
Passeriformes	Hirundinidae	*Atticora fasciata*	LC	-
Passeriformes	Hirundinidae	*Hirundo rustica*	LC	-
Passeriformes	Hirundinidae	*Progne tapera*	LC	-
Passeriformes	Hirundinidae	*Tachycineta albiventer*	LC	-
Passeriformes	Icteridae	*Cacicus cela*	LC	-
Passeriformes	Icteridae	*Cacicus solitarius*	LC	-
Passeriformes	Icteridae	*Psarocolius angustifrons*	LC	-
Passeriformes	Pipridae	*Lepidothrix coronata*	LC	-
Passeriformes	Thraupidae	*Dacnis cayana*	LC	-
Passeriformes	Thraupidae	*Ramphocelus carbo*	LC	-
Passeriformes	Thraupidae	*Ramphocelus nigrogularis*	LC	-
Passeriformes	Thraupidae	*Thraupis episcopus*	LC	-
Passeriformes	Thraupidae	*Thraupis palmarum*	LC	-
Passeriformes	Troglodytidae	*Donacobius atricapilla*	LC	-
Passeriformes	Tyrannidae	*Myiarchus ferox*	LC	-
Passeriformes	Tyrannidae	*Pitangus sulphuratus*	LC	-
Passeriformes	Tyrannidae	*Tyrannus melancholicus*	LC	-
Passeriformes	Tyrannidae	*Tityra cayana*	LC	-
Piciformes	Bucconidae	*Monasa nigrifrons*	LC	-
Piciformes	Bucconidae	*Monasa morphoeus*	LC	-
Piciformes	Bucconidae	*Monasa flavirostris*	LC	-
Piciformes	Galbulidae	*Galbula dea*	LC	-
Piciformes	Ramphastidae	*Pteroglossus castanotis*	LC	-
Piciformes	Ramphastidae	*Ramphastos tucanus*	LC	-
Piciformes	Picidae	*Veniliornis passerinus*	LC	-
Piciformes	Picidae	*Melanerpes cruentatus*	LC	-
Psittaciformes	Psittacidae	*Amazona amazonica*	LC	-
Psittaciformes	Psittacidae	*Amazona farinosa*	LC	-
Psittaciformes	Psittacidae	*Amazona ochrocephala*	LC	-
Psittaciformes	Psittacidae	*Ara chloroptera*	LC	*VU*
Psittaciformes	Psittacidae	*Aratinga leucophtalmus*	LC	-
Psittaciformes	Psittacidae	*Aratinga weddellii*	LC	-
Psittaciformes	Psittacidae	*Pionus menstruus*	LC	-
Strigiformes	Tytonidae	*Tyto alba*	LC	-

Tinamiformes	Tinamidae	*Crypturellus bartletti*	LC	-
Tinamiformes	Tinamidae	*Crypturellus cinereus*	LC	-
Tinamiformes	Tinamidae	*Crypturellus soui*	LC	-
Tinamiformes	Tinamidae	*Crypturellus undulatus*	LC	-
Tinamiformes	Tinamidae	*Tinamus guttatus*	NT	-
Tinamiformes	Tinamidae	*Tinamus major*	NT	-
Tinamiformes	Tinamidae	*Tinamus tao*	VU	-
Trogoniformes	Trogonidae	*Trogon curucui*	LC	-

Source: Own elaboration

Where:

VU = Vulnerable, LC = Least Concern, NT = Near Threatened, DD = Data deficient, CR = critically endangered, EN = Endangered, LR/cd= low risk, but it depends on conservation.

1.10.2. Socio-economic aspects

The 7 native communities that are part of the project come from 2 ethnic groups in the Peruvian Amazon. Communities located near the Ucayali River are ethnicities Shipibo Conibo and those located in the San Alejandro River are the Cacataibo ethnicities.

Thanks to the Participatory Rapid Diagnostics - PRD, elaborated by the project team[1], we can indicate relevant information on the socioeconomic status of each native community.

- **Calleria Native Community:** populated by descendants of the ethnic group Shipibo Conibo and has a population of 307 inhabitants, 50.8% constitutes of men and 49.2% on women. It is conformed by 66 families with an average burden of 4 children per family. It has a population density of 0.076/Km^2. Its main economic activities are fishing, agriculture and logging.

- **Flor de Ucayali Native Community:** populated by descendants of the ethnic group Shipibo Conibo and has a population of 92 inhabitants; 52.2% constituted of men and 48.2% on women. It is conformed by 22 families with an average burden of 3 children per family. It has a population density of 0.084 hab/Km^2. Its main economic activities are fishing, agriculture and logging.

- **Puerto Nuevo Native Community:** belongs to the ethnic group Cacataibos and has a population of 476 inhabitants; 57% constitutes of men and 43% on women. It is conformed by 93 families. The main economic activities are fishing, agriculture, timber and non-timber harvesting and handicraft.

- **Sinchi Roca Native Community:** populated by descendants of the ethnic group Catataibos and has a population of 443 inhabitants; 48 % constitutes of women and 51.8% men. It is conformed by 106 families. The main economic activities are fishing, agriculture, timber and non-timber harvesting and handicraft.

[1] AIDER, 2013

- **Curiaca Native Community:** populated by descendants of the ethnic group Shipibo Conibo and has a population of 483 inhabitants; 49% constitutes of men and 51% women. It is conformed by 78 families. Its main economic activities are fishing, agriculture, logging and handicraft.

- **Pueblo Nuevo Native Community:** populated by descendants of the ethnic group Shipibo Conibo and has a population of 476 inhabitants, 57% constitutes of men and 43% women. It is conformed by 93 families (Census 2013). Its main economic activities are fishing, agriculture, logging and handicraft.

- **Roya Native Community:** populated by descendants of the ethnic group Shipibo Conibo and has a population of 440 inhabitants, 48.9% constitutes of men and 51.1% women. It is conformed by 95 families. On the economic aspect, the community determined that its main economic activities are fishing, agriculture, logging and handicraft.

1.11 Compliance with Laws, Statutes and Other Regulatory Frameworks

According to the Political Constitution of Peru, natural resources are patrimony of the Nation, therefore the country's tropical forests are considered the property of the nation and according to Article 66 of the Constitution this is sovereign in its use, so has dominion over them and the services they emerge. It also promotes sustainable use.
In addition, the state is obliged to promote the conservation of biological diversity that comprises the whole range of plants and animal species, etc.; as well as the ecosystems and ecological processes of which they are part (Andaluz, 2009), so the conservation of the tropical forests of Peru, which harbor a high biodiversity is a topic of national interest. Note that this commitment has been strengthened by the ratification of the Convention on Biological Diversity (CDB for its acronym in Spanish) through the legislative resolution N° 26181.

Product of the above, the State has enacted laws and regulations that promote the establishment of compensation mechanisms for environmental services. As stated in Article 94 of law N° 28611 General Environmental Law, means for Environmental Services, inter alia, to the protection of biodiversity and the mitigation of greenhouse gases emission. It also, declares that the State establishes mechanisms to assess, compensate and maintain the provision of ecosystem services puirsing to achieve the conservation of ecosystems, biological diversity and other natural resources. Also, indicates that the Ministry of Environment (MINAM for its acronym in Spanish), as National Environmental Authority, promotes the creation of financing mechanisms, payment and monitoring of environmental services.

Furthermore, Law No. 27308, “Law of Forestry and Wildlife”, in effect since 2000, states in its Article 35 that "the State be implemented starting in 2005 any compensation for the effects of pollution caused by the consumption of fossil fuels, which will be used to finance conservation, rehabilitation of natural areas and forest research and wildlife”. However, such mechanisms were not implemented. The new forestry law passed in June 2011, Law No. 29763 Law of Forestry and Wildlife, which will become effective upon approval of its rules, states in Article 72 ° that "The State recognizes the importance and necessity of conservation and responsible management and sustainable ecosystem of vegetation to counteract the negative effects of climate change. In that sense develops plans, develops prevention and education budgets and financial resources for its implementation”. Also points out that the National Forest Service in coordination with regional governments, among others, promote practices and mitigation activities and climate change on forest ecosystems, and other types of wild vegetation, recognizing its intrinsic value in relation to services they provide, including priority activities reduction of deforestation and degradation of forest ecosystems and other types of wild vegetation.

Now, the National Environmental Policy (approved by Supreme Decree No. 012-2009-MINAM) provides, within its policy guidelines concerning to the use of natural resources, promote the design and implementation of economic and financial instruments, compensation systems, economic retribution and distribution of payments for environmental services. Similarly, the policy guidelines respected to forest include priority full use of forest resources, supporting initiatives on the timber and non-timber resources, wildlife and environmental services. Thus, the project activity is in accordance with the purposes expressed by these regulatory frameworks regarding the establishment of mechanisms for payment for services.

With respect to the ownership of the lands of peasant and indigenous communities and the use and exploitation of the forests within its territory, Article 88 of the Political Constitution of Peru states that the State guarantees the ownership of land in private or communal form or any other form of association, and Article 89 of the Constitution states that the peasant and indigenous communities have legal existence and legal entities, are autonomous in their organization in communal work and freely available their land, as well as economic and administrative, within the framework established by law. The ownership of land is inalienable, except in the case of abandonment.

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Now according to which the article refers in Article 8 of Law 27308, Law of Forestry and Wildlife, still in force, the State recognizes as community forests to those located within the recognized territory of the community (rural or native) and the requirements stipulated in regulations, which states that according to Article 18 ° of law No. 26821, Organic Law on the Use of Natural resources, have preference to the sustainable use of natural resources in their community land, duly recognized; therefore any use proceeds only at the express request of such communities. Note that the new Law of Forest and Wildlife (Law No. 29763) recognizes the exclusivity over the use and enjoyment of the goods and services of forest ecosystems and other ecosystems of wild vegetation by native and rural communities within their titled lands or ceded in use.

The Peru approved through Decree-Law No. 26253 the Convention 169 on Indigenous and Tribal Peoples in Independent Countries of the International Labour Organisation which states, in its article 15, there must be carefully protect the rights of the peoples concerned to the natural resources on their lands. These rights include the rights of these peoples to participate in the use, management and conservation of these resources. By signing this agreement confirms the commitment of the Peruvian government for the right to use natural resources located within the territory of the native communities. Law No. 29785, Law Right to Prior Consultation with Indigenous People or Native Recognized by Convention 169 of the International Labour Organization (ILO), indicates in its article 2 that indigenous peoples have the right to be prior consulted about legislative or administrative measures that directly affect their collective rights, their physical existence, cultural identity, quality of life or development.

1.12 Ownership and Other Programs

1.12.1 Right of Use

The right to use the native forest communities that are part of the project, are supported with their respective deed titles, granted by the Peruvian state. In Table 7, is described the title number, order confirming the title, date of approving resolution and area entitled for each native community, and equally for its impementation.

Table 7. Native Communities Titles

Native Community	Nº of title	Aproval resolution of title	Date of approval resolution of title	Entitled area(he)	Nº of title (enlargement)	Approval resolution of title (enlargement)	Date of approval resolution of title (enlargement)	Entitled area (enlargement) (he)
Sinchi Roca	CN-0046/76	Directoral Resolution N° 3294-76-DGRA-AR	June 21, 1976	3130	N° 016-86	Ministerial Resolution 00537-86-AG-DGRA-AR	June 30, 1986	23985
Curiaca	CN-0021-75-DL-20653	Directoral Resolution N° 1643 - 75 - DGRA-AR	1975	623.4458	919	Regional DirectoralResolution 000120-96-CTARU-DRA	June 9, 1996	5541.775
Pueblo Nuevo del Caco	N° 00023-75	Directoral Resolution N° 1645-75-DGRA-AR	June 19, 1975	1146.1741	933	Resolución Directoral Regional N° 000146-96-CTARU/DRA	June 19, 1996	5839.19
Roya	CN-0024-75-DL.20653	Directoral Resolution N° 1646-75-DGRA-AR	1975	925.8283	Título de propiedad 380-94-DRAG-PETT	Ministerial Resolution N° 0244-93-AG	July 12, 1993	4320
Puerto Nuevo	Título de propiedad Nº 027- 85	Resolución Ministerial N° 00291-85-AG-DGRA-RA	May 10, 1985	12635	Título de propiedad Nº 377-94	Ministerial Resolution N° 0244-93-AG	July 12, 1993	56289.1
Flor de Ucayali	Título de propiedad N° 934	Directoral Resolution N° 000147-	June 9, 1996	21290.8	0	0	0	0

		96-CTAZ-DRA						
Callería	Título de propiedad 026-84	R.M. 000408-84-AG/DGRA	June 21, 1984	2743.36	Título de propiedad 972	Regional Resolution 000205-97-CTARU-DRA	April 01, 1997	1291.4

1.12.2 Emissions Trading Programs and Other Binding Limits

The project is not included in the emissions trading program; this programme does not exist in Peru to date. Also, Peru does no have commitments to limit GHG emissions.

1.12.3 Other Forms of Environmental Credit

The project has not participated in any other environmental accreditation program for the elimination of GHG emissions. Also the project is not intended to generate any other type of environment credit related to GHG emissions other than through the VCS Program environment.

1.12.4 Participation under Other GHG Programs

The project has not been registered by another GHG program.

1.12.5 Projects Rejected by Other GHG Programs

The project has not been rejected by any other GHG program.

1.13 Additional Information Relevant to the Project

Eligibility Criteria

N/A (This is not a grouped project)

Leakage Management

It is considering that the project will produce a single type of leakage, in this case would be a leakage because the displacement of activities (Annex I. Methodology for avoided unplanned deforestation VM0015, version 1.1, step 8). It should also be noted that there is leakage management areas, considered at the beginning of the project as non-forest, where the activities of the 4 components established in the project strategy will be set, most of which are aimed to mitigate the risk of a possible leakage. In section 1.8, the 4 components of the project strategy are described.

Commercially Sensitive Information

The cash flow of the project, comes to be a sensitive information and has been excluded from the public version in the project description. The information used in the cash flow is a comparison between the costs of the activities implementation of the REDD+ strategy and revenues related to the generation and sale of VCUs during the first crediting period of the REDD+ project.

Further Information

The 7 native communities that are part of the project, are today covered by primary subtropical moist forest areas, surfaces have been excluded of the project categorized as "non-forest" (deforested areas and farming mosaic). So it is, the project area covers a total of 127,004.0 ha that correspond to primary forest.

The project area is considered "forest" according to the national definition. Peru has chosen the following parameters for definition of forest, as agreed by the UNFCCC in 2001:

- A minimum of a canopy cover of 30 percent;
- A minimum land area of 0.5 hectares, and
- A minimum tree height of 5 meters

2 APPLICATION OF METHODOLOGY

2.1 Title and Reference of Methodology

The methodology used in the project was "Methodology for avoided unplanned deforestation VM0015, version 1.1," approved by the VCS on December 3, 2012. It has developed each of the steps and established sections by the methodology in a transparent way. As such, the project proponent has documented the application of the methodology to the project as a separate methodological appendix. This document will be cited according to the requirements of the PD VCS.

Besides the methodological document, the following tools were used:

- VT0001 "Tool for the demonstration and assessment of additionality for activities of the VCS project in Agriculture, Forestry and other land uses (AFOLU), version 3.0".

- AFOLU Non-Permanence Risk Tool: VCS version 3.2 aprobed by VCS.

- Tool for testing significance of GHG emissions in A/R CMD project activities" version 01.

2.2 Applicability of Methodology

The project meets the applicability conditions established methodology for avoided unplanned deforestation, VM0015 version 1.1. Will renew the baseline after the first period GHG emission reduction at age 10, and was developed using the same methodology established in the first period.
The conditions of applicability of the project are:

a) The project promotes activities that avoid deforestation and degradation in the project area. Therefore, is within the unplanned deforestation and degradation of the category (AUDD) VCS AFOLU.

b) The project activity considers a community forest management of the forest (forest mature protection with controlled harvesting), thus the project falls within the category D.

c) Althougn there is no an official forest definition under the Peruvian law, the government os Peru has adopted the following parameters for its forest definition, according the UNFCC in 2001:

- A minimun canopy cover of 30 per cent,
- A minimum land area of 0,5 hectares, and
- A minimum tree height of 5 m.

The project does not consider secondary forest in the forest definition, only the primary forest.

d) The project area meets the conditions of forest according to the historical analysis of the past 10 years prior to the start date of the project.

e) The forest land located within the project area is characterized by low hill, average hill, riverbank complex, high terrace, low terrace and average terrace, therefore no forested wetland is found within the project area.

2.3 Project Boundary

According to the applied methodology (Methodology for avoided unplanned deforestation VM0015, version 1.1). The project will monitor changes in carbon stock in aboveground biomass and belowground biomass for both the baseline and the project.

Also, it was considered mandatory to use the “Tool for testing significance of GHG emissions in A/R CMD project activities”. In this case, have been considered in first place the criteria of required documents by AFOLU VCS, as well as those of the methodological framework, to include reservoirs and sources of emissions within the project boundaries. All this is described in Annex I. Methodology for avoided unplanned deforestation VM0015, version 1.1.

2.4 Baseline Scenario

The identification of the most likely reference scenario for the project area was conducted according to the procedure of VCS VT0001- Tool for the demonstration and assessment of additionality for VCS project activities in Agriculture, Forestry and other land uses (AFOLU), developed in the section 2.5. Using this tool it is concluded that the most likely scenario would be the continuation of illegal logging as well as forest invasions by coca growers, miners and farmers, thereby causing deforestation and forest degradation of the native communities.
Carbon pools measurement object were reservoir of air biomass and the reservoir of underground biomass. The justification for the inclusion and exclusion of carbon reservoirs is detailed in Annex I. Methodology for avoided unplanned deforestation VM0015, version 1.1.

2.5 Additionality

The additionality demostration of the activity (or activities of the project) was carried out using the VCS VT0001 tool "Tool for the demonstration and assessment of additionality for VCS project activities in Agriculture, Forestry and Other Land Use" (AFOLU) Version 3.0 Adapted from the CDM "Tool for the demonstration and assessment of additionality in A/R CDM Project Activities " (Version 02).

According to the mentioned tool, the following steps were followed:

STEP 1. Identification of scenarios for alternative o land use to the AFOLU project activities.

Sub-step 1a. Identify credible scenarios of alternative land use to the proposed VCS AFOLU project activities.

a) Identification of the land use scenarios

i. Continuation of land use

Scenario 1. This scenario conisders that both illegal logging and encroachment on forests by coca growers, miners and farmers will continue, thus causing deforestation and forest degradation of the native communities. These activities have been reported previously in the project area and there is a systematic failure of the legislation.

ii. Project activity in the soil within the project boundaries fulfilled without being registered as a VCS AFOLU project.

Scenario 2. That the activities proposed by the project will be given without selling VCUs, but supported by technical or state cooperation.

iii. If applicable, similar activities to the proposed project activity in at least part of the soil within the VCS AFOLU project boundary (legal requirements or extrapolation).

Scenario 3. The project activities are performed by the same communities with funds generated by the forest management within its territory.

b) Scenario of credible land use

Scenario 1.

Historically the territory of the Amazonian native communities have been affected by external pressures in principle to extract valuable wood, basically mahogany (Swetenia macrophylla) and cedar (Cedrela odorata), then depending on market demand were being included other species. The generalized form of extract, is without consent of communities, in areas within the community which is difficult to control and community surveillance because of its distance.

Another pressure on the territory of the communities is given by colonists that in search of land illegally invade communal areas to install crops, pastures and on that claim possession of the territory.

<u>Scenario 2.</u>

In Peru, the international cooperation has been contributing financially on environmental issues and natural resource management.

Also from 2002 through AIDER have been channeling funding of the international cooperation for the management of natural resources in the communities members of the project.

Currently, there are programs and projects from the Ministry of Environment (MINAM for its acronym in Spanish) as the Forest Conservation Programme, Forest Investment Fund (FIP for its acronym in Spanish) that have similar objectives to this project.

<u>Scenario 3.</u>

Some of the communities have significant volumes of timber species inside the areas that have been established as management area. An efficient management of this resource could generate income and employment to the communities, with these utilities the communities could allocate similar activities to those raised in the project scenario. However this scenario is not credible because of the illegal timber extraction practices, the presence of economic actors that weaken the organized utilization of natural resources, the asymmetric commercial relations and little transparency.

c) Result of Sub-Step 1a.

The two credible scenarios of alternative land use within the VCS AFOLU project boundaries are:

<u>Scenario 1</u>. This scenario expects that both illegal logging and encroachment on forests by coca growers, miners and farmers will continue, thus causing deforestation and forest degradation of the native communities. These activities have been reported previously in the project area.

<u>Scenario 2</u>. That the activities proposed by the project are met without selling VCUs, but supported by the state or International cooperation.

Sub-step 1b. Consistency of credible scenarios of land use with mandatory applicable laws and regulations.

<u>Scenario 1.</u> Legal analysis. The various activities described in this scenario, and that are carried out by outsiders within the area of communities are address activities that do not comply with current legislation. Being a systematic failure of the legislation that is a reality in the region of project analysis as described below.

Illegal logging

It is a fairly widespread event in the Peruvian Amazon including Ucayali region. The Consortium Cámara Nacional Forestal-AIDER-UNALM (2004) notes that in Peru it is estimated that illegal logging activities extracts and sold more than 60,000 m3 of wood annually, representing a market value of $ 72 million. The Forest Research Centre (CIFOR) in Ucayali and Loreto found that between 78 and 88% of the wood is harvested outside authorized zones, ie is illegal. In 2002, INRENA, in a report to the International Tropical Timber Organization – ITTO, reported that about 500,000 m3 (40% of national production) of timber are illegally extracted, which are eventually legalized by fraudulent methods. In December 2005, INRENA and the Multi Sectoral Commission to Combat Illegal Logging has estimated that: "Every year more than 221,000 m3 of illegal timber is removed. That is, 15% of national production, equivalent to U.S. $ 44.5 billion".
This group of agents of deforestation is growing due to: the profitability of the timber activity, the growing demand for wood, the presence of species with high commercial value in the communal lands and weak oversight in this area. In addition, timber harvesting means immediate source of cash income for villagers and settlers to cover their needs.

Coca crops

Nearly three quarters of the coca leaf is grown in three valleys, namely Apurimac-Ene (32%), La Convención and Lares (21%) and the Alto Huallaga (20%). Almost another quarter focuses on Marañón, Putumayo, bajo Amazonas and Napo (7%), Inambari-Tambopata (6%), Palcazu-Pichis-Pachitea (6%) and Aguaytía (4%). A decade ago, the three main valleys produced 90% of the total. Since then its production grew only in 23%, whereas the remaining tripled. Although production is highly concentrated, there is no doubt that there has been a geographical multiplication of crop, which will deepen if current growth rates are maintained. (Situational Diagnosis of Crime in Peru. Ministry of Justice and Human Rights. 2013).
In the case of coca cultivation, in participatory rapid diagnostics (DRP for its acronym in Spanish) made in communities, the community population identify the area where there is presence of coca.

Illegal gold mining

Illegal gold mining today is the main illicit production in Peru, largely surpassing drug trafficking. According Macroconsult, exportations of illegally mined gold amounted to three billion dollars in 2011, compared to 1200 million generated from exports of cocaínicas drugs. (See figure 7) This amount represents 1.5 of GDP. (Situational Diagnosis of Crime in Peru. Ministry of Justice and Human Rights. 2013).

The rapid growth of international mineral prices in recent years explains the rapid expansion of informal mining. Indeed, while that the price of an ounce of gold has tripled between 2005 and 2011, from U.S. $ 500 to 1,600 U.S. $, illegal gold production increased more than eight-fold, from 200,000 ounces in 2005 to more than 1'700, 000 in 2011. (Situational Diagnosis of Crime in Peru. Ministry of Justice and Human Rights. 2013).

Fuente: Macroconsult, en base a MEM y SUNAT. Elaboración Ciudad Nuestra

Figure [2] 3. Evolution of exports of cocaine and illegal gold, Peru, 2005-2011

There is a systematic breach of legislation regarding the formalization of mining activity[3].

Scenario 1, even though does not meet current standards them result from a systematic lack of enforcement of regulations and laws.

Scenario 2. **Legal analysis.** This is a scenario that complies with the legislation on international cooperation. We describe below the standards that support this statement.

For the case of technical cooperation under the law of the International Technical Cooperation Legislative Decree No. 719 (Published on November 10, 1991) states in Article 2: -. The International Technical Cooperation, is the mean by which Peru receives, transfers and/or exchanges human resources, goods, services, capital and technology from external cooperating sources which aim is to complement and contribute the national efforts in development, intended for:

a. Support implementation of activities and priority projects for the country development and its regions, especially in the socio-economic areas of greatest poverty and marginalization.

b. Acquire scientific and technological knowledge for its adaptation and implementation in Peru; as well as to facilitate for foreign the acquisition of national scientific and technological knowledge.

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[2] Figure obtained from the document "Situational Diagnosis of Crime in Peru. Ministry of Justice and Human Rights. 2013".

[3] [3] http://www.larepublica.pe/28-10-2013/deforestacion-por-mineria-ilegal-se-triplica-en-selva-peruana
http://www.inforegion.pe/medio-ambiente/171599/minam-denuncio-a-ciudadanos-chinos-por-practicar-mineria-ilegal-en-huanuco/
http://diariocorreo.pe/ultimas/noticias/4518768/mineria-ilegal-depredan-bosques-en-puerto-in

This same law in its article 5, mentions that the NGOs that are officially registered and are implementing projects in prioritized areas of the development plans are executing units, responsible for identify and implement actions and/or projects supported by the International Technical Cooperation, with the knowledge of Central, Regional and Local Government, as appropriate.

For the case of the state of the new Forestry Law and Wildlife Silvestre No. 29763, that still is not effective, due to the lack of its regulation, it states in Article 19 that the regional government, as regional forest and Wildlife authority, has the function to design and implement a program of technical assistance and advice to the native communities within their jurisdiction.

According to the analysis of Step 1, the scenarios of land use alternative to activity of the AFOLU VCS resulting from legal analysis VCS AFOLU are:

Scenario 1. This scenario contemplate that both illegal logging and encroachment on forests by coca growers, miners and farmers will continue, thus causing deforestation and forest degradation of the native communities. These activities have been reported previously in the project area and there is a systematic failure of the legislation.

Scenario 2. That the activities proposed by the project are met without selling VCUs, but supported by the state or International cooperation.

Sub-step 1c. Selection of the baseline scenario

The baseline was developed following the methodology for avoided unplanned deforestation VM0015, version 1.1. According to step 3 of this methodology was developed the analysis of agents, drivers and main causes of deforestation and its expected future development.

The agents found are made by illegal loggers, miners, coca growers and farmers. The drivers identified are rural wages, market prices, low agricultural yields, prices of forest products, and road infrastructure.

There are evidenced areas where on the territory exist absence of well-defined property rights, where the agents of deforestation occupy these areas to then demand property rights on the ground, this behavior is common in the Peruvian Amazon and this sharpens the award procedure of certificates of possession.

Under this scenario, the reasons why there are agents who deforest in areas where net profit is negative at first, is that they expect the development of roads and access to technology will make their activities profitable in the future or through a future sale of these areas can generate them revenue. (Angelsen, 1997).

In the case of extensive coca cultivation and pasture establishment, these are preferably made over areas without the right of land use defined or with weak land ownership rights. Are made by migrants that do not have their own ground and look for areas without protection or surveillance for establish. This occurs in the area of native communities which lack of resources to control and constant patrolling to ensure the protection of their forests.

In that sense was determined that the most likely scenario baseline is the scenario 1, discarding the Scenario 2 because although there is funding from the regional government, these have mostly been directed to health and education.

Those for the budget of the regional government of Ucayali 2010 and 2011 for the case of education means a 39.90% and 42.95% respectively, and for the case of health mean an implementation rate of 16.72% and 17.64% for those same years.

Facing the 2010 and 2011 regional budget, for the case of the environmental sector which meant 0.57% and 1.20% respectively and the agricultural sector 2.94% and 6.20% for the same period (data calculated based on the report> http: / /apps5.mineco.gob.pe/transparencia/mensual/default.aspx?y=2010&ap=ActProy).

Therefore it is unlikely that public funds will be used to finance activities required to reduce deforestation and forest degradation in communities in a future scenario.

STEP 2. Investment analysis

Not applicable

STEP 3. Analysis of barriers

Sub-step 3a. Identify barriers that would prevent the implementation of the type of proposed of project activity

Establish that there are barriers that prevent the implementation of type of the proposed project activity from being carried out if the project activity is not registered as a VCS AFOLU project. The barriers must not be specific to the project or project proponents.

a) Barriers due to social conditions and land use practices, including:

i. Population pressure on the land

The demand for resources such as wood, agricultural products, areas for the agricultural industry have increased.

According to the social economic report of the Ucayali Region (BCR, 2012). Ucayali with 432 thousand inhabitants in 2007, and 102 400 km2 has a low population density (4.2 inhabitants per km2). Nevertheless, the 2007 census population is about twenty times more than that recorded in 1940. By 2015, the INEI estimates that the Ucayali population will be 495 thousand.

The same report describes that the mayority of the population of the region lives in the province of Coronel Portillo (77 percent of the total) and in its capital Pucallpa, where the commercial and production activity of the region is centered; in this city 211,000 people live today.

Therefore conservation of forest communities faces this barrier of the pressure for resources to be close to the capital of the region and for the extent of its forests, proximity to secondary roads and navigable rivers compared to other rights granted as forest concessions.

ii. Widespread illegal practices

In the reference region illegal logging, coca cultivation and illegal mining are performed.

The Consortium Cámara Nacional Forestal-AIDER-UNALM (2004) notes that in Peru it is estimated that illegal logging activities extracted and sold more than 60,000 m3 of wood annually, representing a market value of $ 72 million. The Forest Research Centre (CIFOR) in Ucayali and Loreto found that between 78 and 88% of the wood is harvested outside authorized zones, ie illegal.

Regarding the widespread production of coca leaf and illegal gold, the Situational Crime Diagnostics in Peru (Ministry of Justice and Human Rights. June-2013) states that "The income generated by coca exports fluctuated between U.S. $ 800 and U.S. $ 1,200 million and only in recent years were displaced to second place by illegal gold mining, due to the dramatic growth of international prices".

b) Barriers due to lack of organization of local communities;

Participatory Rural Appraisal (PRA) and socioeconomic baseline of the project realizes the weak system of governance in relation to the interaction with external agents, loggers, NGO's, entrepreneurs, oil companies, state, settlers and others. Are note thing like:

- Low participation of community members in assemblies and community activities.
- The exercise of local governance is weak because there is communal perception that there is no accountability transparent accounts by the authorities.
- Public and private donations received by the community are not sustainable over the time, there is no culture in the community to pay for the service provided by the machinery, equipment and infrastructure to deteriorate over time.

c) Barriers related to land tenure, ownership, inheritance and property rights, among them:

i) Systems of formal and informal tenure that increase the risk of fragmentation of holdings;

The informal property ownership is a barrier to the project because the communal areas are susceptible to being invaded, this is caused by:

- Weak presence of the state and its institutions
- Lack of unified register
- The costly for communities to control their territory more often
- Access to land ownership records of individuals who demonstrate that they have enabled and allocated land for farming sometimes even overlapping areas to native communities

d) Barriers related to local traditions, including:

i. Traditional knowledge or lack thereof, laws and customs, market conditions, practices;

The poor market linkages remains a barrier for native communities. Surplus production and marketing the communities such as bananas, corn, rice, reach the market in a disjointed way because each commoner offer individually.

Another factor is the institutionalization of the habilito system (delivery of money from third party for its production) is often limiting in the conclusion of the price generally being against the producer.

In the case of wood marketing contracts between communities and timber is characterized by asymmetric, unfair, not transparent. ORAU (2012) describes these features in more detail.

Asymmetric Because communities negotiate in disadvantage to the information character and technical, economic, legal, administrative and managerial skills that enable them to make decisions weighted and less harmful to their interests.

Inequitable: Because the benefits of the transaction are distributed unevenly. Most of the benefits is received by the employer, which not only helps to accentuate the extreme poverty of the communities, but also to degrade their forests.

No Transparent: Only communal presidents or group of communal power, who decide transactions without proper negotiation and approval of the communal assembly also no desire for accountability.

The Ministry of Labour and Promotion of Employment of the Peruvian government and the International Labour Office (ILO) conducted a study in which the relations of communities with logger's patterns described as follows: Access by wood patterns to native communities where "contracts" are arranged with some of the leaders communal. These contracts allow loggers access patterns, usually illegally, the most valuable timber resources of communal land or relatively close. Recruits often end up indebted to employers through mechanisms such as undervaluation of wood delivered to the patterns ("punishment of wood") and overvaluation of products developed communities.
(Source:http://www.mintra.gob.pe/trabajo_forzoso/tf_amazonia.html).

Sub-step 3b. Show that the identified barriers would not prevent the implementation of at least one of the alternative land use scenarios (except the proposed project activity):

These barriers do not prevent the Scenario 1 as this scenario is the product of these barriers.

STEP 4. Common practice analysis

For the geographic area have not been registered similar activities to those proposed in the project in terms of similar scale and temporality.

Three types of relationship have been found, which are made as common practice for the natural resources utilization.

i) Native communities and loggers relation

At level of interaction with private what has been found as a common practice in regard to terms of use of natural resources with emphasis on timber resources is that:

- The community manages the extraction permits with the local authority
- The processing is technically supported by the company
- Once the community has gained the approval of the POA is the company that extracts wood that often is not limited to authorized areas and in cases in which discovers the fact, the warning is for the community.
- Communities receive between 20 to 25% of the production of timber production, but assumes the obligation to then sell this percentage to it. The company pays a low price and also deceives people to cube timber (http://www.pidesoneuba.com/es/presentaci-n-comunidades-nativas-y-madereros-una-relaci-n-colaborativa-o-conflictiva-rodrigo-arce)

This situation occurs that is disadvantaged communities have to establish trade agreements with third parties:

- Conduct informal agreements without safeguards, ambiguous conditions and unfavorable
- Not penalties are expected to breach of the parties not actual compensatory measures to repair the damage.
- The participation of community members are not recognized to control extraction and shipments of wood (control volumes and balances)
- Liability to tax unilateral commitments (many communities due to the SUNAT, even unknowingly) (ORAU, 2012)

Cases of this type of relationship that have been made in communities are quite, such as is identified in diagnosis made in the communities. The activity is limited to extraction, forest management is not made. Concerning to the intervention scale, this is bigger and generally opt for extraction methods of high impact, regarding timing, are punctual activities and are subject to the moment when the logger recover its initial "investment".

ii) Forest management project financed by International cooperation and executed by nonprofit organizations.

The promotion of forest management in communities made with international cooperation funds and facilitated by non-governmental organizations is part of the common practice found, examples of that are the project developed by IIAP, AIDER, Forestry National Chamber, PRA. This project have a short temporality of 2 to 3 years which differ from the VCS project which is raises forest management with a horizon of 20 years.

An example of this type of intervention is the reforestation made in the Sinchi Roca native community, where was installed 700 ha of mahogany, however funding only has covered the three first years.

iii) Projects of alternative development addressed to reduce and eliminate coca crops

Other type of common practice found is that of alternative crops projects that are promoted with the purpose of replace coca crops for licit crops. Have been found as examples of alternative corps promotion it implemented by "cacao alliance" in the Neshuya - curimana and irazola sectors, among others. Other example of alternative crops is the project performed by the Ucayali REGO to install 800 ha of palm oil.

This projects have promoted crops with economical potential like cacao and palm oil, however this interventions didn't take into account the trade and technical assistance aspects, being generally addressed to plots installation. In addition, have been directed to a large way to colonist populations and no to native communities. In the following link can be seen a summary of the alternative development project: http://www.bvcooperacion.pe/biblioteca/handle/123456789/1481 and http://www.devida.gob.pe/institucion/direccion-de-articulacion-territorial/pirdais/

In this sense, unlike of that found as common practice, the project has a participatory management and improving local capacity approach to natural resources management, this aspect is crucial and in them the members of the communities will be the main actors in order to improve their capabilities for management and administration their forests.

The project also pose a much greater intervention horizon than the findings as a common practice, that are generally intermittent interventions of 2-3 years, which are based on the ability of organizations to raise funds.

Another important aspect that differentiates project activities than those that corresponds to the common practice is a set of activities that arise for both forest areas and areas with land use change, which includes aspects of marketing this in order to improve the income of the villagers.

The proposed REDD+ project includes 4 components of holistic character besides a continuous length for a period of 20 years. What has been identified are short-term projects that attended specific activities. Therefore the project is not common practice in the analysis region.

There have been no registered similar activities in the reference region and neither is expected to be implemented in field or similar activities in the future, by the Peruvian government or international cooperation.

2.6 Methodology Deviations

No deviation was made in the methodology

3 QUANTIFICATION OF GHG EMISSION REDUCTIONS AND REMOVALS

3.1 Baseline Emissions

Refer to Annex I. Methodology for avoided unplanned deforestation VM0015, version 1.1.

To quantify current carbon stocks, was followed the procedure defined in the methodology for avoided unplanned deforestation VM0015, version 1.1

The methodology of the inventory conducted in the project area was exploratory, with a design of optimal stratified sampling, with samples randomly distributed of vegetation types identified in the project area. Annex D, "Report of the carbon stock of forests of 7 native communities of Ucayali", has the description of the methodology used in carbon inventory. This Annex D, is found in Annex I. Methodology for avoided unplanned deforestation VM0015, version 1.1. It should also be noted that satellite images Landsat 5 were used to determine the types of forest on the project area and leakage belt, which was considered under a physiographic criteria. Table 8 has the types of forest and carbon contents based on the results of the carbon inventory.

Table 8. Carbon stored in the project area

Physiographic Strata	Total (tC/ha)
Low hill forest	171.1
Average hill forest	122.3
Riverbank complex forest	169.7
Knoll forest	141.5
High terrace forest	137.7
Low terrace forest	101.7
Medium terrace forest	147.4

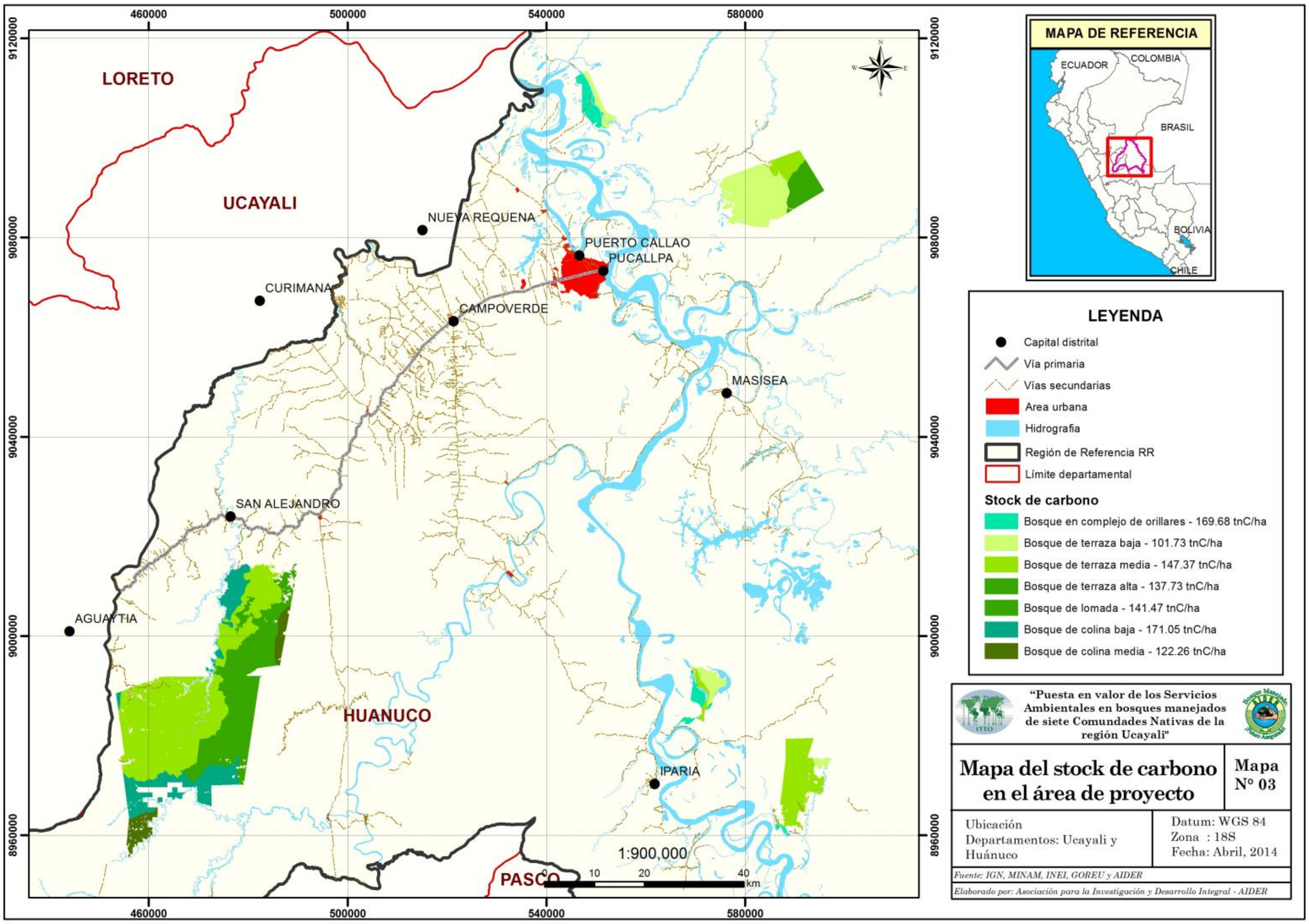

Figure 4. Map of carbon stock

To determine the amount of hectares that will be deforested in next years if there is no project, as well as determinate zones under most risk of deforestation, was applied as provided in the methodology for avoided unplanned deforestation VM0015, version 1.1 and with the help of Dynamic Ego 1.6 software was possible to obtain the desired results. The entire procedure is in the step 4 of Annex I. Methodology for avoided unplanned deforestation VM0015, version 1.1.
The results of modeling for this project are shown in Figures 5, 6 and 7 for 2011, 2016 and 2020.

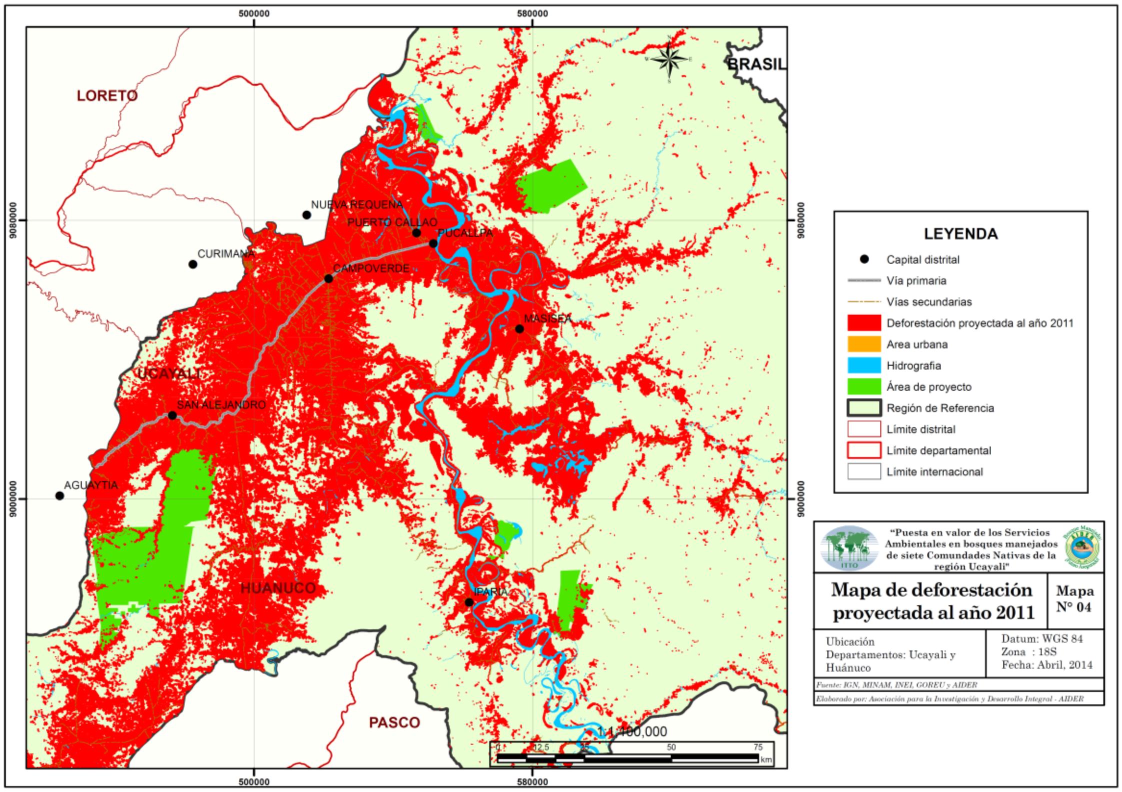

Figure 5. Projected Deforestation Map at 2011

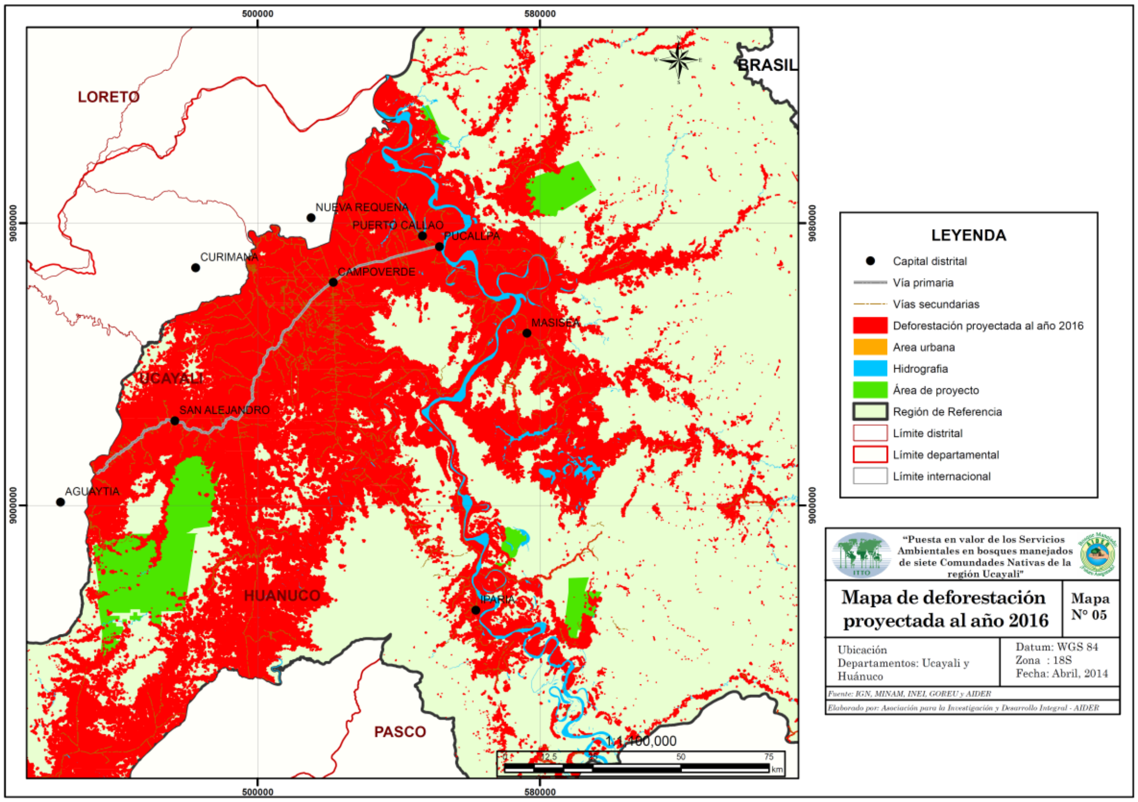

Figure 6. Projected Deforestation Map at 2016

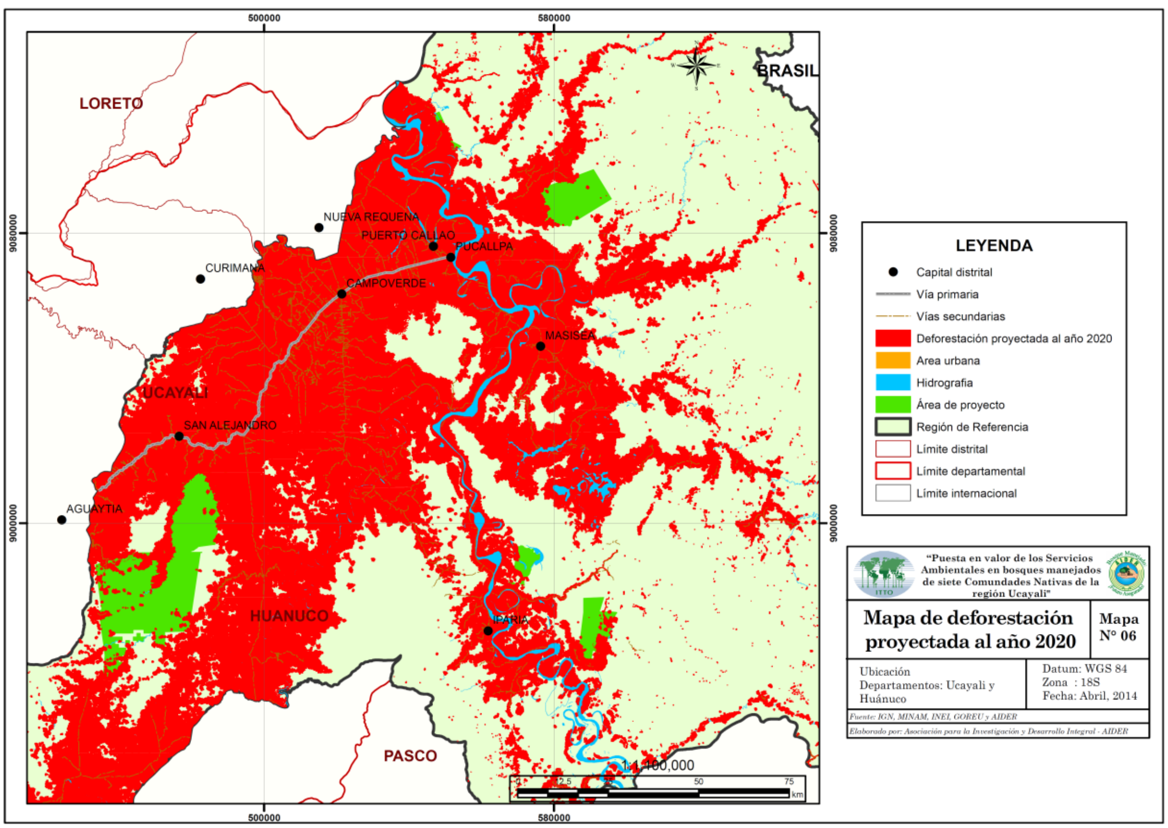

Figure 7. Projected Deforestation Map at 2020

3.2 Project Emissions

Refer to Annex I. Methodology for avoided unplanned deforestation VM0015, version 1.1.

3.3 Leakage

Refer to Annex I. Methodology for avoided unplanned deforestation VM0015, version 1.1

3.4 Net GHG Emission Reductions and Removals

The calculations performed for emission reductions of greenhouse gases are described in Annex I. Methodology for avoided unplanned deforestation VM0015, version 1.1. It should be noted that the calculation of Table 9 does not include the 15% discount credit for risk of non-permanence. The discount is shown in Table 10.

Table 9. GHG emission reductions generated by the project

Year	Estimated baseline emissions or removals (tCO_2e)	Estimated project emissions or removals (tCO_2e)	Estimated leakage emissions (tCO_2e)	Estimated net GHG emission reductions or removals (tCO_2e)
2010-2011	465,901.1	107,157.2	33,544.9	325,198.9
2011-2012	343,801.2	61,884.2	24,753.7	257,163.3
2012-2013	405,739.8	52,746.2	29,213.3	323,780.4
2013-2014	494,918.1	39,593.4	35,634.1	419,690.5
2014-2015	505,188.8	15,155.7	36,373.6	453,659.6
2015-2016	610,794.9	18,323.8	43,977.2	548,493.9
2016-2017	814,117.5	24,423.5	58,616.5	731,077.5
2017-2018	872,380.0	26,171.4	62,811.4	783,397.2
2018-2019	951,659.5	28,549.8	68,519.5	854,590.2
2019-2020	1,059,168.4	31,775.1	76,260.1	951,133.2
Total	**6,523,669.2**	**405,780.3**	**469,704.2**	**5,648,184.7**

The calculation of the Voluntary Carbon Units (VCUs) amount was performed by subtracting 15% to the net annual emission reductions, which is the reserve of credit risk of non-permanence, calculated according to Tool risk of non-permanence AFOLU (VCS Version 3.2); the development of the tool and the calculation of the reserve is in Annex III. Non-Permanence Risk Report – Version 3.1. The VCUs also were calculated for each native community that is part of the project and is shown in Table 10.

Table 10. Voluntary Carbon Units

Period	*Ex ante* net anthropogenic GHG emission reductions annual $\Delta REDD_t$ tCO_2-e	*Ex ante* buffer credits (15%) annual VBC_t tCO_2-e	*Ex ante* VCUs tradable annual VCU_t tCO_2-e
2010-2011	325,198.9	53,811.6	271,387.4
2011-2012	257,163.3	42,287.5	214,875.7
2012-2013	323,780.4	52,949.0	270,831.3
2013-2014	419,690.5	68,298.7	351,391.9
2014-2015	453,659.6	73,505.0	380,154.6
2015-2016	548,493.9	88,870.7	459,623.2
2016-2017	731,077.5	118,454.1	612,623.4
2017-2018	783,397.2	126,931.3	656,465.9
2018-2019	854,590.2	138,466.5	716,123.7
2019-2020	951,133.2	154,109.0	797,024.2

Table 11. Voluntary Carbon Units for each native community

Años	Calleria (tnCO2-e)	Flor de Ucayali (tnCO2-e)	Curiaca (tnCO2-e)	Pueblo Nuevo (tnCO2-e)	Puerto Nuevo (tnCO2-e)	Roya (tnCO2-e)	Sinchi Roca (tnCO2-e)
2010-2011	4,049.9	29,616.9	12,913.4	21,212.7	120,132.9	10,462.5	72,999.1
2011-2012	9,012.6	20,257.3	8,453.2	16,013.3	87,835.1	5,823.2	67,481.1
2012-2013	16,940.6	24,412.5	7,548.9	16,899.4	116,192.3	5,824.9	83,012.8
2013-2014	27,911.1	27,205.4	7,666.4	22,104.3	143,048.2	8,290.8	115,165.7
2014-2015	39,502.5	30,704.3	8,673.1	19,147.0	150,222.1	11,024.6	120,881.0
2015-2016	56,552.5	30,009.0	10,162.7	25,247.5	183,667.6	13,260.5	140,723.4
2016-2017	70,400.3	48,085.4	13,922.0	30,958.5	248,814.1	11,386.0	189,057.1
2017-2018	78,546.1	42,868.8	17,487.1	28,428.4	275,039.6	15,713.2	198,382.7
2018-2019	89,282.1	49,757.3	10,595.3	24,447.2	296,060.1	15,977.3	230,004.6
2019-2020	77,371.1	49,600.3	14,205.0	28,778.5	352,191.4	18,444.0	256,433.8

4 MONITORING

4.1 Data and Parameters Available at Validation

Data / Parameter	Map of forest cover / no forest cover in the reference region 2010
Data unit	ha
Description	Map showing the location of forest land within the reference region, project area and leakage belt at the start of the crediting period.
Source of data	Landsat 5 TM images 2000, 2005 and 2010
Value applied:	1 ha of forest patch as minimum threshold
Justification of the choice of data or description of measurement methods and procedures applied	Interpretation of Landsat 5TM using ENVI 5.1 and ArcGIS 10.2 software. Map an accuracy of 90%, according to the specifications in the methodology for avoided unplanned deforestation VM0015, version 1.1. The validation of deforestation map was made by verifying field points were distributed randomly, allowing calculate the precision and errors of commission and omission by a confusion matrix.
Purpose of Data	Determination of baseline scenario
Comments	-

Data / Parameter	Leakage belt
Data unit	Ha
Description	Boundary map leakage belt.
Source of data	Map database (population centers, primary roads, secondary roads and distance to forest edge)
Value applied:	-
Justification of the choice of data or description of measurement methods and procedures applied	Analysis of mobility through a multi-criteria evaluation, for which factors maps based on fuzzy analysis and data collected through a participatory workshop were used
Purpose of Data	Determination of baseline scenario
Comments	-

Data / Parameter	Map of projected deforestation (2011-2020)
Data unit	ha
Description	Analysis of the projected for each stratum of reference

	region, the project area and leakage belt at baseline deforestation.
Source of data	Map database
Value applied:	-
Justification of the choice of data or description of measurement methods and procedures applied	To determine the projected deforestation based on historical analysis of deforestation in the area of interest and maps factor model was used.
Purpose of Data	Determination of baseline scenario
Comments	-

Data / Parameter	$ABSLRR_t$
Data unit	ha
Description	Annual area of baseline deforestation in the reference region at year t
Source of data	Procesing GIS
Value applied:	-
Justification of the choice of data or description of measurement methods and procedures applied	Results of the projected distribution within the reference region using spatial modeling deforestation. Appendix I. Methodology for avoided unplanned deforestation VM0015, version 1.1, section 4.2 projection of the location of future deforestation
Purpose of Data	Calculation of baseline emissions
Comments	-

Data / Parameter	$ABSLPAi,_t$
Data unit	ha
Description	Annual area of baseline deforestation in stratum i within the project area at year t
Source of data	Procesing GIS
Value applied:	-
Justification of the choice of data or description of measurement methods and procedures applied	Results of the projected distribution within the reference region using spatial modeling deforestation.
Purpose of Data	Calculation of baseline emissions
Comments	-

Data / Parameter	$ABSLPA_{ct,t}$
Data unit	ha
Description	Area of category ct deforested at time t within the project area in the baseline case
Source of data	Field measurements
Value applied:	-
Justification of the choice of data or description of measurement methods and procedures applied	Information obtained through field measurements and Results of the projected distribution within the reference region using spatial modeling deforestation.
Purpose of Data	Calculation of baseline emissions
Comments	-

Data / Parameter	$ABSLLki_{,t}$
Data unit	ha
Description	Annual area of baseline deforestation in stratum i within the leakage belt at year t
Source of data	Procesing GIS
Value applied:	-
Justification of the choice of data or description of measurement methods and procedures applied	Results of the deforestation projected distribution within the reference region using spatial modeling.
Purpose of Data	Calculation of baseline emissions
Comments	-

Data / Parameter	$Ctot_{cl}$
Data unit	$tCO_2e\ ha^{-1}$
Description	Average carbon stock per hectare in all accounted carbon pools of LU/LC class *cl*
Source of data	The information wil be obtained through field measurements.
Value applied:	-
Justification of the choice of data or description of measurement methods and procedures applied	The inventory made for the carbon stock determination was exploratory type with temporary sample plots. As a base was used the stratification and variability of each stratum, which is the principle design of the optimal fixation. The sample plots were circular and concentrically nested. The quantification of the existent carbon was through

	allometric equations and root/shoot ratio. In Annex D, is indicated in detail the whole process.
Purpose of data	Calculation of baseline emissions
Comments	-

Data / Parameter	*$Ctotf_{cl,t}$*
Data unit	$tCO_2e\ ha^{-1}$
Description	Average carbon stock of all accounted carbon pools in non-forest class fcl at time t
Source of data	Bibliographic references J. Alegre and L. Arevalo. Carbon Stocks according to land use at two sites in the Peruvian Amazon.
Value applied:	-
Justification of the choice of data or description of measurement methods and procedures applied	Information from secondary sources for land converted to young secondary forest 3-10 years, pastures and burned areas. Information held in the region of Ucayali.
Purpose of Data	Calculation of baseline emissions
Comments	-

4.2 Data and Parameters Monitored

Data and parameters that will be monitored in each monitoring period are presented in the following tables.

Also indicate that the verification results will be reported creating ex post tables of data activities for each stratum (table 9.b and 9.c); per initial forest class *icl* (tables 11.b and 11.c); per post-deforestation zone z (13.b and 13.c) and also is considerate the analysis on natural disturbances and other catastrophics events.

Data / Parameter	**Forestry cover map (July 2010 – June 2020)**
Data unit	ha
Description	Map showing the location of forest cover in the project area and leakage belt in each verification period.
Source of data	Landsat 8 images.
Description of measurement methods and procedures to be applied	Interpretation of Landsat 8TM using ENVI 5.1 and ArcGIS 10.2 software. The validation of deforestation map will be made by checking field points to be distributed randomly, allowing calculate the precision and errors of commission and omission by a confusion matrix.

Frequency of monitoring/recording	In each verification period
Value applied:	1 he per forest patch as minimum threshold
Monitoring equipment	Computer (desktop / laptop) i7 processor and 6 GB of RAM. ENVI 5.0 and Arc GIS 9.3.1 Softwares GPS Garmin Oregon600
QA/QC procedures to be applied	The minimum map accuracy is 90%, according to the specifications in the the methodology for avoided unplanned deforestation VM0015, version 1.1. The mapping will be according to the Standard Operating Procedures developed for this purpose.
Purpose of data	Calculation of project emissions Calculation of leakage
Calculation method	It will refer to the classified image of the previous year, which will be updated with new areas of "non-forest" generated by the software and knowledge of the area of remote sensing analyst; thus, the area of forest for each monitoring event shall be demarcated. The accuracy of the map is calculated by comparing it with the data field.
Comments	-

Data / Parameter	***ABSLPA**$_{i,t}$*
Data unit	ha
Description	Annual area of baseline deforestation in stratum i within the project area at year t.
Source of data	Procesing GIS
Description of measurement methods and procedures to be applied	Results overlay map of forest cover within the limits of the project area
Frequency of monitoring/recording	In each verification period
Value applied:	Project area boundary in shapefile format.
Monitoring equipment	Computer (desktop / laptop) i7 processor and 6 GB of RAM. ENVI 5.0 y Arc GIS 9.3.1 Softwares GPS Garmin Oregon600
QA/QC procedures to be applied	The Map of deforestation will be validate in the field through an unaligned systematic sampling, and calculation of accuracy and errors of commission and omission by a confusion matrix. The minimum map accuracy is 90%, according to the specifications in the the methodology for avoided unplanned

	deforestation VM0015, version 1.1. The mapping will be according to the Standard Operating Procedures developed for this purpose.
Purpose of data	Calculation of project emissions
Calculation method	The calculation is done using an excel spreadsheet.
Comments	-

Data / Parameter	***ABSLLKLi,*** $_t$
Data unit	ha
Description	Annual area of baseline deforestation in stratum i within the leakage belt at year t
Source of data	Processing SIG
Description of measurement methods and procedures to be applied	Results overlay map of forest coverage limits leakage belt
Frequency of monitoring/recording	In each verification period
Value applied:	Leakage belt boundary in shapefile format.
Monitoring equipment	Computer (desktop / laptop) i7 processor and 6 GB of RAM. ENVI 5.0 y Arc GIS 9.3.1 Softwares GPS Garmin Oregon600
QA/QC procedures to be applied	The Map of deforestation will be validate in the field through an unaligned systematic sampling, and calculation of accuracy and errors of commission and omission by a confusion matrix. The minimum map accuracy is 90%, according to the specifications in the the methodology for avoided unplanned deforestation VM0015, version 1.1. The mapping will be according to the Standard Operating Procedures developed for this purpose.
Purpose of data	Calculation of leakage
Calculation method	The calculation is done using an excel spreadsheet.
Comments	-

4.3 Monitoring Plan

Purpose of the monitoring plan of greenhouse gases:

- Obtain necessary information to estimate the amount of avoided emissions during the crediting period.

- Evaluate the effectiveness of project activities and collect all the information needed to ensure the achievement of the goals of emission reduction of the project.

The monitoring activities include the use of remote sensing as well as in-situ inspections. The combination of both sources have as a result the calculations and estimations required to determine whether the project is being developed in accordance with “the methodology for avoided unplanned deforestation VM0015, version 1.1”, approved by the VCS on December 3, 2012.

Technical description of the monitoring tasks

The change of land use monitoring, based on Landsat 8 images, will take place annually, involving all the changes in forest cover. The deforested area (in hectares) within the project area and leakage belt will be calculated. Also, once generated map of deforestation, it will be validated through a systematic sampling unaligned in field.

Description of the information to be collected

The in-situ monitoring will be conducted by the professional monitoring team and will be conducted in coordination and collaboration with the community that are part of the communal monitoring, who will be primarily responsible for data collection in the field, being trained for this purpose and counting with technical advice while performing the assigned activities.

The Institutional Monitoring, Project Monitoring and Quality Control and Assurance are in charge of the monitoring equipment in the city of Lima. The work of monitoring emissions are shared between both headquarters.

Project monitoring will be done by a professional monitoring team, which will be in the cities of Lima and Pucallpa, under the overall coordination of the Ecosystem Services Program of AIDER. To this will be incorporated the communal monitoring team of the communities that are part of the project.

Management data storage

All the monitoring activities will be implemented using Standard Operating Procedures (SOPs) that will be developed by the project team. The staff will be trained continuously to ensure data quality.

The group of Assurance and Quality Control program audit visits to verify compliance of the SOPs; also select random processes to verify the correct implementation of the SOPs.

The monitoring data are stored and processed in the cities of Lima and Pucallpa.

Organization

The responsible organization of the project data managing will be AIDER, with the support of the 7 native communities, according to their responsibility:

- Responsible for the administration of information: AIDER and the management and administration committee of the REDD+ project “Forest management to reduce deforestation and degradation in the Shipibo Conibo and Cacataibo indigenous communities of Ucayali region”, will be the responsible the administration the information generated for project.

- Data storage and organization: will be the responsibility of the coordinator of GIS AIDER Lima and Pucallpa.

- Processing and GIS data analysis: GIS Specialist headquarters Pucallpa.

Task 1. Monitoring of changes in carbon stocks and GHG emissions for periodic checks

1.1 Monitoring of current changes in carbon stocks and GHG emissions within the project area

1.1.1 Monitoring of project implementation

The project implementation “Forest Managenent to reduce deforestation and degradation in Shipobo Conibo and Cacataibo indigenous communities of Ucayali region”, will be monitored in accordance with provisions in Annex IV "Monitoring Strategy to Reduce Emissions from Deforestation and Forest Degradation in 7 Native Communities."

1.1.2 Monitoring of the change in land use and land cover within the project area

From the date of validation there is no regional system of monitoring, national or jurisdictional land use and land cover change. Therefore, the project proponent will be responsible for monitoring land use and vegetation cover change to the project area and leakage belt. The analysis will cover the control of forest land converted into non-forest land. The methods used to monitor categories of LU/LC change and evaluation of its accuracy, is carried out according to the description in sections 2.4 and 2.5, step 2 of Annex I Methodology for avoided unplanned deforestation VM0015, version 1.1.

Also the project proponent will develop the following technical steps:

Landsat 8 sensor spatial data will be used, since it has a medium resolution (resolution 30m x 30m).

Data collected and analyzed will completely cover:

- Reference region: data will be available for the year of the renewal of the baseline or no farther in the past than the year prior to the renewal of the baseline.
- Project area: data is available for the year in which the monitoring and verification are performed.
- Leakage belt: data will be available for the year in which the monitoring and verification are performed.

a. Change data processing LU/LC

The processing of satellite images will involve geometric correction (orthorectification).

b. Post-processing and accuracy assessment

The post-processing is required to:

- Mapping the changes detected in the images.
- Calculate the area of change to the category "non-forest" within the project area and leakage belt. For the periodic review of the baseline and, also will be made to the reference region.

For the calculation of change category:

1. At the end of each monitoring period
   - Will be calculated the categories area of "forest" and "non-forest" in the project area and leakage belt.
   - Forest Cover Maps for the project area and leakage belt will be updated.
   - The remaining forest area in the reference region will be updated.
2. At the time of the baseline review
   - Will de calculated the area of the categories "forest" and "non-forest" in the reference region, the project area and leakage belt.
   - The forest cover maps for the reference region, the project area and leakage belt will be updated.
   - The total deforested area during the historical reference period in the reference region will be estimated.
3. The data concerning to the change in land-use and coverage in areas covered by shadows/clouds will be estimated.

The overall classification accuracy of the result of above lines described should be 90% or more.

1.1.3 Monitoring changes in carbon stocks and non-CO_2 emissions from forest fires

➢ **Monitoring of changes in carbon stocks**

Inside the project area:

For the project area the estimation of ex-ante carbon stock per classes LU / LC, will not change during the baseline period. We know that the project area has been carried timber harvesting under a community forest management and this will continue during the baseline period. As such, a conservative estimate of anticipated emissions was performed by the use of wood in the project area; this was done with information that includes the management plans of each native community that is part of the project. These are legal documents and provides all information on the wood volume in m^3, to be harvested each year. Most of the management plans have a duration of 20 years. Under this scenario the estimates gave no significant results.

Inside the areas of leakage management:

The leakage management areas is not subject to the reduction of carbon stock in the project baseline according to the *ex – ante* evaluation. On the contrary, it is expected that increase carbon stocks in these areas, due to project activities, but it is omitting in a conservative way. Therefore, no carbon stocks will be monitored within the areas of leakage management.

Inside the leakage belt:

Carbon stocks are not subject to monitoring within the leakage belt, as this is optional.

- **Monitoring in non-CO2 emissions from forest fires**

  The non-CO2 emissions from forest fires will not be monitored because it was not considered in the baseline scenario.

1.1.4 Monitoring impacts of distribution and other catastrophic events

Special emphasis is placed on the procedures for mapping the changes of LU/LC, take into account all changes in coverage, whether natural or anthropogenic causes. As far as the new software be available to measure small-scale changes in coverage, will be incorporated into the monitoring procedures. Moreover, the field monitoring carried out by the villagers themselves, with the advice of the professional team, will focus on the detection and evaluation of natural disturbances in case they occur.
If events are recorded within the project area resulting in a degradation of the carbon stored (hurricanes, earthquakes, volcanic eruptions, floods, severe droughts, earthquakes), the disturbed area and the area of each post-disturbance stratum will be defined using the same procedures given to monitor the LU/ LC changes; subsequently, the resulting emissions will be counted.

Depending on the type of disturbance occurred, will be decided whether is conservatively assumed that the reservoir of living and dead vegetation naturally post-disturbance is zero, or if it is preferable to measure the post-disturbance carbon content.

1.1.5 Total estimated ex-post of actual net carbon stock changes and GHG emissions in project area

The relevant tables are updated with the new measurements of changes in carbon stocks and GHG emissions in each monitoring period. The results are summarized in Table 29, set by the methodology.

1.2 Monitoring of leaks

1.2.1 Monitoring changes in carbon stocks and GHG emissions associated with leakage prevention activities

No changes are expected in carbon stocks nor in GHG emissions from the established activities for preventing leakage, because the areas where the activities were held, are considered non-forest lands at the beginning of the project. And it is expected that with the implemented activities, the carbon stocks increases in these areas. Therefore, changes in carbon stocks and GHG emissions associated with leakage prevention activities will not be monitored.

1.2.2 Monitoring the decrease in carbon stocks and the increase of GHG emissions due to activities of leakage displacement

- **Monitoring changes in carbon stock**

Deforestation above baseline in the leakage belt areas will be considered as leakage by activity-shifting. Activity data for the leakage belt area will be determinate using the same methods applied for the monitoring of deforestation activity data.

The results of the *ex post* estimations of changes in carbon stocks will be reported using the same format used in the *ex ante* changes in carbon stocks of the baseline in the leakage belt as is detailed in Annex I. Application of methodology for avoided unplanned deforestation VM0015, version 1.1.

Leakages will be calculated between the difference of the *ex ante* estimations and the *ex post* measures.

Only will be monitored leakage by shifting of *ex ante* activities.

- **Increase monitoring in GHG emissions**

Emissions from forest fires were not included in the baseline, therefore are not monitored.

1.2.3 Total estimated ex-post leak

The results obtained by the *ex post* estimates leakage through monitoring will be summarized using the same table format used in the *ex ante* evaluation and are presented in Table 35 - Total Estimated *ex - post* leakage.

1.3 *ex - post* calculations of reductions of net anthropogenic GHG emissions

The calculation of net reduction emissions in ex-post anthropogenic GHG is similar to the *ex-ante* calculation with the only difference that the *ex-post* estimate changes in carbon stocks and GHG emissions should be used in the case of project scenario and leakage.

Ex-post estimated calculations of net anthropogenic GHG emissions and calculations of Verified Carbon Units (Vcut and VBCt), will be reported using the same *ex- ante* table number 36.

Task 2. Review of the baseline projections for future periods established in the baseline

The established baseline for the project "Forest management to reduce deforestation and degradation in Shipibo Conibo and Cacataibo indigenous communities of Ucayali Region" is 10 years and will be revised in 2020. It should indicate that if to this date, is not yet a regional baseline, national or jurisdictional developed, the project proponent will revise and update the baseline again. Also be considered in the review of the baseline the following tasks:

2.1. Update information of agents, drivers and fundamental causes of deforestation.
2.2. Adjust the component of change in land use and land cover baseline.
2.3. Adjust the carbon component of the baseline.

5 ENVIRONMENTAL IMPACT

From the results of the Impact Assessment can be concluded that from the twenty activities evaluated, according to the 4 established components in the project strategy, 17 of them are classified as favorable among the very insignificant up highly significant rank, and 3 of them are unfavorable among the ranks of very little significant and moderately significant.

Among the results of the 17 activities classified as positive is necessary to mention those who obtained a higher value standing out from the others, among them are the following:

- Conducting the participatory microzonification of the 7 Native Communities 1:20,000. Land use and vegetation. This activity is actually beneficial to communities since the capacity of land use and soil quality are impacted favorably, the economic aspect is also wrapped as to be able to have a better projection of the state and land use can increase the efficient use of land environmental factor

- Improve and implement agricultural techniques for both food and commercial security. The current status of communities with respect to their agricultural development is quite empirical, thanks to this activity the soil factor increases its quality due to the development of appropriate agricultural techniques for each identified area, which in turn not only increases economic activity community but also the quality of health to build sustainability in their food security.

- Develop ecological tourism activities in communities with potential. Economically the community benefits entering to the ecological tourism market, which promotes a series of sustainable activities that improve the status of the flora.

- Design and implement participatory training plan and manuals on productive and environmental aspects of communities based on the methodology of field schools. This activity is carried in a very practical way and participative, allowing the integral community involvement and develop its administrative and organizational efficiency.

- Articulate the agricultural and forest products in the local and national market. Many communities require activities that promote economic development, this activity is one of them, allowing them to expand their market prospects and stop funding their local economy of sporadic and unreliable income.

- Build strategic alliances between communities and the state to strengthen the management of natural resources. The impact generated by this activity allows them to have more control in managing exerted by the community on their resources, in turn the community organization is strengthened with state intervention.

The 3 activities that qualify as unfavorable are not very significant since they are mitigated in the same development, these activities are:

- To develop agroforestry, silvopastoral and good farming practices. The development of this activity generates soil compaction in a not very significant way, surface waters are impacted by livestock activity in a not very significant form, these activities are mitigated with good practice that are planned.

- Encourage the community forest management (timber and non-timber). The development of reduced-impact forest management favors the assessment of this activity, thus impacts generated are specific but reversible shortly.

- Border establishement and placement of landmarks in communal boundaries. The border establishment generates a not very significant negative impact on flora, it has very short duration and significantly benefits the impact of the security and personal integrity.

  The methodology of environmental impact assessment is described in Annex V "Environmental Impact Assessment of activities to reduce emissions from deforestation and degradation in 7 Native Communities."

6 STAKEHOLDER COMMENTS

Studies conducted of scenarios and social context analysis, has considered to involve settlements of interest for the project. Information of the adjoining of the project area was collected, also has conducted interviews with key personalities of each sector.

These interviews were conducted in order to obtain reference information at the same time, as it not only proceeded to give and receive information relating to the project, but also were asked to give their opinion about the possibles positives and/or negative impacts of the project and raise their concrete proposals on what activities would be suitable to their conditions and expectations. These approaches to population lead to greater openness to dialogue and creating an atmosphere of trust and a respect with neighboring families to channel working agreements to avoid deforestation.

Under the interviews and workshops that were developed at the beginning of the project, we can highlight the information gap that existed on REDD+ projects. Native communities initially were poorly informed, they believed that these projects do not allow them to achieve sustainable forest management of their forests, raising doubts regarding the limitation of its rights over land use. This was clarified in the workshops held in which was announced that forest management activity would be tha base of the REDD+ project. With the information about REDD+ projects clarified, were arriving new questions from native communities, questions and concerns focused on the implementation of the project when this wil be validated, also born the need to know the whole issue of the sale of carbon credits and as is the operation of this mechanism. Al these issues were discussed and explained. Participartion of the native communities was thriugh their representatives in this case the head of community, lieutenant governor and municipal agent, in some workshops also included the participation of organizations like Interethnic Association for the Development of the Peruvian Rainforest - AIDESEP Ucayali.

All these spaces and participatory processes began in June 2012, date on which the native communities have a first contact with the project developers. Since then, the project design work began with the participation of those involved. This entire process have been implemented in 2013, ending in May 2014, starting the project validation process. During the project design process was achieved clarify doubts and generate commitments such as to continue working the forests in a sustainable way.

In summary we can say that the people have a clear understanding of what REDD+ projects involve from the design to the implementation. The comments obtained from the populations involved were basically, know the benefits to be gained with the project and how would be the distribution, how to keep working on sustainable forest management of their forests, the marketing of carbon credits and a concern about the existence of any negative impacts that could happen from the project to populations. All this comments that in general were basically questions from the populations, wanting to know how the projects work. These approaches to the populations through workshops and meetings have to greater openness to dialogue and the creation of an atmosphere of trust and respect to channel arrangements agreed work.

BIBLIOGRAPHY

AIDER. 2013. Diagnostico Social Económico en dos Comunidades Cacataibo. 2013. Pucallpa.

Andaluz, C. 2009. Manual *de Derecho Ambiental. Proterra* Iustia ed. Lima, Perú. 958p

Angelsen, A. and D. Kaimowitz, 1999. Rethinking the causes of deforestation: lessons from economic models. The World Bank Research Oberver, Vol. 14, No. 1.

Banco Central de Reserva – BCR. 2012. "Informe Económico y Social del Encuentro Económico Región Ucayali". Ucayali – Perú. Documento en línea disponible en: http://www.bcrp.gob.pe/docs/Proyeccion-Institucional/Encuentros-Regionales/2012/Ucayali/Informe-Economico-Social/IES-Ucayali.pdf.

Climate Investment Funds. 2013. Forest Investment Plan Peru. 121 p.

Constitución Política del Perú. 1993. Congreso de la República del Perú. Lima, Perú. 60p.

Convenio Interinstitucional Ministerio de Energía y Minas – Gobierno Regional de Ucayali. 2007. "Caracterización del departamento de Ucayali, con fines de ordenamiento territorial". Pucallpa – Perú. Documento en línea disponible en: http://www.ibcperu.org/doc/isis/12377.pdf.

Domus (Consultora Ambiental) para Pacific Rubiales Energy. 2011. "EIA – Proyecto de Prospección Sísmica 2D y Perforación Exploratoria, Lote 138". Lima – Perú.

Guevara, Susana. 2009. "Ucayali: análisis de situación en población". Ucayali – Perú. Documento en línea disponible en: http://www.unfpa.org.pe/publicaciones/publicacionesperu/UNFPA-CIES-ASP-Ucayali.pdf.

Ley de derecho a la consulta previa a los pueblos indígenas u originarios, reconocido en el convenio No 169 de la Organización Internacional del Trabajo. Congreso de la República. Lima, Perú.

Ley N° 26821. Ley Orgánica para el Aprovechamiento Sostenible de los Derechos Naturales. Lima, Perú. 9p.

Ley N° 27308. 2000. Ley Forestal y de Fauna Silvestre. Diario Oficial El Peruano. Lima, Perú. 7p.

Ley N° 28611. Ley General del Ambiente.2005. Lima, Perú. 34p.

Ley N° 29763.2011. Ley Forestal y de Fauna Silvestre. Diario Oficial El Peruano. Lima, Perú.

Ley de Cooperación Técnica Internacional, Decreto Legislativo Nº 719.

Ley Nº 26821 Inversión Privada en el Desarrollo de las Actividades Económicas en las Tierras del Territorio Nacional y de las Comunidades Campesinas y Nativas. Lima, Perú. 4 p.

Ley N° 29785. 2011. Ley del Derecho a la Consulta Previa a los Pueblos Indígenas u Originarios, reconocido en el Convenio 169 de la Organización Internacional del Trabajo (OIT). Diario Oficial El Peruano. Lima, Perú.

MINAM (Ministerio del Ambiente). 2011. Volumen IX Diversidad Biológica y Áreas Naturales Protegidas. Compendio de la Legislación Ambiental Peruana. Dirección General de Políticas, Normas e Instrumentos de Gestión Ambiental del Ministerio del Ambiente. Lima Perú. 284p.

MINAG (Ministerio de Agricultura, PE) s.f. Reglamento de la Ley Forestal y de fauna Silvestre 27308 y su modificatoria. Lima, Perú. 106 p.

Ministerio de Justicia y Derechos Humanos. 2013. Diagnostico Situacional del Crimen en el Perú. Documento de trabajo Nº 03. Lima. Perú 48 p.

OIT (Organización Internacional del Trabajo, CH). 2007. Convenio N° 169sobre Pueblos Indígenas y Tribales en Países Independientes. Oficina Regional para América latina y el Caribe. 2a. ed. 106

Organización Regional AIDESEP Ucayali-ORAU. 2012. “Sistematización de la experiencia de la Veeduria Forestal Comunitaria en la Región Ucayali” MINAM, MINAG, VFC-ORAU. Proyecto “CGP/GLO/194/MUL”. Lima, 59 p.

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