REDD PROJECT IN BRAZIL NUT CONCESSIONS IN MADRE DE DIOS

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LIST OF ACRONYMS

ACCA	:	Asociación para la Conservación de la Cuenca Amazónica (NGO)
AIDER	:	Asociación para la Investigación y Desarrollo Integral (NGO)
AOP	:	Annual Operating Plan
APAFA	:	Asociación de Padres de Familia (Parents Association)
ASCART	:	Asociación de Castañeros de la Reserva Tambopata (Association of Brazil nut concessionaires of the Tambopata Reserve)
BAM	:	Bosques Amazónicos SAC
BN concessions	:	Brazil nut concessions
CAMDE	:	Conservación Ambiental y Desarrollo en el Perú (NGO)
Castañeros REDD Project	:	Abbreviation for the Proposed "REDD Project in Brazil Nut Concessions in Madre de Dios"
CDC	:	Centro de Datos para la Conservación (research center of the La Molina National Agrarian University)
CEFE	:	Competencias como base de la Economía a través de la Formación de Emprendedores/as (Competency-based Economies through Formation of Enterprise)
COFOPRI	:	Organización para la Formalización de la Propiedad Informal (Organization for the Formalization of Informal Property)
DBH	:	Diameter Breast Height
DGIA	:	Dirección General de Información Agraria (General Directorate of Agricultural Information)
ECOMUSA	:	Empresa Comunal de Servicios Agropecuarios (Communal Agricultural Services Company)
EIA	:	Estudio de Impacto Ambiental (Environmental Impact Study)
FEDECAM	:	Federación Departamental de Castañeros de Madre de Dios (now FEPROCAMD)
FEPROCAMD	:	Federación Departamental de Productores de Castaña de Madre de Dios (Departmental Federation of Brazil nut Producers of Madre de Dios)
FMP	:	Forest Management Plan, also called General Forest Management Plan (PGMF in Spanish)
GOREMAD	:	Gobierno Regional de Madre de Dios (Regional Government of Madre de Dios)
GRADE	:	Grupo de Análisis para el Desarrollo (private research center of environmental, social and economic themes)
IIAP	:	Instituto de Investigaciones de la Amazonia Peruana (Research Institute of the Peruvian Amazon)
IIRSA	:	Iniciativa para la Integración de Infraestructura Regional Sudamericana (Initiative for South American Regional Infrastructure Integration)
INEI	:	Instituto Nacional de Estadística e Informática (National Institute of Statistics and Information)
INRENA	:	Instituto Nacional de Recursos Naturales (National Institute of Natural Resources)
IOH	:	Inter-Oceanic Highway, also called IIRSA Highway
IRR	:	Internal Return Rate
LB	:	Leakage Belt
MARC	:	Mecanismos Alternativos de Resolución de Conflictos (Alternative Mechanisms for Conflict resolution)
MDD	:	Department of Madre de Dios
MINAG	:	Ministerio de Agricultura (Ministry of Agriculture)
MINAM	:	Ministerio del Ambiente (Ministry of Environment)
PAMA	:	Environmental Management and Adaptation Plan
MINEM	:	Ministerio de Energía y Minas (Ministry of Energy and Mines)
OSINFOR	:	Organismo de Supervisión de los Recursos Forestales y de Fauna Silvestre (Agency for Supervision of Forest Resources and Wildlife)

PA	:	Project Area
PAMA	:	Plan de Adecuación Medio Ambiental (Environmental Management and Adaptation Plan)
PNA	:	Protected Natural Areas
PROCLIM	:	Programa de Fortalecimiento de Capacidades Nacionales para manejar el Impacto del Cambio Climático y la Contaminación del Aire (Program for Strengthening National Capacity to manage the impact of Climate Change and Air Pollution)
RONAP	:	Recolectores de Nuez Amazónica del Perú (Peruvian Brazil Nut Harvesters)
SENASA	:	Servicio Nacional de Sanidad Agraria (National Service of Agrarian Health)
SOP	:	Standard Operating Procedures (In Spanish: POE)
SPDA	:	Sociedad Peruana de Derecho Ambiental (Peruvian Society of Environmental Law)
HT	:	Total Height
UNALM	:	Universidad Nacional Agraria La Molina (La Molina National Agrarian University)
UNAMAD	:	Universidad Nacional de Madre de Dios (National University of Madre de Dios)
SWOT	:	Strengths, Weaknesses, Opportunities and Threats
ZEE	:	Ecological Economic Zoning

1 PROJECT DETAILS

1.1 Summary Description of the Project

The "REDD Project in Brazil Nut Concessions in Madre de Dios", proposed by Bosques Amazonicos SAC (BAM), is located within the political boundaries of the Provinces of Tambopata and Tahuamanu, Department of Madre de Dios.

The department of Madre de Dios, considered Peru's richest in biodiversity, runs the risk of losing its wealth of forest resources and biodiversity primarily due to the deforestation caused by ranchers and farmers. The project proponent and its implementation partner, the Departmental Federation of Brazil nut Producers of Madre de Dios, are committed to reduce emissions that deforestation could produce within the project areas, and implement a socio-environmental management plan that will also contribute to the economic development of the Brazil nut concessionaires.

Using the Deforestation Model developed by BAM, in collaboration with Carbon Decision International and AIDER, the deforestation rate in the Madre de Dios department was estimated. This model was based on the analysis of three Landsat satellite images of from the years 2000, 2005 and 2008, which revealed different deforestation rates in the department. In the project area, approximately 1.23% of forested land will be lost per year.

The project areas correspond to 377 Brazil Nut Concessionaires of the FEPROCAMD and make up a total 291,566 hectares. The estimated deforestation corresponding to the Area of the Project, according to the model of the 31 years of the crediting period, totals 100,297 hectares, which represents 34.40% of the area of the project.

A study of the causes and consequences of deforestation in the project area was carried out, a survey of concessionaires was conducted and the behavior of the main deforestation agents in the project area was observed. Based on these studies, a number of activities were established to help achieve the proposed objective to "Considerably reduce greenhouse gas emissions caused by deforestation agents in the Concessions within the project area and mitigate project leakage".

The design of the proposed REDD Project was based on the modular methodology developed by Avoided Deforestation Partners, approved by VCS on December 3, 2010. The steps defined for each of the mandatory modules were followed, in accordance with Module REDD-MF for unplanned deforestation.

Using this methodology, the total Reduction of Emissions in the Project Area during the first ten years has been estimated to be 21'925,266 tCO_2-e equivalents. This includes the discounts due to leakage and the risk buffer: 2'238,559 tCO_2-e and 6'040,956 tCO_2-e respectively.

During the entire credit period of 31 years, these reductions will total 64'668,764 tCO_2e, with an average of 2'086,089 tCO_2-e/year. This total takes into consideration the discounts corresponding to the buffer risk of the project and the possible leakage: 17'832,571 and 6'661,520 tCO_2-e respectively.

It is worth noting that the uncertainty of the project was calculated to be less than 15%, so it was not necessary to adjust the value of the total emission reductions found. The uncertainty value is 14.45%.

1.2 Sectorial Scope and Project Type

According to the decision tree presented in the Methodology Framework, the project qualifies under the VCS category *Avoided Unplanned Deforestation*.

Table 1. Methodological Framework

Is the forest land expected to be converted to non-forest land in the baseline case?			
YES		NO	
Is the land legally authorized and documented to be converted to non-forest?		Is the forest expected to degrade by fuel wood extraction or charcoal production, in the baseline case	
YES	**NO**	YES	NO
Avoided planned deforestation	**Avoided unplanned deforestation**	Avoided forest degradation	Proposed project is not a VCS REDD activity currently covered by the module framework

Source: REDD Methodology Framework (REDD-MF)

Since the proposed areas are constituted as Brazil nut concessions, granted through a 40-year contract with the Peruvian Government, it is expected that activities incompatible with Brazil nut gathering will not be planned inside of the concessions. Nevertheless, a survey was carried out to identify possible areas of planned deforestation, by revising current regional plans. Occurrence of degradation by fuelwood extraction and production of charcoal was also analyzed by revising regional statistics.

The results of this analysis[1] show that neither planned deforestation driven by urban expansion, large-scale agriculture/cattle ranching, nor degradation is expected to occur in the PA.

A special consideration was taken with mining. There are currently mining petitions (1,705.1 ha) and concessions (6,083.7 ha) inside the permitted mining areas, according to the Emergency Decree 012-2010, that overlap the PA in the southern section. Even though a mining area can be legally recognized, the concessionaires have to comply with several requirements to be able to develop the activity in a legal way. For miners, this means that they must undertake PAMAs, get permission from the Brazil nut concessionaires (or from any others with whom they overlap), a favorable technical opinion from the Forestry authority, and comply with many other stipulations.

[1] Further review in REDD-MF module

The ED gives preferential rights to whoever had been previously any kind of right to develop an activity, which in each case belongs to the Brazil nut concessionaries. Specifically, the ED mentions in Article 7 that those who already hold the rights for mining activity can only implement their activities when they have previously obtained an environmental certificate. In areas where mining petitions overlap with forest concessions, this certificate may only be approved if they receive a positive technical opinion from the National Forest Authority, which is unlikely to happen as the Forest Authority has been prioritizing forest concessions for decades. An additional requirement states that once miners have the environmental certificate approved, they further need to obtain the right to use the land surface, which is already given to the Brazil Nut Concessioners.

Even though the ED causes a significant threat to Brazil nut concessions that are overlapped with mining petitions, the ED also gives a legal protection to concessionaries that, of course, needs to be enforced with the support of the project activities. The project has already accounted for this with the implementation of a Control and Surveillance System, which includes legal support and alliances with the Police and the Attorney to guarantee the enforcement of the law. Additionally, it must be highlighted that new petitions are forbidden in areas outside those allowed in ED. (See Annex 1)

1.3 Project Proponent|

Bosques Amazónicos (BAM)

Bosques Amazónicos is a Peruvian company established in 2004, whose mission and vision is to lead the value maximization of forests in Latin American, by the recovery and sustainable management of said forests, thus contributing towards biodiversity conservation and creating real benefits for the population and for the company.

The company is in charge of developing forest carbon projects, such as Reduced Emissions from Deforestation and Forest Degradation (REDD) and carbon sequestration through reforestation projects.

BAM's staff has ample experience in the design and implementation of AFOLU projects as BAM has validated under VCS and CCB standards the first reforestation project in Peru (and first in the world with native species), which is now preparing for its first verification.

Part of BAM’s team was involved in the first REDD project in Peru validated under CCB standards (Madre de Dios REDD Project), the first reforestation project validated under CDM standards (Dry Forest Reforestation Project), with the additional experience of FSC sustainable forest management projects (the first two FSC certification processes, one for Brazil nut harvesting and the other for logging with indigenous communities), among others. Also, part of our staff was part of the Peruvian Official Delegation in the UNFCCC COP 15 in Copenhagen and is the advisor of the Madre de Dios Regional Government in the GCF Taskforce.

Main duties

- Provide ownership titles to commercialization rights of environmental services related to carbon in the Project area.
- Finance the project.
- Responsible for the implementation and monitoring of the project activities.
- Responsible for the technical process to certify carbon credits, including validation and verification of the Project.
- Responsible for selling carbon credits.

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1.4 Other Entities Involved in the Project

IMPLEMENTATION PARTNER

a) Federación de Productores de Castaña de Madre de Dios (FEPROCAMD)

The FEPROCAMD was established on September 12, 2009 and was duly registered in the Public Registry on April 15, 2010. This is the main organization representing most of the concessionaires of forestry products other than wood (i.e. Brazil nuts) in Madre de Dios, and it gathers the associations formed by people and families working on extracting, harvesting, transforming and selling of Brazil nuts. Concession agreements were granted to those associations between 2002 and 2007.

The FEPROCAMD members are listed below:

i) Association of Brazil nut and Agro forestry Growers of Alerta (APROCAAL)
ii) Association of Forestry and Agro forestry Growers and Extractor from La Novia
iii) Association of Brazil nut Growers and Extractors from Loreto (APECAL)
iv) Agro forestry Brazil nut Association from Varsovia (ASOCASVAR)
v) Association of Brazil nut Growers from Alegría
vi) Agro forestry Association Alegría, Alto Malecón, San Carlos and nearby areas
vii) Agro forestry Brazil nut Association Carmen Rosa (ASOCAR)
viii) Association of Brazil nut Growers and Extractors of Mavila (APECMA)
ix) Association of Brazil nut Growers and Extractors of Planchón (APECAPLAN)
x) Association of Brazil nut Producers and Extractors of Río Pariamanu and affluent (APECARPA)
xi) Association of Brazil nut Growers and Extractors from Shiringayoc (APECASHIR)

Main Duties inside the federation

- Integrate ideas and initiatives from the Associations duly represented, in order to contribute towards the economic, social and cultural development of the people and families that work on activities related to the extraction, collection, transformation and selling of Brazil nuts in the department of Madre de Dios.
- Promote reforestation activities and the integrated use of forestry resources included in the Brazil nut concessions in accordance with the legal framework in force and effect.
- Protect the interests of the Associations included, complying with the adopted agreement for mutual benefit.
- Defend the rights of each member of the Association and provide support for all procedures done with the political, administrative and legal authorities, if common interests are the same as those of FEPROCAMD and do not contradict them.
- Support participating associations in all issues related to regular development, such as budget planning, program execution, plans, projects, activities and other productive actions developed alone or with the joint collaboration of any public or private agencies.
- Promote and perform actions and initiatives that may help to obtain the technical and financial support of government institutions and of national or international private organizations that help to comply with the objectives of FEPROCAMD.
- Foster awareness of concessionaires, holders of ownership titles and legal holders of Brazil nut forest areas in Madre de Dios, all of which form the participating associations. They must respect the proper and sustainable use of forestry resources and the importance of conservation and foster the management and sustainable use of natural resources.
- Solve all questions posed to the participating associations regarding technical, legal and tax problems, among others, that may come up.
- Foster cooperation, solidarity and reciprocity among participating associations, thus promoting good relations among the members.
- Promote formalization of the economic activities that participating associations and its members may perform, in relation to Brazil nut management and use.
- Raise awareness among the population regarding the economic and social importance of conservation, management and sustainable use of Brazil nut forests in the region.
- Promote formalization of Brazil nut forests holders, encourage the signing of concession agreements of non-timber forestry products with the Peruvian government, and overcome any overlapping concessions with farming producers, concessionaires of timber forestry products and others.
- Promote best practices to harvest, dry, manage and transform Brazil nuts by learning new technologies, enhancing on-going training and promoting the use of modern machinery and equipment.
- Foster the conservation and afforestation of Brazil nut forests, improving their density, fighting against logging and avoiding forest fires.
- Foster the protection and defence of local Brazil nut growers against the illegal importation of Brazil nuts and price agreements.
- Other duties that may be approved by the FEPROCAMD General Assembly.

Contact Person

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b) Conservación Ambiental y Desarrollo en el Perú (CAMDE PERU)

CAMDE PERU is a Peruvian NGO that seeks to contribute to the conservation of biodiversity in Peru by promoting sustainable management of natural resources and generating profits in the local population. This institution has been working in Madre de Dios for the past 4 years and has developed several projects of conservation and sustainable management with different regional producers of palms, Brazil nuts, Shiringa (latex), etc. It also has presence in the region of Cuzco. CAMDE PERU has been an ally of BAM since the beginning of the project.

Main Duties

- Give technical support to the Brazil nut concessionaires in activities such as: redefinition of boundaries, preparation of AOP and actualization of documents of FMP.
- Present monthly reports of its activities to BAM's office in MDD.

Contact Person

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OTHER ENTITIES

Carbon Decisions International (CDI)

CDI is a recognized independent advisory company specializing in the design of projects, programs and policies that reduce greenhouse gas emissions in the forestry and land-use sector. Their main goal is to contribute meaningfully to the conservation and restoration of forests for climate change mitigation, biodiversity conservation, livelihood improvement and sustainable development.

This institution has participated in the development of the model of deforestation of the Madre de Dios Region, by elaborating the draft version and by giving technical advice for the completion of the final version of the model.

Main Duties

- Support BAM in the elaboration of the draft version of the deforestation model using DINMICA EGO software for the MDD region.

Contact Person

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1.5 Project Start Date

The Project start date is 24/09/2009, the date when the Association Contract between BAM and FEPROCAMD was executed for the joint development of the REDD Project in Brazil nuts concessions.

1.6 Project Crediting Period

Start date: 01/ 01/ 2010
End date: 31/ 12/ 2040
Crediting Time: 31 years
The Project Crediting Period start date coincides with the beginning of the first Monitoring Period.

1.7 Project Scale and Estimated GHG Emission Reductions or Removals

Considering that the project estimates the removal of more than 1 million tons of CO_2 per year (the top limit according with VCS Definitions version 3), it can be classified as a:

Table 2. Scale of the Project

Project	
Mega-project	x

Below is an estimate of the Net GHG Emission Reduction for the baseline period (shaded portion of the table) and for the entire crediting period (up to the year 2040). The cumulative total is 21'925,266 tCO_2-e and 64'668,764 tCO_2-e respectively. This total already considers a deduction for the quantities lost due to possible leakage inside and outside of the Leakage Belt and for the buffer withholding percentage, which represents 20% of total credits.

Table 3. Estimated Annual GHG Emission Reductions

Year	Estimated GHG emissions reductions and removals (tCO_2-e)
2010	**2,222,049**
2011	**2,222,670**
2012	**2,184,278**
2013	**2,344,471**
2014	**2,261,405**
2015	**2,305,004**
2016	**2,170,089**
2017	**2,075,694**
2018	**2,163,232**
2019	**1,976,375**
2020	**1,937,203**
2021	**1,934,450**
2022	**2,046,315**
2023	**1,964,013**
2024	**2,076,329**
2025	**2,063,281**
2026	**2,078,474**
2027	**2,084,112**
2028	**2,131,214**
2029	**1,968,690**
2030	**2,076,265**
2031	**2,107,481**
2032	**2,108,958**
2033	**2,071,472**
2034	**2,045,776**
2035	**2,234,499**
2036	**1,992,777**
2037	**2,073,294**
2038	**1,948,177**
2039	**1,940,581**
2040	**1,860,136**
Total	**64,668,764**

1.8 Description of the Project Activity

In the face of the deforestation trend - powered by the opening and improvement of the Interoceanic Highway, and almost not repelled given low economic returns and the few possibilities to access a credit system, which do not allow concessionaires to improve their activity - the Brazil nut areas would be easily invaded and activities other than forestry would be carried out. Therefore, Brazil Nut Concessionaires are in need of developing Forest Management and of implementing strategies towards increasing their revenues. Furthermore, they need to improve their capacity to effectively protect their concessions from the deforestation risk.

For this reason, several project activities were designed to reduce the deforestation rate inside the PA. These proposed activities have been divided in 3 categories: Climate, Community and Biodiversity, according to the main impact of each activity. Consistent with our baseline analysis that deforestation is driven by the higher profitability of alternative land use activities, our approach is to focus on the increase of our partners' incomes by improving forest management (adding value through processing and exporting, reforestation and certification, among others) while at the same time, making it more difficult for other actors to clear the land through a permanent surveillance system, legal advisory, etc.

The general and specific objectives, as well as the activities and their expected results, are arranged in Table 4 for review. The activities are further explained in this section.

Table 4. Organization of Project objectives, expected results and activities

General Objective	Categories	Specific Objective	Expected Results	Actions
Reduce Deforestation while contributing to the development of local people and preservation of biodiversity	Climate	By the seventh year of the project´s lifetime, deforestation will be minimum or even zero, and in the Leakage Belt, deforestation will have a decreasing trend	RCL1: Reduction of GHG emissions in the Brazil Nut Concessions	A1: Implementation of the Forest Monitoring and Surveillance System
				A2: Training deforestation agents in alternative and sustainable productive initiatives
		Increase carbon stocks in the Project Area	RCL2: Carbon reserves have been increased in the Project Area	A3: Training and establishment of community tree nurseries
				A4: Forest enrichment through plantation of native species
	Community	By the end of the first year, the concessioners will be legally organized and represented, and will also have their management documents updated	RCo1: FEPROCAMD is a formal and efficient organization in the management of its areas	A5: Organization and legal formalization of their grassroots organizations
				A6: Implementation of the Early Alert System
				A7: Implementation of the Conflicts and Complaints Management System
		By the fifth year, income from concessioners and local people will be significantly increased	RCo2: Brazil Nut Concessioners produce high quality products with a defined market	A8: Implementation and Start-up of the Brazil Nut Processing Plant
				A9: Certification of their products and processes (organic, FSC, fair trade)
			RCo3: The Government of Madre de Dios and local communities have strengthened their capacities in Sustainable Forestry Management, and the local communities have raised their living standards	A10: Training of actors in forestry management, reduced-impact techniques and use of the Alert System
				A11: Establish cooperation agreements and alliances with the Government of Madre de Dios and other local entities.
				A12: Local Campaigns for preservation of the Amazon Rainforest, its goods and services
	Biodiversity	Guarantee and maintain ecological integrity in Brazil Nut Concessions and contribute to the preservation of biodiversity in the Leakage Belt	RB1: Biodiversity and water quality in the Project Area have been preserved	A13: Improve Forestry Management in Brazil Nut Concessions

CLIMATE CATEGORY ACTIVITIES

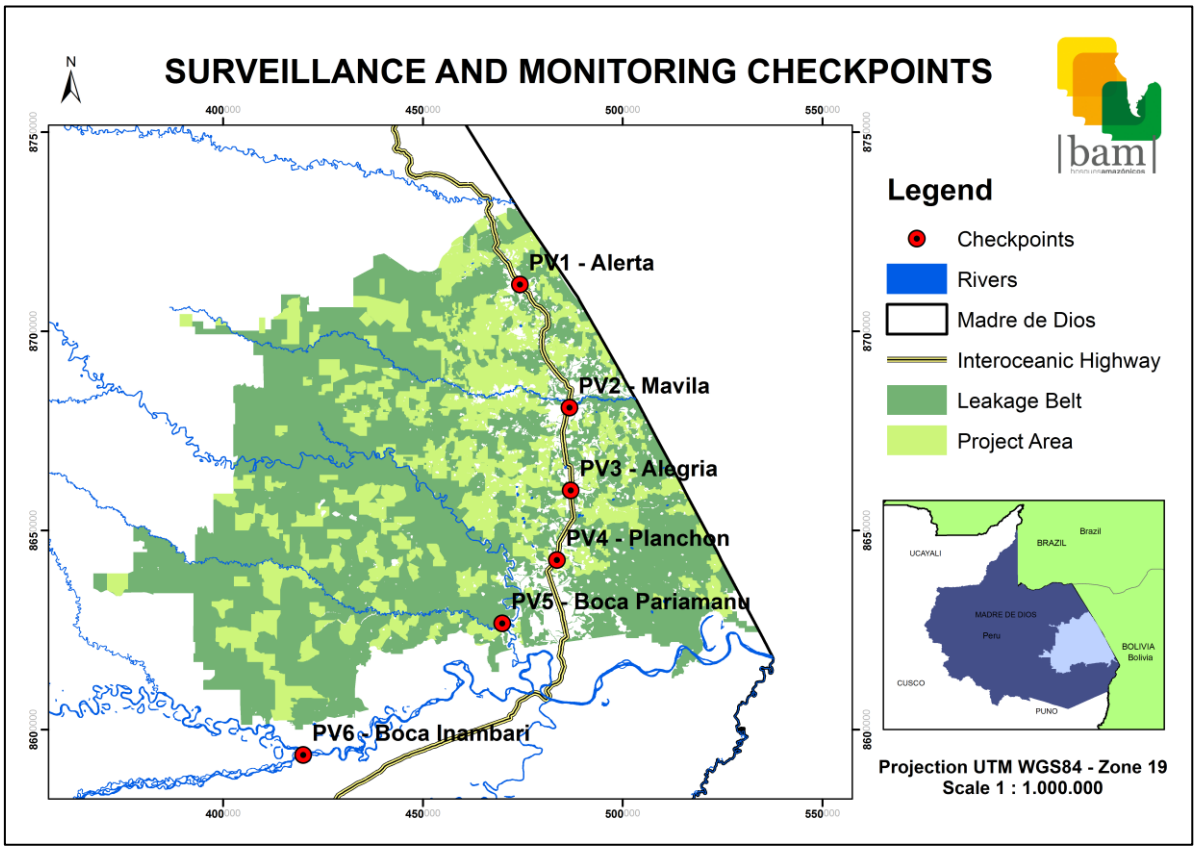
A1. Implementation of the Forest Monitoring and Surveillance System

Concessionaires will organize a Ground Team of Monitoring and Surveillance, formed by 12 people divided into sub-teams of two people for each of the 6 Checkpoints that will also be implemented. All of the Checkpoints will be located in strategic places in order to monitor and control illegal logging activities, migratory agriculture and mining activities in the PA (see Map 1). Moreover, the whole area will be divided into sectors (see Map 2) to efficiently employ the checkpoints and the work of the surveillance teams.

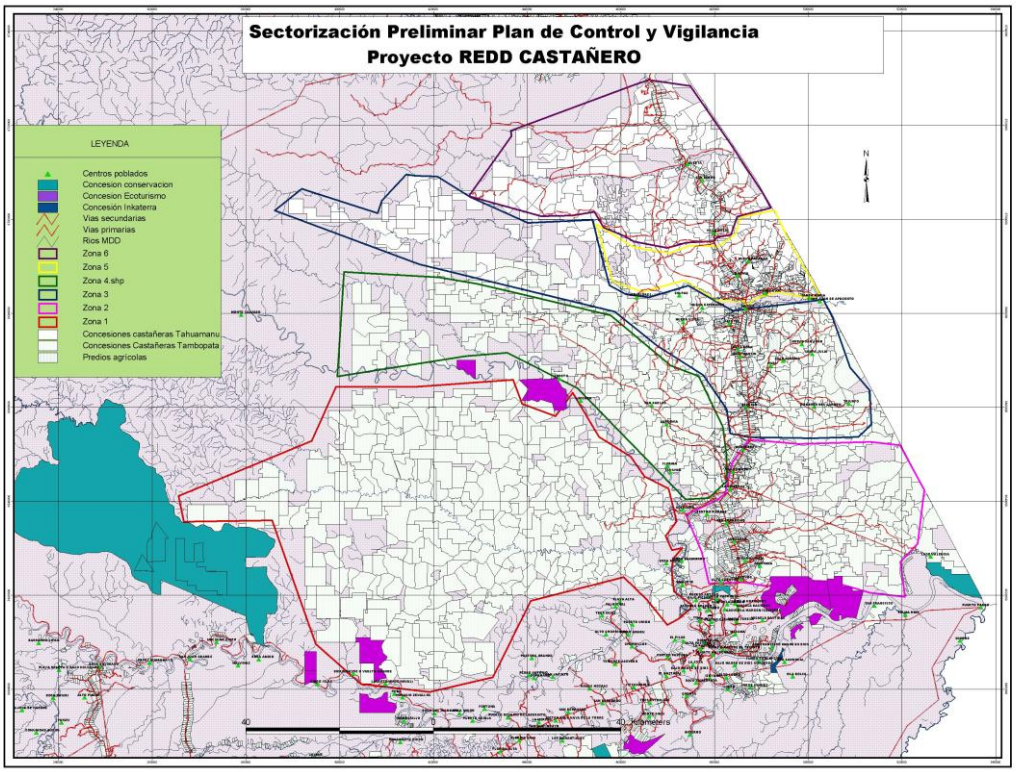
A weekly preventive patrolling system will be implemented throughout the boundaries of the project area, highlighting some critical points. The patrolling system includes 4 different river routes as well as a number of routes along roads in each sector. These ground paths will be constituted by the “Estradas” (small roads inside the concessions, used in the collecting of the nuts), thus it won’t be necessary to open new roads.

A Forest Surveillance Committee will be established and will be formed by active members of the Federation, who will directly receive the reports and findings of the Monitoring and Surveillance Team. A protocol is being elaborated to gather graphic information and statements to legally prosecute ecological crimes committed within the project area.

Map 1. Location of Surveillance and Monitoring Checkpoints



Map 2. Sectoring of the Brazil nut area for the Monitoring and Surveillance Activity



Location of Monitoring Checkpoints

Surveillance and Monitoring Checkpoints will be located in community areas free of forest. They will correspond to the more accessible areas where there may be leakage from farming, ranching and illegal logging. The Checkpoints are listed below:

- **PV1:** Surveillance point at Alerta. From this populated center, all threatening activities related to land use change for agricultural purposes will be monitored.

- **PV2:** Surveillance point at Mavila. From said surveillance point, the monitoring of activities related to forest deforestation and degradation will be done.

- **PV3:** Surveillance point at Alegría. Another important populated center near the IOH from where threatening agricultural activities will be surveyed.

- **PV4:** Surveillance point at Planchón. This is a strategic location since it is the first populated center, from where Brazil Nut Concessions can be accessed. Due to the fact that the Guillermo Billinghurst Bridge was recently built across the Madre De Dios River and the paving of the IOH was completed, such populated centers will likely increase, and so will the forest threats.

- **PV5:** Surveillance point at Boca Pariamanu. This surveillance point will monitor at all times the access to the Pariamanu River and the Las Piedras River, in order to control threatening activities related to land use change for mining purposes and for agricultural purposes respectively.

- **PV6:** Surveillance point at Boca Inambari. This surveillance point in the Southern area of the Project will allow the monitoring of activities related to land use change for mining purposes. An agreement will be established with the community of Boca Inambari, so that they will run this surveillance point, in exchange for training regarding agro forestry, reforestation and mining management issues.

The Checkpoints PV1, PV2, PV3 and PV4 will be implemented within the existing infrastructure of the Agricultural Agencies though a covenant between BAM and said institution.

Table 5. Specific actions to control and monitor the REDD Project area

Specific actions	Product description	Indicator
Construction and proper equipping of checkpoints (surveillance and communication)	6 checkpoints and surveillance points	Proper rooms and all equipment of checkpoints must completely work
Hiring and training of surveillance personnel	There are surveillance personnel trained on protocols to report ecological crimes, media management and surveillance of habitat and wild vulnerable fauna under threat.	The entrance of squatters and ecological criminals is controlled and reported. Number of reports per year.
Control and surveillance of access roads.	Total control of access by the river and ground paths of area of Brazil Nut concessionaires of the project.	Control and reports.
Audiovisual registration of patrolling	Training on use of audiovisual tools, such as filming and photography for patrolling	Material content
Formation of Early Alert Surveillance Committee	Election among Federation members	Surveillance Committee Operating
Periodic visits of Surveillance Committee to control points and patrolling	Supervision of control and surveillance. Quality control.	Approved reports
Maintenance of surveillance path.	Maintenance of monitoring and surveillance paths, and that of the established path circuits.	Complete maintenance made to all surveillance paths.
Legal intervention, complaints about squatters and people who take away illegal natural resources.	Civil and criminal reports against third parties.	Number of complaints and interventions performed.
Training of Brazil nut concessionaires, farmers and communities regarding protocols on how to report ecological crimes and sanctions.	360 concessionaires and 100 people of the surrounding areas trained.	Surveillance process

Machinery and Equipment

The following equipment is needed for control and surveillance purposes:

- 06 communication equipment, located on each checkpoint.
- 12 personal radios for the checkpoint personal
- 02 outboard motors for checkpoints PV5, PV6.
- 04 motorbikes for the checkpoints PV1, PV2, PV3, PV4.
- 02 video cameras for the checkpoints PV1, PV2.
- 04 cameras for the checkpoints PV1, PV2, PV3, PV4

The ex- ante calculation of emissions arising from the implementation and operation of this activity were undertaken with the E-FFC module, as the main source of emissions will originate from the use of fossil fuels for transport, and were included in the M-MON.

The ex-post calculations will be reported in the monitoring reports once the activity is implemented.

A2. Training Deforestation Agents in alternative and sustainable productive initiatives

In order to reduce the deforestation trend, the project will seek to promote sustainable activities among the main deforestation agents in the nearby areas. This includes training miners, present in areas very close to the southern section of the PA, so that they limit themselves to the mining areas described by Emergency Decree 012-2010.

It has been determined that the following training workshops will be conducted:

- Agroforestry
- Management of forestry products
- Fish farming
- Elaboration of PAMAs for miners

Training will be focused on explaining to specific groups of miners, the ones who are organized and interested in reducing their negative impact on water quality and natural forests (mainly the ones who work on river sands, not within forests), which requirements they need to obtain the legal certificate. It will include also techniques to replace the use of mercury in the gold mining process (ecologic gold production). Additionally, it must be highlighted that providing training to miners is part of the integral strategy to combat illegal mining, as miners used to argue that they didn't have any kind of alternatives and support. Training won't replace the strengthening of enforcement actions to eliminate illegal mining and control its expansion to new areas, which will be led by regional authorities with the support of project partners.

Meanwhile, alliances with local NGOs or superior institutions will be made for the promotion of alternative development activities. In the same way, alliances to support the development of PAMAs and EIAs will be sought for the mining concessions near the PA and where mining can be done by decree under the environmental required standards.

A3. Implementation of a Tree Nursery

As part of the Project activities, the establishment of a permanent tree nursery will enrich the Brazil nut concessions of the project. The objective is to produce 100,000 seedlings per year.

The following actions will carry out this activity:

- Selection of seed-trees
- Seeds collection
- Construction of a tree nursery
- Production of seedlings
- Training on production of seedlings

The tree nursery will have an area of 1 ha and could be established in the settlement of Alegría, in the "Colegio Agropecuario Raúl Vargas Quiroz", through a covenant with said institution, because they used to have a tree nursery but did not maintain it due to a lack of resources. If the tree nursery is placed here, many advantages would arise since the seedling production would be carried out by the students (supervised by a forestry technician), allowing them to do pre-professional practices and at the same save cost in transport and personnel, given that this settlement is in the mid zone of the PA.

The projected top capacity of the tree nursery is 120,000 seedlings per year, from which 20,000 are estimated to be the security amount to cover potential losses during the different steps of the process (including field survival). This will be accomplished in two steps, as the first implementation step will only cover half of the projected capacity (0.5 ha and 60,000 seedlings per year). The second implementation step will be done when the capacity is surpassed by the increasing demand of seedlings. The nursery will have medium technology management, with irrigation during dry season and application of fertilizers.

This activity will be directly coordinated by Bosques Amazónicos personnel, and local workers will be hired.

Regarding tree species to be produced, the commercial native species most interesting for concessionaires are: Tornillo (*Cedrelinga catenaeformis*), Shihuahuaco (*Dipteryx odorata*) and Brazil nut tree (*Bertholletia excelsa*). Other species could be included.

The tree seeds will be obtained from the concessions, given that they are areas of natural forest with these species present. The trees identified as suitable seed trees will be geo-referenced, and the collection will be done according to the seeding campaign of each species.

The delivery of the seedlings will go from Alegría to the main settlements along the IOH by truck. As the number of seedlings per concessionaire won't be large, the concessionaires will transport their own plants to their planting areas easily. This will signify savings in transport cost and in fuel consumption, because the large capacity vehicle will only be used in the main road paved axis.

The design and final supervision will be under the charge of the forestry engineer Jorge Chavez, who also runs the Forest Plantation and tree nursery of the Campo Verde Project (*Reforestation of Pastures in Campo Verde with native species, Pucallpa, Peru*, validated by VCS in 2009).

A4. Forest enrichment through plantation of native species

This activity includes the identification of the concessionaires that are interested in doing forest enrichment, and also the identification of the areas suitable for it.

A preliminary sketch of this activity was made, and a first pilot is being developed. The whole activity is under the charge of BAM´s forestry engineer Jorge Chavez and CAMDE PERU. The first beneficiaries are 13 concessionaires of the project, and it is expected that this number will increase each year.

The apt areas for the establishment of seedlings are the degraded areas inside the concessions, like areas that are disturbed due to natural tree falling or cleared spaces due to tree harvest. These cleared areas will be identified from an annual block – the concessions will be divided for this purpose into blocks of 5 hectares each – through a field survey, and a selection will be done to get at least two parcels per block (of variable dimensions and shapes). A low intensity plantation will be undertaken in these areas (15 seedlings per average parcel of 1500 m^2), to permit the natural regeneration of valuable species.

These preliminary estimations are based on a limited field survey, and can be modified according to the real conditions seen in the field each year.

COMMUNITY CATEGORY ACTIVITIES

A5. Organization and legal formalization of the FEPROCAMD

Organization and legal formalization is carried out following four main objectives: i) social and legal organization of Brazil nut concessionaires in associative entities that may offer them negotiation power and institutionalism within the Brazil nut sector, ii) social and legal organization of the FEPROCAMD as an organizational entity that safeguards the interests of Brazil nut concessionaires, iii) identification, delimitation and determination of the areas granted in concession to the project Partners and iv) defense, care, management and preservation of the previously mentioned areas.

Brazil nut concessionaires at Madre de Dios organize themselves in different ways in order to make the most of the product, to defend their areas, to obtain best market prices, and to guarantee forest management, among others.

When said organization is strengthened, then the concessionaires' needs and interests will be satisfied and their goals accomplished. Therefore, the process of investing in their organizational strength, and protecting and providing legal security to these organizations follows the plan detailed below:

- Bosques Amazónicos SAC worked with Brazil nut producers' organizations, providing them with legal training to formalize their social institutionalism. That is to say, work plans were included, which covered legal revision of their

corporate documents, assemblies planning to make decisions, and finally, incorporation of their organizations in the registry.

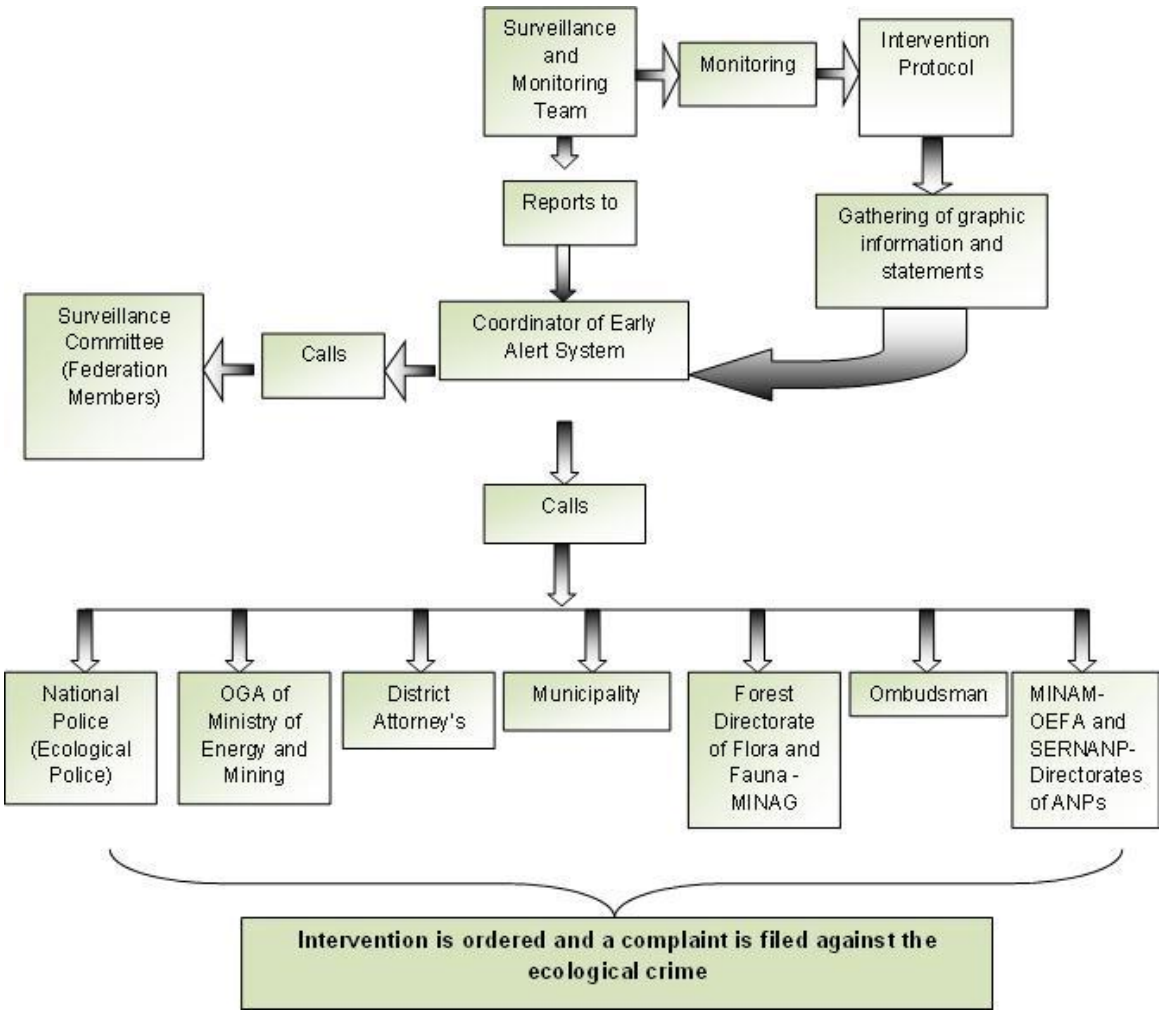
- Work plans were executed by Bosques Amazónicos SAC personnel between the months of January and March of 2010. These meetings served to keep the Brazil nut producers informed about the REDD Project, advanced the debate about new proposals in order to improve the project and, finally, to reassure their commitment to the federation, and to the long term business proposal that Bosques Amazónicos SAC established with the subscribing of the framework contract between Bosques Amazónicos SAC and FEPROCAMD.
- The priority identified to incorporate each of the associations into the registry was due to the request from Brazil nut producers' partners, who wanted to legally incorporate their organizations to be able to participate in different daily life activities as an organized group and be legally acknowledged – for instance, to be able to ask for donations, attendance to congresses/seminars/workshops, request for technical support to different associations and government agencies, etc.
- In March 2010 eleven associations were incorporated, and they were also legally incorporated in the registry and had updated documentation regarding their activities, which backed their organization background.
- Once the eleven organizations were legally incorporated and expressed their willingness to belong to FEPROCAMD, Bosques Amazónicos SAC team trained said associations to hold an assembly where they expressed their willingness to be part of the federation. In addition, several activities were started to protect Brazil nut producers' concessions.
- All procedures regarding public registration and legalization of FEPROCAMD started in March and finished in April 2010, successfully complying with legal incorporation of said federation. It is important to mention that the aforementioned activities to comply with the goal were managed by Bosques Amazónicos SAC and FEPROCAMD. The role of Bosques Amazónicos SAC was mainly that of advising and training social leaders belonging to each of the associations that today form FEPROCAMD.
- Member associations of FEPROCAMD identified as their main priority the need to limit areas granted in concession to protect them and manage them properly. Within this scenario, the most important issue was to elaborate a database where all essential documentation was gathered to show ownership of Brazil nut producers' concessions, as well as comply with the forest management regulations of the Peruvian government.
- Ownership of the Brazil Nut Concessions has been proved through administrative documentation gathering, which demonstrates concession granting, as well as updated management tools of each of the Brazil nut producers. Likewise, inter-institutional relations have been established with the Public Administration in order to guarantee the above mentioned ownership.
- Bosques Amazónicos SAC has been in charge of creating and managing the database since the process started (at the end of 2009). It is important to mention that participation of FEPROCAMD and project partners has been of paramount importance for the success of this activity.
- The legal Defense of the areas of the concessions begins with the identification of the areas and the problems that could exist in them. This will be complemented with the Early Alert System, so that denunciations can be made

before the Office of the public prosecutor and the National Police of Peru with the aim of defending the interests of the concessionaires affected by invasions or illegal logging.

A6. Implementation of the Early Alert System

An Early Alert System will be implemented and it shall be operated by the Forest Surveillance Committee. Said system will be designed to promote the readiness to call the members of the Federation as well as the public authorities in charge of sanctioning ecological crimes, such as the Ecological Police, District Attorneys, Forest Technical Administration, Environmental General Directorate under MINEM and MINAM, among others.

Figure 1. Early Alert System Flow

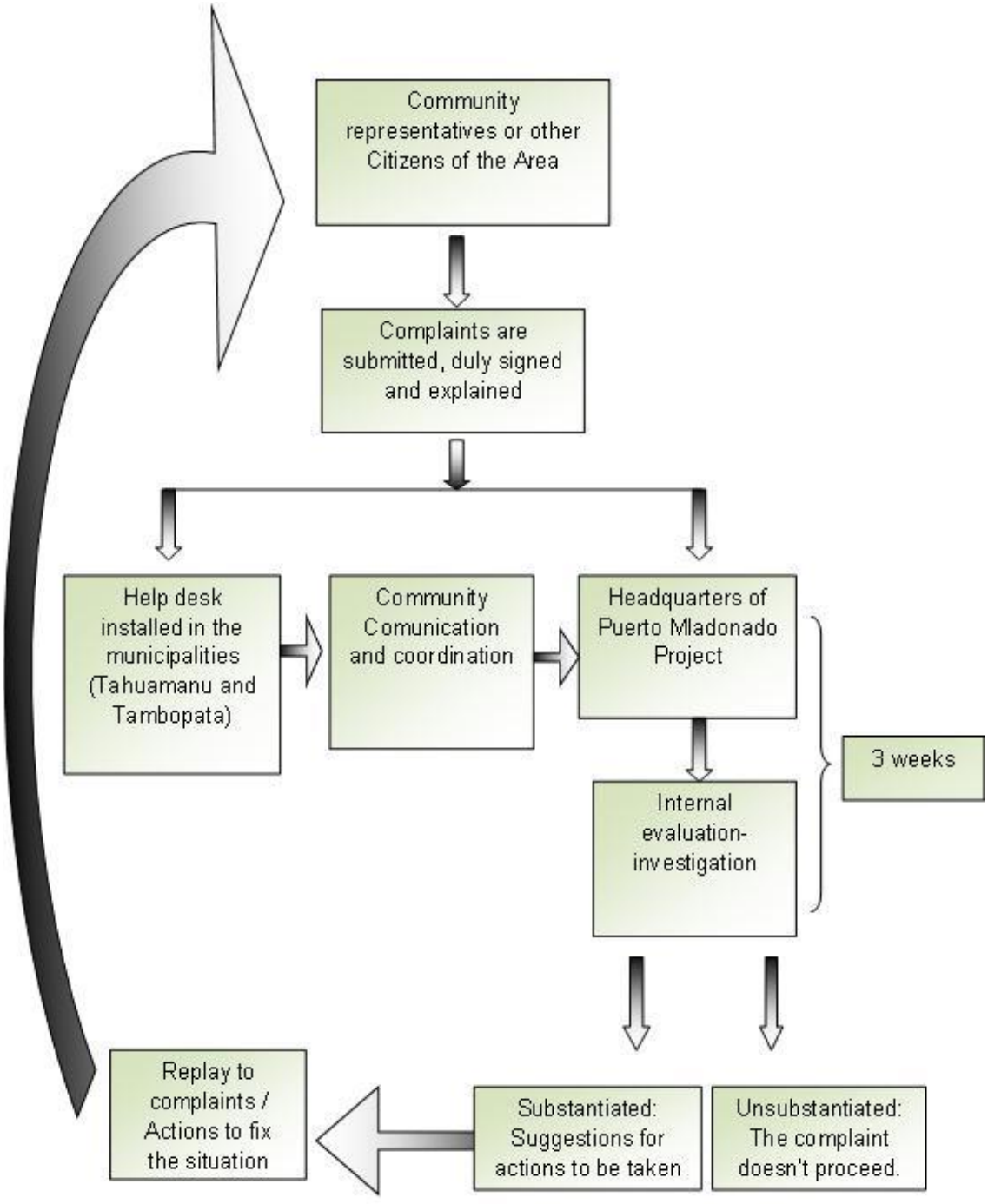


As a part of the Early Alert System, there will be 10 "REDD Community Promoters", aimed at leaders and young people (men and women) from the communities, that will be opinion leaders and promoters of the REDD Project. They will keep the communities of the zone area informed about environmental crimes, penalties and the role and use of the Early Alert System. In addition, they will be the community connection for training.

A7. Implementation of the Conflicts and Complaints Management System

The project will implement a Conflict and Complaints Management System that will help to solve any potential problems with the activities' implementation that may be perceived by the concessionaires or the communities of the nearby vicinity of the PA, if any, in order to continue good relations. The flowchart of the System can be visualized in the Figure 2.

Figure 2. Flowchart of the Conflict and Complaints Management System



A8. Implementation and start-up of the Brazil Nut Processing Plant in the Project Zone

The Brazil nut processing plant is the main action strategy of the project to seek profitability and value added to the Brazil nuts of the Concessionaires. It will be located on km 17 of the Interoceanic Highway, at 10 km away from El Triunfo, a town located in front of the city of Puerto Maldonado, in the way to Iñapari. This is the most appropriate location for easy access to Brazil nuts concessionaires coming from campsites that have access to this road, as well as for those coming from campsites along the river banks.

This location has local electric power availability from Electro Sur Este S.A.A., with a high-tension line capacity of 22,900 kilovolts. There are also qualified technical personnel and workforce available, given its proximity to Puerto Maldonado.

The landsite for the plant will cover 1 hectare and the processing plant will have 1,000 m^2 of roofed area in the first stage, where Brazil nuts in shell will be received from FEPROCAMD farmers and others who may wish to sell their product.

The business focuses on the acquisition of Brazil nuts in shell from FEPROCAMD associates. The products to be obtained from the processing of Brazil nuts are vacuum-packed peeled Brazil nuts and Brazil nut oil to be sold in international markets, and Brazil nut soap and other byproducts that ensure sustainability and added value that would be sold in the domestic market for the cosmetics, bakery and candy industries.

The Processing Plant will include the following steps:

- Reception

  Brazil Nuts will be received and temporarily stored. This stage comprises quality control, weighing, moisture level control on arrival and load yield.

- Classification

  In this stage, Brazil Nuts will be sorted by size (large, medium and small) using a rotary drum classifying machine, eliminating broken and foreign material.

- Drying

  After they are classified, Brazil Nuts in shell will be dried in a rotary dryer until they have 12% moisture content. This operation may take between 20 and 30 hours, depending on the moisture contained by the product on arrival.

- Vaporization

  To separate the seed from the shell without damaging them, Brazil Nuts undergo a high pressure steam process at 200° C in an autoclave. Fresh seeds need approximately 55 seconds, while old ones are vaporized up to 90 seconds.

- Cooling

  Once the autoclave chamber is open, vaporized Brazil Nuts are poured onto a basket and cooled down with cold water, a process that implies cooling and washing in one. The sudden change of temperature and pressure causes the shell to separate from seed, making it easier to crack them thereafter.

- Cracking (shelling)

As a general rule, cracking is made manually in a separate space. The prepared seeds are open with special nutcrackers. The net seed yield ranges from 35 to 40%. Sixty kilograms of seeds in shell – the daily yield of one worker – yield 25 net kg of peeled seed, 20 kg of which turn out to be prime quality, 2 kg second quality and 3 kg third quality. A pre-selection is made during the cracking process to remove damaged and poor quality nuts. Thereafter the drying process comes. As of this moment, the product must be in an isolated area in order to prevent contamination.

- Dehydration of peeled Brazil Nuts

Seeds are placed on trays that are then introduced, one on top of the other, into drying chambers. During this procedure that takes between 30 and 40 hours, moisture is brought down to about 4%. During the first 10 hours the drying is made at 40°C temperature and thereafter, at 60°C. The moisture level is continually controlled during the last hours of drying.

- Selection and packing

Prior to packing, Brazil Nuts will be cleared of impurities (pebbles, shell residues, etc.) and sorted in categories.

The details of the development of this activity may be found in the document: *Plan de Negocio para la producción y exportación de la Castaña y sus productos derivados* (business plan for the production and export of Brazil nut and Brazil nut byproducts)[2].

A9. Certification of Brazil Nuts and Brazil Nuts Second Class Byproduct, and Forest Management Certification

Due to the relatively simple nature of Brazil nut extraction, the intention is to pursue international certification as an organic product, which generates greater value added to the product. It will require the organization and registration of the Brazil nut management and adaptation of the processes of Brazil nut at the processing plant.

The other important certification sought by the project is the FSC certification for the sustainable management of the entire forest, including the collection of Brazil nuts and the harvest of timber (in the cases where is practiced). Currently, the process of implementing FSC in the PA is starting and will be kept for the whole project lifetime.

A recent report of OSINFOR about Brazil nut concessionaires doing timber harvesting (from the total of BN concessions of the region) shows that the majority of concessionaires have committed faults which could result in the revocation of the concession contract. This problem could be solved by the implementation of FSC.

[2] Taken from the Business Plan for the Production and Export of Brazil Nuts, June 2010

A10. Training in Forestry Management, Utilization of Reduced Impact techniques and Alert System to communities in area

Training Workshops will be conducted on subjects relevant to the improvement of forest management for communities of the area (FEPROCAMD, other Brazil nut concessionaires, native communities), such as:

- Training in reduced impact exploitation techniques, like directed tree felling, low impact trawl, etc., because many concessionaires also produce wood on a small scale.
- Consultancy in the preparation and implementation of the General Forest Management Plans and in the Annual Operating Plans. They will be trained in the design and implementation of forest inventories and census, use of the GPS and forest measurement tools, recognition of forest species, silvicultural techniques, tree's volumetric measurement, processing forestry information, etc.
- Design and implementation of forest inventories.
- Consultancy in Monitoring and measurement techniques.

These training activities will be conducted following the Community Training Plan, described in Annex 2.

A11. Cooperation agreements, alliances and training with the Government of Madre de Dios and other public and private actors

The Project will seek to raise the awareness of regional and national policy makers and of territory occupation planners, and influence the promotion and improvement of the legal framework and of policies aimed at preserving forests, which will enable the improvement of local people's behavior in the medium and long term and with it, the preservation of forest ecosystems.

This activity proposes participation in public and consultation spaces to inform about the achievements of the Brazil Nut Concessioners Project and the possibility that a REDD Project may be a territory management model that harmonizes community economic activities with the preservation of ecosystems and climate change mitigation.

To that effect, it considers the establishment of cooperation agreements and alliances with the authorities of the Madre de Dios Regional Government (GOREMAD) and other related institutions, for the promotion and issuance of regulations to guarantee the conservation of the Project Area; for instance: Participate in Ecological Economic Zoning and land-use regulation processes in the region, participate in the construction of a baseline of REDD projects in the region, encourage exclusion of Brazil Nut Concessions from the areas declared to be potentially eligible for mining activity (Mining Emergency Decree N° 012-2010).

A12. Local Campaigns for Preservation of Forests Goods and Services

The project will seek, through local campaigns, that the local people identify themselves with the project, its activities and the attainment of its objectives. These campaigns will

inform communities about the importance of forest preservation for the provision of eco-systemic goods and services, of which they are the primary beneficiaries.

Table 6. Specific actions for the communications strategy and impact on REDD Project

Specific Actions	Descriptions	Indicator
Local campaigns at the community level related to the project on forest conservation and ecosystem goods and services.	Communities nearby the area of Brazil Nut growers Project shall be informed on the importance of forest conservation and the ecosystem goods and services.	Strategy of community relations, communications plan, amount of workshops, attendees, information materials, training materials, media advertisements, press releases, events.
Campaigns at regional and national level with regional and national authorities and decision makers.	Implementation of proper land use zoning among different types of land tenure. According to ZEE, the area allocated for the project is considered a permanent area for cultivation, pasture, forestry production and a high fish farming potential. There are exclusion mining areas within the area, where mining activities can be performed.	Number of agreements, regional and sector resolutions, working legal documents, events, media advertisements, inter institutional agreements.

BIODIVERSITY CATEGORY ACTIVITY

A13. Improved Forestry Management in Brazil nut Concessions

The Ministry of Agriculture granted the concessions to Brazil Nut Concessioners in the Project Area to exercise sustainable management and utilization of Brazil nuts, with the additional possibility of low-intensity timber extraction as a complementary activity.

The recently approved Forest Law[3] specifies that forest logging will be allowed in non-timber forest concessions only exceptionally if it has been considered in the Management Plan. It means that concessionaires will need to do an adjustment of their management plan if they want to continue harvesting wood. With the previous law, logging was permitted after the approval of a Complementary Plan and an estimate of 30% of total Brazil nut concessionaries were accessing to this option. The project plans to agree with concessionaries who still want to do wood harvesting to move toward FSC certification in order to comply with the requirements of the module revision.

With regard to Brazil nut extraction, harvesting is rather precarious and without adequate implements or required hygiene, harvesters are prevented from obtaining good quality material. For this reason, processing companies lower the price, reducing return margins for the concessionaires.

[3] "In non-timber forest concessions, forest resources harvesting proceeds exceptionally always that it does not denature the objective of the concession, does not put in risk the management of the non-timber forest resource under concession and it has been considered in the approved management plan" (art. 57).

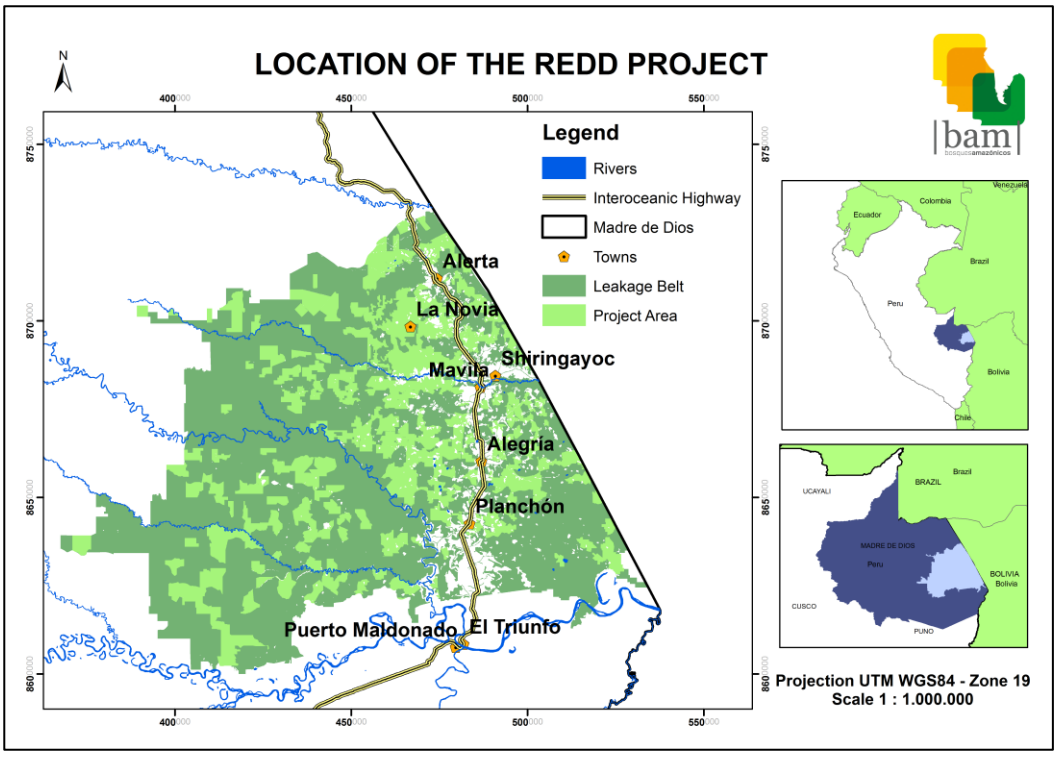
Below are described the main actions established in the project towards improving Forestry Management of Brazil nut Concessionaries:

- Improvement and redesign of Forestry Management Plans and Complementary Plans, prior diagnosis of the concessions. The project will also supervise first stage or primary Brazil nut processing actions, which take place in the forest and verify actions of this first stage on site and that the required quality standards are followed. Furthermore, they will oversee compliance of authorized volumes and implementation of Reduced Impact Utilization.
- Establishment and development of activities in each concession or groups of concessionaires.
- Determination and implementation of reforestation areas, enrichment and type of enrichment.
- Determination and implementation of permanent land plots, monitoring and mensuration of established species.
- Determination and execution of clearing and thinning actions for the development of commercial species.
- Identification and tagging of Brazil nut trees.
- Low-intensity extraction of timber forestry species.

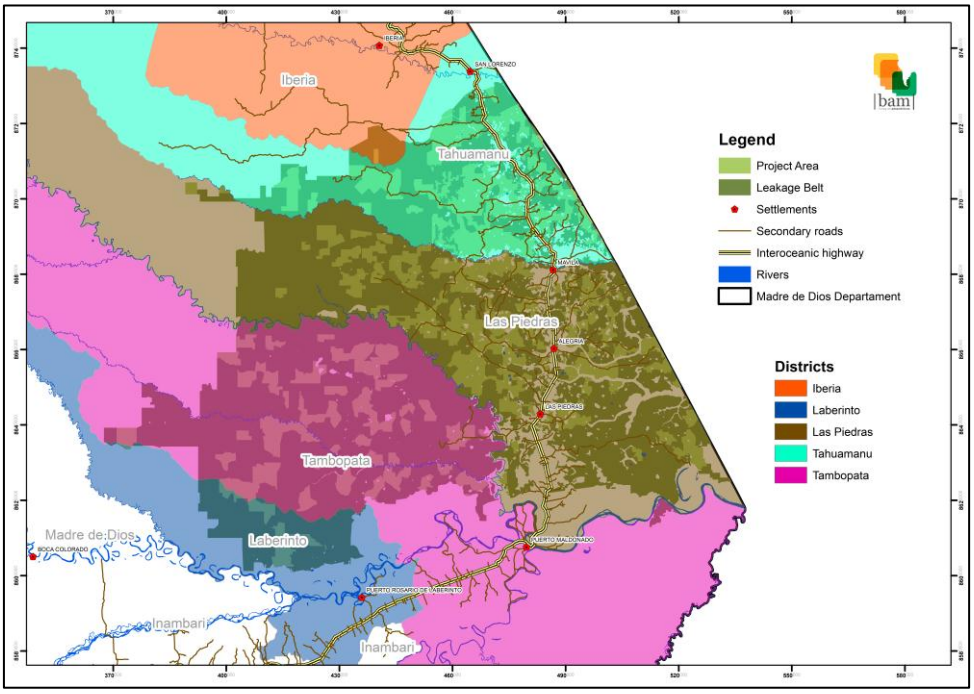
1.9 Project Location

The Project is located in Peru, in the southeast zone of the Department of Madre de Dios, in the Provinces of Tahuamanu (Districts of Iberia and Tahuamanu) and Tambopata (Districts of Las Piedras, Laberinto, Inambari and Tambopata). It includes part of the sub-watersheds of the Rivers Tahuamanu and Las Piedras, as well as great part of Stretch 3 of the Inter-Oceanic Highway (Iñapari – Puerto Maldonado).

Map 3a: Location of the REDD Project



Map 3b: Districts where REDD Project is located



The spatial boundaries have been defined based on the predominant use of the soil and the legal boundaries already established (by the State) for all Brazil nut concessions, grouped in a well-defined zone. No geographical, natural, political or infrastructure boundaries were used. The Project Area is inside this pack of concessions, and its boundaries are determined by the boundaries of each Brazil Nut Concession participating in the REDD Project. The other ones that are not part of the project make up the Leakage Belt area.

1.10 Conditions Prior to Project Initiation

Brazil nut harvesting is a traditional activity in Madre de Dios since the 40s. Usually rural families go every year into the forest during rainy season (Jan-Mar) to crack fallen pods and harvest in-shell nuts, that they peel in their houses or sell in-shell to intermediates or companies. Brazil nut sale represents the main source of income for rural families and is a source of employment for around 1/3 of total population (barriqueros, peladoras, etc.). Madre de Dios is the less populated region in Peru but, at the same time, has the highest growth rate, mainly caused by internal migration from neighbor highlands. This has aggravated with the recent paving of Interoceanic Highway, a road that joins Western Brazil with Pacific Ocean (and Asian markets). The flow of migrants (and even Brazilian farmers) have accelerated increasing the risk over forest areas, including Brazil nut concessions, that are under a higher threat as it is a seasonal activity.

To prevent this risk, BAM has signed a contract with FEPROCAMD, the regional grassroots organization that represents Brazil nut concessionaries in order to implement a REDD project that will implement actions with the target of dealing this threat. Without BAM support, it is unlikely that concessionaries could finance these actions, v. g. a

processing plant, a control and surveillance system, among others. A detailed analysis on initial situation can be found in T-ADD module and in Section 2.4 of VCS PD.

1.11 Compliance with Laws, Statutes and Other Regulatory Frameworks

Compliance with Laws, Statutes and Other Regulatory Frameworks

The Castañeros REDD project complies with Peruvian law because their activities are planned according to not only national standards but also regional and local ones. In this section we grouped Castañeros REDD project activities' on five relevant topics and describe how the design and implementation of project activities comply with Peruvian legislation:

1. **Right to exploit and commercialize environmental services of carbon sequestration**

The right to exploit and extract natural resources and, therefore, environmental services is enshrined in the Peruvian Constitution. Such recognition has been developed by the current Law on forests and wildlife that regulates the sustainable use of forest resources and determines ways to assign the ownership of them to social actors.

In the case of Castañeros REDD Project the above rule gives ownership of the exploitation and sustainable use to Brazil Nut Concessionaires through concession contracts that are valid for forty years. Environmental services of carbon[4] sequestration are assigned by those contracts to Brazil Nut Concessionaires. These rights have been transferred from Brazil Nut Concessionaires that belong to Castañeros REDD Project to FEPROCAMD, and then to BAM (see Annex 3).

The use, management and exploitation of ecosystem services must be accompanied by a supervisory authority that directs public policy. Consequently, by Supreme Decree 012-2009-MINAM and Legislative Decree 1013 was delimited the jurisdiction of the national environmental authority (Ministry of Environment). This ministry is responsible for financing, paying and monitoring mechanisms that safeguard the environmental services. Furthermore, this government agency[5] is also promoting their evaluation of their economic value[6].

Peruvian government has not only given rights to environmental services but also is designing and implementing programs and national and regional policies that promote and encourage REDD projects. This has been supported by Law 26839 (Law on conservation and sustainable use of biodiversity) and Law 28852 (Law that promotes private investment in reforestation and agroforestry). Both frameworks stress the ecosystem approach (as the new Law on Forest and Wildlife does it, it is soon to be

[4] Concession contracts indicate that concessionaires can exploit and extract existing natural resources in the concession area according to parameters that determine the forest authority. Environmental services are substantial part of these resources to be identified as its fruits or products. This is because forest benefits that are obtained by proper management of the concession. Consequently, Brazil nut concessionaires are entitled to exploit them like they would do it with Brazil nuts or wood.

[5] Ministry of Environment through its General Office for Economic Evaluation of Natural Resources develops this task.

[6] For example, Ministry of Environment has launched the National Forest Conservation Program for the Mitigation of Climate Change (Supreme Decree 008-2010-MINAM). This program aims to conserve 54 million hectares of forest by 2021.

enacted) through which emphasizes the overall assessment of the environmental services and encourages the development of inventories, preservation and activities to promote sustainable management of natural resources in order to generate more environmental services.

On the other hand, the Ministry of Environment has declared the importance of i) evaluation of REDD and CDM (Clean Development Mechanism), ii) train government officials and social partners, and iii) promote national environmental policy to direct and encourage the management and use of environmental services through various mechanisms and programs. This initiative has been followed by the Madre de Dios region through various ordinances. These ordinances have affirmed its commitment to the development of REDD projects and the use of environmental services of carbon sequestration.

For example, recently Madre de Dios region has become the sixteenth member of Governors' Climate Forests Task Force (Task Force of Governors for Forests and Climate). This is a group of sub-national governments (governments, states, regions or provinces), fighting against climate change by supporting actions for REDD and other sustainable forestry activities (see http://www.gcftaskforce.org/).

The Ministry of Environment has achieved the approval of the Peruvian RPP (Readiness Preparation Plan) at the eighth meeting of the FCPF Participant Committee (PC8). Basically, this document expresses the Peruvian position to allow the coexistence of markets and funds; moreover it stresses the nested approach as public policies for implementing REDD that allows sub-national initiatives (like Madre de Dios region).

Finally, both national and regional policies support the commercialization, i.e., the economic exploitation and benefit of environmental services of carbon sequestration because this would create greater incentives for the social responsibility in caring for the forest. As can be seen along the PDD, Castañeros REDD Project is based on a solid basis for recognition, incentive, management and use of environmental services in accordance with Peruvian law. All Environmental Laws in Peru related to carbon trade are listed in Annex 4.

2. Employment generated by the Castañeros REDD project

Castañeros REDD Project is based not only on the economic benefits of ecosystem services but also seeks to allocate value to forest products that belongs to Brazil Nut Concessionaires. This will be done by building a Brazil nut processing plant that will generate jobs in the Brazil nut sector. Therefore, in this section show that the project is in accordance with Peruvian labor standards.

First, it is important to underline that Castañeros REDD Project articulates the policy of encouraging employment and labor rights that Peruvian government has regulated by Legislative Decree 728. This is because that will create permanent and temporary jobs in the design, construction, implementation and administration of the Brazil nut processing plant.

Then, because Castañeros REDD Project workers' will enjoy fair wages (above the minimum established by the Peruvian government), will have employment benefits established in Peruvian law (e.g., vacation, bonuses, compensation for length of service, etc.), and have a high expectation of the duration of their jobs[7], we can ensure that the project not only ensures compliance with labor standards but also the protection of the worker through an employment relationship that will improve employment conditions in the project area. It also generates clear benefit to Brazil Nut Concessionaires who will be direct beneficiaries of higher prices for their product (brown), which represents more income for them.

Third, considering that the majority of project beneficiaries (potential employees) are people over 50 years, the project recognize fringe benefits to seniors who are established in the Peruvian labor legislation[8] (see Annex 4). Notwithstanding the foregoing, employees may be divided into unions to negotiate better employment benefits and working conditions if they find it convenient. This will be secured by the Castañeros company[9] area in charge of human resources and labor relations.

Finally, the Castañeros REDD Project has as a main line of work establishment of a company that manages the nut processing plant. The company is managed by its shareholders (Brazil Nut Concessionaires) who under Peruvian standards ensure the distribution of profits among the workers at the plant mentioned above (see Annex 4).

3. Health and safety at the Brazil nut processing plant

The Castañeros REDD Project activity related to the processing plant pays much attention to the care of their employees and their direct beneficiaries. As can be seen in Annex 4, Peruvian legislation exists to support this concern about employer responsibilities and executing the project.

The following describes how the Castañeros REDD project complies with Peruvian legislation mentioned above:

The Brazil nut processing plant shall meet the standards of health and safety requires by the Peruvian State. All employees will be trained not only on issues related to health and safety in the workplace but also receive incentives for continued compliance with these standards.

To all employees will be assigned materials and protective equipment suitable for the performance of their duties.

All employees of the processing plant and administrative staff of the company indicated in the preceding section shall be provided with health insurance to them and their families, health care, medicine and others.

[7] Brazil nut processing plant will keep working all along Castañeros REDD Project with a clear goal: be the best Brazil nut processing plant in Madre de Dios region and be a leader on the Brazil nut market.

[8] Older people working in the Castañeros REDD project are entitled to retirement and, therefore, to a pension to support them in their non-working years (rest established by the Peruvian Government).

[9] It is noted that the processing plant will be under the management of the Castañeros Company, where the principal shareholders are the concessionaires. BAM will be a minority shareholder and encourage economic and financial sustainability of that company.

All workers shall have accident insurance and life insurance because Peruvian law requires it.

Persons who perform services for Castañeros REDD Project will have all the necessary security protection and welfare at the plant facilities. They will be also trained on issues related to care and precautions to be taken in the aforementioned facilities.

4. Construction, Implementation and Administration Brazil Nut Processing Plant

The design and construction of the Brazil nut processing plant has been performed according to the decrees that regulate the rights and obligations related to the construction market in Peru (see Annex 4). Similarly, directives and guidelines issued by the Ministry of Housing, Construction and Sanitation have been incorporated into technical records which will lead the construction of the plant.

All stages of construction and implementation of the Brazilian nut processing plant will be monitored and validated by the local, regional and national requirements. The idea is that since the design of the plant involves those responsible for oversight in order to receive institutional endorsement certifying proper implementation of this important part of the project.

It should be noted that the construction of the plant shall comply with the environmental management tools and land the Madre de Dios region requires this type of construction.

5. Processing and packaging of food products

In the Castañeros REDD project we will consider important to plan from the beginning what and how is the packaging and preparation procedure although many products are not yet defined. Therefore, we selected a set of rules that i) guide the standards to be met, ii) state the certification and authorization procedures that must start when the products are defined, and iii) ensure the proper packaging and distribution of products.

In Annex 4 is listed the standards that will be met once the products are defined, as well as the process, package and distribution.

1.12 Ownership and Other Programs

1.12.1 Proof of Title

The following are presented as proof of title:

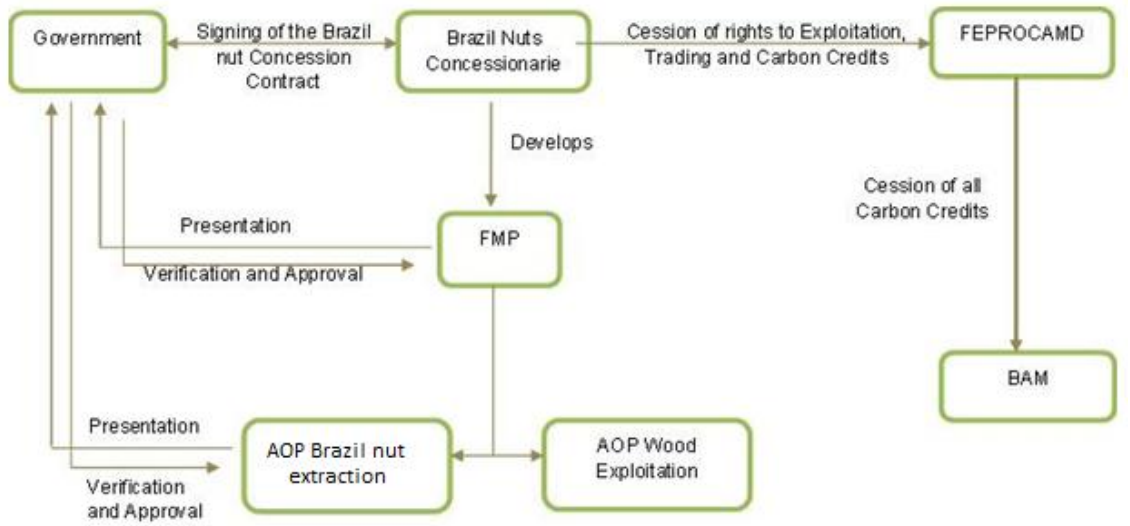
- The Investment Commitment Agreement between BAM and FEPROCAMD.
- The Assignment of Rights Contract from an individual concessionaire to the federation (FEPROCAMD).
- Concession Contract for the Management and Utilization of Forestry Products other than Timber, entered into by and between the State and the Concessionaires.

These documents are included in Annex 3 and belong to just one Concessionaire. The contracts of the 377 concessionaires that are part of the project can be found in the BAM files if required.

It is very important to emphasize that all Concessionaires Partners of the Project comply with all requirements imposed by the State: Forest Management Plan (FMP) and Annual Operating Plan (AOP).

Below there are the legal steps followed for the Assignment of Carbon Rights to the firm BAM SAC.

Figure 3: Flowchart of Carbon Contracts



Everything related to the carbon market is new in the country, so the concession contracts so far have made no mention of carbon as a resource. However, because of the new projects being developed, with BAM's help, concessioners are presenting supplementary plans to FMP, so they can use this resource following the established legislation, which requires that all development is adequately supported by a plan management. Nevertheless, from the Civil Code and the Organic Law for Sustainable Use of Natural Resources (Law N° 26821) among others, it can be assumed that the Brazil nut concessionaires have the right over the carbon resource. This is documented in the supporting document: *Ownership and use rights for environmental services of carbon capture hold by Brazil nut concessioners of Madre de Dios,* made by the law firm REBAZA, ALCAZAR & DE LAS CASAS.

1.12.2 Emissions Trading Programs and Other Binding Limits

As a developing country, it is not mandatory under the United Nations Framework Convention on Climate Change or the Kyoto Protocol for Peru to reduce the greenhouse gas emissions it generates. The project's reductions will not be used for any emissions trading program.

1.12.3 Participation under Other GHG Programs

The project has not been registered in any other Greenhouse Gases program.

1.12.4 Other Forms of Environmental Credit

The project has not been submitted to any other REDD program other than VCS. A statement signed by the BAM Manager is attached (Annex 5).

1.12.5 Projects Rejected by Other GHG Programs

Since the project has not been submitted to other programs, it has not been rejected.

1.13 Additional Information Relevant to the Project

Eligibility Criteria

The criteria stated in VCS Standard v3.1 was analyzed, and we saw the following similar conditions between BN concessions (part or not part of the Castañeros REDD Project):

- Concessionaries that have already joined the project have similar characteristics than the ones who haven't done it yet in terms of size, distance to roads, physiography, condition of the holder of the concession, etc., so as BL-UP module develops, the modeling includes all the BN concessions as part of the RRD and RRL, and even more, concessionaries who haven't joined the project yet are the main destination of potential leakage because of similar degree of capability to deal with newcomers and invaders. In that sense, baseline scenario has been projected and can be determined to the whole Reference Region (including all the Brazil Nuts concessions) for the whole crediting period.
- New concessionaries can access easily to project activities (i.e., organizational strengthening, processing plant, control and surveillance system, etc.) by joining the project. Moreover, most of the activities are being implemented without any difference between concessionaries as the cost, for instance, to monitor risks is the same as both type of concessionaries are spread and mixed. Only some economic benefits as the distribution of carbon profits and the right to be shareholder of the processing plant require the acceptance of the agreement with BAM.
- Monitoring system also doesn't make any difference because deforestation maps and other components of the system can't separate between both of them.
- Finally, the protocol to accept new concessionaries in the project database assures that proof of title and eligibility for crediting is being complied, i. e., Forest Management Plan, Concession Contract with the Peruvian State, No other agreement regarding carbon rights, are the main requirements asked to interested to join the project.
- In that sense, as it has been analyzed in the applicability conditions of each module, both actual concessionaries and potential concessionaries meet the requirements of the methodology.

Given that above items are already covered, the following set of criteria for acceptance of new concessionaries was added:

- Signing of the standard contract with Federation.
- Knowledge and acceptance of conditions of long term agreement between Federation and BAM.
- Be the titular of a Valid Concession Contract with Peruvian State.
- Not having signed a contract regarding carbon rights with other companies.
- In case of forest logging, accept to access to FSC certificate previously to continue logging.

Leakage Management

Some of the activities described in section 1.8 above address the leakage issue and the work with the stakeholders surrounding the Project Area, and for this reason there are no activities of leakage management per se. Below is a summary of these activities, whose effectiveness will be evaluated constantly throughout the project's life. If necessary, new activities could be implemented during the project life spam.

The main sources of leakage identified in the project are:

- Activity shifting leakage: Expansion of agrarian frontier to install annual crops or cattle, which represents the 98% of projected deforestation in the baseline.
- Other drivers (e.g. infrastructure, etc.) which represents the 2% of projected deforestation in the baseline.

Project Activities that include leakage prevention measures:

- Implementation of the Forest Monitoring and Surveillance System. This is not just limited to the project area, but also includes the leakage belt. Checkpoints are located in the most critical access points throughout the area.
- Implementation of the Early Alert and Complaints Management Systems.
- Promotion of Sustainable Projects among neighboring residents – Agro-forestry, Utilization of other forest resources, Fish farming – to encourage the rational use of non-timber resources in the project area.
- Creation of alliances with local NGOs or Technical Institute to develop pilot projects comprised of alternative development activities.
- Improvement of the organizational capacity of FEPROCAMD.

Commercially Sensitive Information

The Agreement between BAM and FEPROCAMD and the individual agreements between BAM and the Project's Concessionaires (in Annex 3) are considered sensitive information that should not be disclosed. These agreements are available in the BAM offices on request.

Further Information

Not applicable.

2 APPLICATION OF METHODOLOGY

2.1 Title and Reference of Methodology

The methodology used to design the project is: REDD Methodology Modules, v1.1 (VM0007). It belongs to the AFOLU Sectorial Scope, was developed by "Avoided Deforestation Partners" and was approved by VCS on December 2010.

It is formed by several modules, but as this is an Unplanned Deforestation Project, we have only used the ones most appropriate, listed in Table 7.

Table 7. Information of the Modules used

	Module	Code	Version	Link
Always Mandatory	REDD Methodology Framework (REDD-MF)	VM0007	1.1	REDD Methodology Modules (REDD-MF), v1.1
	Methods for monitoring of greenhouse gas emissions and removals (M-MON)	VMD0015	2.0	Methods for monitoring of greenhouse gas emissions and removals (M-MON), v2.0
	Estimation of uncertainty for REDD project activities (X-UNC)	VMD0017	1.0	Estimation of uncertainty for REDD project activities (X-UNC), v1.0
	Methods for stratification of the project area (X-STR)	VMD0016	1.0	Methods for stratification of the project area (X-STR), v1.0
Baseline	Estimation of baseline carbon stock changes and greenhouse gas emissions from unplanned deforestation (BL-UP)	VMD0007	2.0	Estimation of baseline carbon stock changes and greenhouse gas emissions from unplanned deforestation (BL-UP), v2.0
Leakage	Estimation of emissions from activity shifting for avoided unplanned deforestation (LK-ASU)	VMD0010	1.0	Estimation of emissions from activity shifting for avoided unplanned deforestation (LK-ASU), v1.0
Pools	Estimation of carbon stocks in the above- and belowground biomass in live tree and non-tree pools (CP-AB)	VMD001	1.0	Estimation of carbon stocks in the above- and belowground biomass in live tree and non-tree pools (CP-AB), v1.0
Emissions	Estimation of greenhouse gas emissions from biomass burning (E-BB)	VMD0013	1.0	Estimation of greenhouse gas emissions from biomass burning (E-BB), v1.0
	Estimation of emissions from fossil fuel combustion (E-FFC)[10]	VMD0014	1.0	Estimation of emissions from fossil fuel combustion (E-FFC), v1.0

Table 8. Information of the Tools used

	Tools	Code	Version	Link
Risk	Tool for AFOLU non-permanence risk analysis and buffer determination (T-BAR)		3.0	AFOLU Non-Permanence Risk Tool, v3.0.pdf
Additionality	Tool for the Demonstration and Assessment of Additionality in VCS AFOLU Project Activities (T-ADD)	VT001	1.0	Tool for the Demonstration and Assessment of Additionality in VCS Agriculture, Forestry and Other Land Use (AFOLU) Project Activities, v1.0
Significance	Tool for testing significance of GHG emissions in A/R CDM project activities (T-SIG)	EB_31	1.0	Tool for testing significance of GHG emissions in A/R CDM project activities

[10] Only used for ex-ante estimations of project activities emissions in the with-project case

2.2 Applicability of Methodology

In this methodology, specific applicability conditions exist for each module and must be met for the module to be used. They are mentioned below:

Framework (MF) Applicability Conditions

For All Activity Types:

- Land in the project area has qualified as forest at least since 1999 as it is primary natural rainforest. No deforested areas under natural regeneration are being included.
- The project area does not include wetlands neither peats. As mentioned in X-STR module, the stratification was based on official Ecologic Economic Zoning of Madre de Dios. One of the strata (Swamp Trees – PA) was divided in sub-strata and 2 of its sub-strata were conservatively excluded as potential areas with more than 65% of organic matter in soils. It was demonstrated that soils from other sub-strata have levels of organic matter quite lower than threshold allowed by the methodology.
- Project area is composed by non-timber forest concessions granted to national citizens (mostly rural families) for 40 years and project proponent has agreements with concessionaries and their grassroots organization that gives to the project proponent the rights on carbon credits for 30 years.
- Baseline deforestation in the project area fall in the following categories:
    - Unplanned deforestation (VCS category AUDD);
- Baselines will be renewed every 10 years from the project start date.
- There are no areas registered under the CDM or under any other carbon trading scheme.
- Land under threat of deforestation will be permanently used for agriculture and/or cattle ranching without probability to be naturally recovered as forest.
- Reforestation does not constitute a likely post-deforestation land use.
- Leakage avoidance activities will not include:
    - Agricultural lands that are flooded to increase production
    - Intensifying livestock production through use of “feed-lots” and/or manure lagoons.

For Unplanned Deforestation:

- Baseline agents of deforestation are rural families (either residents in the reference region or immigrants) without any right to deforest the area (as they have been granted for Brazil nut sustainable harvesting), who will clear the land for settlements (2.32%), crop production (3.25%) or ranching (51.79%) and mixed agriculture/grazing (39.01%); in all cases, at a subsistence or small-scale.
- Also, Illegal artisanal gold miners are another deforestation agent, mainly concentrated in the Southern part of Madre de Dios and a small part of the Project Area, affecting an area of 3.62% of PA, which must be discounted proportionally from previous percentages.

- According to independent studies, reforestation is not a common practice neither there is a governmental program to promote the reforestation
- At pre-project, no unsustainable fuel wood collection is occurring within the project boundaries, as preferred species used for fuel wood and the dominant species found in forest inventories within Project Area are not the same. In any case, and according with the methodology, a biannual PRA will be implemented to monitor potential degradation.

BL-UP Applicability Conditions

These conditions are the same as the ones above (MF- Unplanned Deforestation). Project complies with all of them as seen before.

LK-ASU Applicability Conditions

- This module was employed as it is mandatory when using the BL-UP module, with all its conditions of applicability duly fulfilled.
- The activities subject to potential displacement are conversion of forest land to grazing lands and/or crop lands. In fewer cases, the conversion in leakage belt will go from forest land to infrastructure or mining.

CP-AB Applicability Conditions

- This module is being used to determine carbon stocks in aboveground- and belowground tree biomass in the baseline case. It will also be employed in the estimation of ex-post change in carbon stocks in above- and below tree biomass.

    - Above ground tree biomass pool has been accounted.
    - Above ground non-tree biomass pool has been excluded as it was not significant in previous results of regional inventories[11].
    - Below ground tree biomass is being accounted as it is significant.

E-BB Applicability Conditions

- According to the Framework REDD-MF this module is mandatory. Also the applicability of this module states that, if fire is used to clear land, emissions shall be accounted. Moreover this procedure will be conducted to accurately account GHG emissions in the future in case of fires.

- In the Baseline, the use of fire to clear areas to establish crops or pastures is very common. Deforestation due to mining activities also includes this step. Another source of GHG emissions is the burning of crop residues, practiced every year by farmers.

[11] The inventory mentioned is the one made in Native Community of Belgica. The stratification used in this inventory is based in the Forest Map of the ZEE of Madre de Dios (2009). See T-SIG module for further detail.

- For the ex-ante calculation of GHG emissions in the with-project case, it was considered the projected areas to be deforested inside Leakage Belt, as it is expected that the deforestation agents use the same steps to clear land.

- The CO2 emissions from biomass burning won't be estimated because they are already accounted through stock change.

M-MON Applicability Conditions

- The ex-ante stratification is fixed for this baseline and will not be changed.
- Strata will remain the same, unless a previous baseline revision is undertaken.
- When selective logging takes place in the Project case:
    - Ex-ante emissions from logging are omitted since the Forest Stewardship Council (FSC) certification is not yet implemented.
    - FSC certificate will be implemented and maintained for years when selective logging occurs.
    - Only selective logging in small scale intensity will be conducted, keeping the land cover as forest.
    - All trees logged will have a DBH greater than 30 cm, according to the methodology and the national regulations.
    - During logging operations, the top/crown of the felled tree will remain in the forested area.
    - Logging practices won't include the piling and/or burning of logging slashes.
    - Volume of timber harvested will be measured and monitored once FSC is implemented.

X-STR Applicability Conditions

- Stratification of pre-deforestation forest classes was made using official data from the Madre de Dios Region. The strata defined remain the same for the entire baseline period.
- The post-deforestation land uses were defined using the Simple Conservative approach (Option 1, step 4.2.2 BL-UP).

X-UNC Applicability Conditions

- A precision target of a 95% confidence interval equal or less than 15% of the recorded value has been used to determinate the number of plots.
- Emission's uncertainty has been accounted as zero, as official data has been used to estimate the proportion of burned forest after deforestation, being this the main source of emissions of other GHGs.

E-FFC Applicability Conditions

- All fossil fuel combustion emissions from the implementation of project activities are accounted inside the present module.

- Emissions from fossil fuel combustion are not accounted in the baseline case, as REDD-MF module indicates is an optional source, and N_2O and CH_4 emissions proceeding from it are negligibly small.
- The significance of these emissions is calculated in the corresponding module (T-SIG).

T-ADD Applicability Conditions

- The proposed activity does not lead to violation of any applicable law even if the law is not enforced. There are not similar activities that could be considered as AFOLU activities going on in the proposed areas.
- The latest versions of VCS documents "Tool for AFOLU Methodological Issues" and "Guidance for Agriculture, Forestry and Other Land Use Projects" were used in the determination of the most plausible baseline scenario.

T-BAR Applicability Conditions

- This analysis has to be done because the avoided emissions can be reversed.
- Each risk factor is clearly documented and substantiated in the Risk document.
- The non-permanence risk rating is used to determine the number of Buffer credits to be deposit into the AFOLU pooled buffer account.

T-SIG Applicability Conditions

- Determine which decreases in carbon pools, and increases in emissions of the greenhouse gases measured in CO_2 equivalents that result from the implementation of the project activity, are insignificant and can be neglected.
- Ensure that is valid to neglect decreases in carbon pools stated as being insignificant in the applicability conditions of the CDM methodology.
- It is also used to determine which carbon pool is insignificant, in comparison to all carbon pools.

2.3 Project Boundary

Total Project Area and Leakage Belt Area

The Project Area (PA) is formed by 377 Brazil Nut concession - awarded by the Peruvian State through a 40 years renewable contract - that have entered into an agreement with the firm BAM to develop the REDD Project.

The Project boundary is already showed in section 1.9. The coordinates of each concession presented in Map 3 can be found in the contracts. Given that the PA is formed by polygons of irregular shape and many vertexes, a list of the centroid coordinates of the concessions part of the Castañeros REDD Project is being presented in Annex 6. This list includes the code of the contracts and the name of the concessionaire. This code is unique thus is used as the concession's Project ID.

The Leakage Belt is composed by the other Brazil nut concessions, which do not form part of the REDD Project and areas that comprise other land uses such as forestry and

ecotourism concessions, etc. A stretch of the Interoceanic highway is crossing the Leakage Belt.

The actual sum areas of the 377 concessions make up a total of 310,930.6 hectares. However, discounts were made due to: overlapping areas (problem present in the official GIS database of the Regional Forest Agency), deforested areas and peats. The stratum called "O*thers – Without Carbon* (NB)" which is constituted by water bodies and natural sand banks is part of PA but was not included in any of the carbon stock changes or in GHG emissions calculations. Therefore, the net area that is being considered as the PA is free from those elements and represents forest areas. The same care was taken with LB areas, and both are presented in Table 9.

Table 9. Area of PA and LB comprising the Project

Boundaries	Total Area (ha)	Net forest area (ha)
Project Area	291,566.5	290,695.5
Leakage Belt	723,748.3	718,282.3

Temporal Limits

a) Start and end dates of the relevant historical period

For the Deforestation model, the historical trend recorded in 2000, 2006 and 2008 was used to estimate the deforestation rate.

Furthermore, all the studies reviewed and used in the different parts of the project design, such as the bibliographic review, also belong to that period of time.

b) Start and end dates of the REDD crediting period.

Project start date: 24/09/2009
Start date of the crediting period: 01/01/2010
Project crediting period: 31 years, renewable

c) Baseline review date

The baseline will be reviewed every 10 years.

d) Verification period

The project proposes that the first verification be performed on the second year after start-up of the Project. As of that date, subsequent verifications will take place at minimum every 5 years.

Carbon Pools

The Above- and Belowground Tree biomass carbon pools were considered.

In the Project Scenario, no consideration was given to any variation in the carbon stock in the project area as a result of deforestation or degradation. Activities established will aim at protecting the Project Area from deforestation agents and preventing leakage.

Table 10. Carbon Pools considered in the project

Carbon Pools	Included / Excluded	Justification
Above-ground biomass	Included	Carbon in tree and palm biomass was calculated for each stratum of the PA, and will remain the same for the entire baseline period. Above-ground non tree biomass is not significant, based on the results of the inventory made in the Native Community of Belgica; therefore it is conservatively omitted. The carbon stocks in post-deforestation biomass were taken from literature.
Belowground biomass	Included	Included. Significant in tropical forests.
Dead-Wood	Excluded	Not a significant pool, based on the results of the Inventory[12] made in the Native Community of Belgica, close to the Project Area.
Harvested wood products	Excluded	The volume of harvested wood is similar in baseline and project case, as it has always been regulated. The use of this wood will be more efficient in project case because FSC certification will be implemented.
Litter	Excluded	According to the Methodology Framework (REDD-MF) and the CP-AB module, this pool is not significant and can be conservatively omitted.
Soil organic carbon	Excluded	The REDD-MF module mentions that the exclusion of this pool is always conservative.

Greenhouse Gas Sources

Other Greenhouse Gases (CH_4 y N_2O) have been considered in the Baseline due to the burning of forest biomass and agricultural biomass. In the ex-ante project scenario no emission of these GHG (CH_4 y N_2O) were considered as it is estimated that there will be no deforestation or degradation in Project Area. Due to the activities proposed, it will stay as forest area for sustainable use, an activity that the State entrusted when awarding the concessions. However they were ex-ante estimated for the LB.

Emissions from burning fossil fuels were not estimated, since there is no certainty in the baseline of how many machines or tools would be incorporated as a result of post-deforestation activities. Nevertheless, such emissions were ex-ante estimated in the with - project scenario for the PA.

[12] Internal use inventory made by FONDAM in 2010, the results table is presented in module T-SIG. They are considered as similar to the results of our project's inventory given that they both were based in the ZEE forest stratification and were made with a year of difference. More details in REDD-MF module.

Table 11. Sources of other greenhouse gas emissions (GHG).

Sources	Gas	Included / Excluded	Justification
Burning of biomass	CO_2	Excluded	Considered in the decrease due to the change in carbon stock.
	CH_4	Included	Burning of biomass in deforested areas and burning of biomass in agricultural areas (waste) in Baseline. There would be no burning in the with – project scenario, as none of the activities would involve such practices.
	N_2O	Included	
Fossil fuels	CO_2	Excluded	Not included in baseline accounts. Included in ex-ante estimations in the with-project case.
Use of fertilizers	N_2O	Excluded	Excluded because there will be no leakage prevention activities that include the use of fertilizers.

2.4 Baseline Scenario

The identification was undertaken following Step 1 of T-ADD module, which includes the identification of alternatives scenarios, supported by an analysis of their consistency. In our case, we identified two possible scenarios: the continuation of the pre-project land use, and the land-use change for typical activities of the region. The second one was selected to be the baseline scenario, and is described below:

Description

The activities currently pressing the proposed area are agriculture and cattle raising, especially in the areas closest to the Interoceanic Highway (IOH), secondary roads and riverbanks. These two activities usually take place together, which is easily seen in the actual use of cultivated areas of farms (35% agricultural crops - 65% pastures)[13].

Agriculture and livestock are characterized by being mainly of subsistence or small scale. According to the 3th National Agricultural Census of 1994, 61% of the agricultural units in the region had less than 100 ha, a percentage that has remained until today (Regional Directorate of Agriculture - GOREMAD). Moreover, according to data from this census, only 3% of the units had their own machinery (tractor, sprayer, etc.). In turn, the median annual income of agricultural producers of MDD in 2007 was equal to 5,951 soles[14], which represents 496 soles per month while the minimum wage in the country is 675 soles per month[15].

In addition there is a high degree of informality in the possession of agricultural units (29%[16] do not have ownership title), which hinders the development of both activities because it limits access to formal credit sources.

[13] Plan Estratégico Concertado de Madre de Dios, 2002 – 2011.
[14] DIREAG/GOREMAD, 2007.
[15] Supreme Decree n° 011-2011-TRI of the Ministry of Labour and Employment Promotion.
[16] Data from the PETT offices of Regional Enforcement (OPERs), shown in the record of the project "Cadastre, land titling and registration in 28 districts adjacent to the Interoceanic Highway, routes: i) Iñapari-Puente Inambari ii) Bridge Inambari, Carabaya, Azángaro, Lampa iii) Inambari Bridge –Urcos".

Despite all the aforementioned, the pressure for new land to develop agricultural activities in the region is very large. In 2005 it was estimated that, while effective demand for land was equal to 5,370 units (including units with ownership title and position title), the potential demand reached 10.091 units[20].

The analysis of deforestation between years 2000 and 2006 [17] shows that land conversion has taken place mainly along the Interoceanic Highway, at a rate of 26,186.72 ha per year. In the area of the Brazil nut concessions, the main reason for land use change has been, and remains, the installation of crops and pastures.

Indeed, the paving of the Interoceanic Highway recently completed and the construction of secondary roads not only facilitate access to the forest, but by reducing the costs of transporting agricultural products to major markets, improve the profitability of alternative activities.

Another consequence of the completion of the works on the Interoceanic and Billinghurst Bridge (over the river Madre de Dios) is that it facilitates the interaction between regional markets and southern Brazil markets, and given that there are no trade tariff between the two countries[18], many investors could explore the possibilities of installing highly profitable export crops. It is worth to stress that this expected increased flow between the two markets can also facilitate the entry of Brazilian deforestation agents like major producers of cattle or soybeans, which are present in the states of Acre and Rondonia.

As a result, the areas near the IOH are preparing to meet the demand of the population in the southern Andes, the own population of Madre de Dios (which is on the increase) and of the Brazilian population, making it necessary to install new areas for crops and pastures to supply the growing food demand, given that it exceeds the productive capacity of existing properties. Thus deforestation enters the proposed project area.

Not mentioned above, Mining is another important activity in Madre de Dios, however despite its significance in the southern part of the region "…specifically in the middle and lower of the Madre de Dios river and the sub basins of the Colorado, Inambari and Tambopata rivers"[19], it has little presence in the Brazil nut areas. According to studies made by the Geological Mining and Metallurgical Institute (INGEMMET), commercial gold stocks are found in the alluvial formations of the Quaternary Holocene, which represents 3.62% of the proposed Project Area.

This is the main reason why mining is not regarded as an alternative activity to the proposed project area under this scenario; yet its effects on migration are considered since it increases due to the attraction generated by the mining profitability, as well as improvements in road infrastructure (mentioned above).

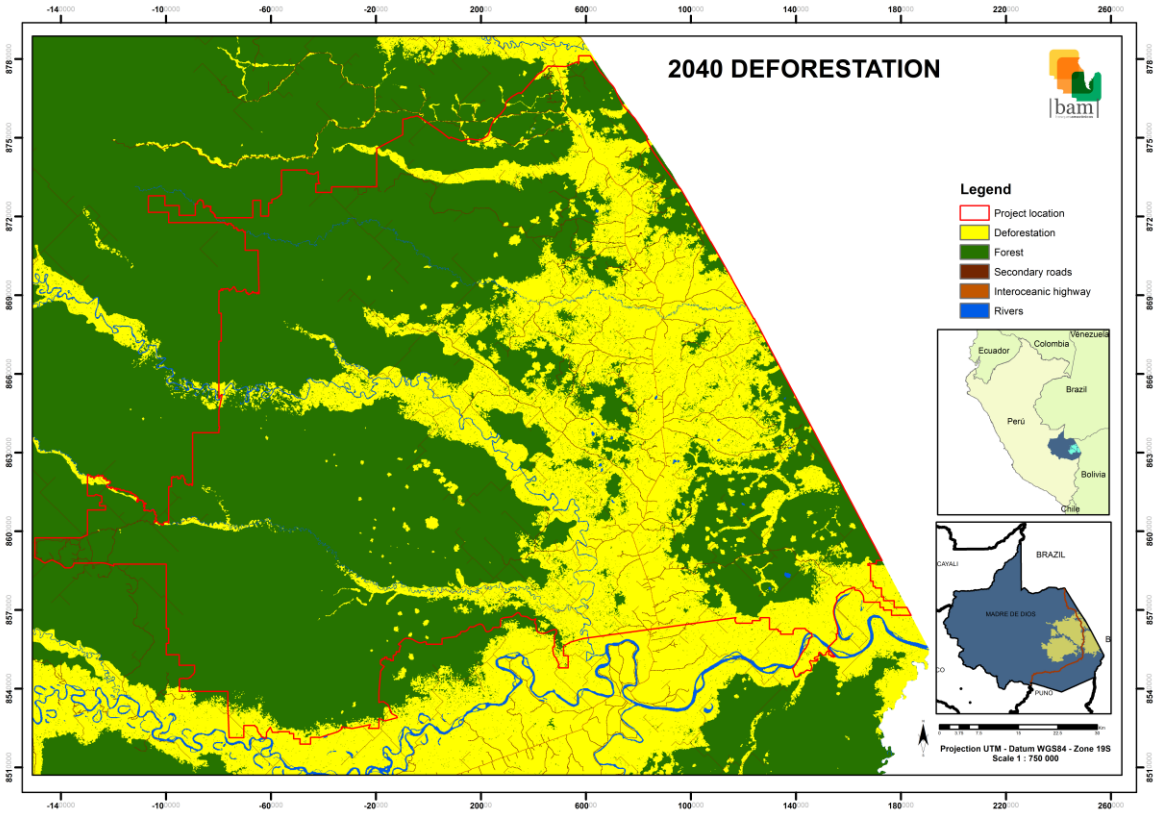
The expected scenario to year 2040 shows deforestation exacerbated for land use change due to agricultural activities and livestock, practiced by these migrant settlers

[17] Analysis of deforestation areas using 5TM Landsat images of years 2000 and 2006.
[18] Peru for being a *Partner Country* of the Southern Common Market (MERCOSUR) has free commerce with member countries, including Brazil.
[19] Integral Study of Mining in Madre de Dios. Conservación Internacional – 2009.

and even by many Brazil nut concessionaries that could change their activity instead of losing all their areas. This can be seen in Map 4.

Deforestation will be given by the direct relationship it has with the increasing profitability of livestock and agriculture.

Map 4. Projected Deforestation up to year 2040 covering Project Areas and Leakage Belt areas



Thus, the result will be a deforestation of 100,296.7 hectares of forests in the Project Area and 193,542.64 hectares in the Leakage Belt by the year 2040, which is the year that the proposed project will end.

The complete justification can be seen in T-ADD module.

2.5 Additionality

Methodology

The additionality of the project was performed by doing an Investment Comparison Analysis between the baseline scenario, the alternative scenario dismissed and the proposed project activity without considering the carbon credits. The financial indicators were IRR, payback period and average investment. Then, a sensitivity analysis was done to see the robustness of the financial attractiveness of each scenario; and finally a Common Practice Analysis was undertaken to see if similar activities to the proposed one are being developed in the region and the results obtained by them.

Relevant assumptions of each scenario

This section will verify that the financially attractiveness of the project excluding GHG credit revenues, is less than other land uses scenarios. We present the relevant assumptions and financial ratios of each scenario.

The activities are evaluated in a horizon of 10 years and consider a discount rate of 15%. In addition, the analysis considers the volume and processing capacity of each activity according to the standards in the region of Madre de Dios.

a) Artisanal Brazil nuts activity (low value-added)

Revenues under this scenario will be generated by the harvesting of low value-added[20] Brazil nuts[21], and also considers other activities such as small-scale logging[22].

Producer harvests an average of 136 Brazil nuts barrels a year. To ensure the Brazil nuts supply, private companies apply the common practice of giving *Habilitos* to the Brazil nuts concessionaires, who spent this working capital in the harvesting activity. Through this practice the concessionaires have cost-effectiveness in terms of IRR due to the limited own investment (although sometimes profit in nominal terms remains of subsistence). The average net revenue estimated is S/.10,339 per year.

The small-scale logging activity in Brazil nuts concessions is commonly done with an arrangement between the Brazil nuts concessionaire and the timber' extractor, where 50% corresponds to the Brazil nuts concessionaire. The scenario considers an annual average volume of 206 m^3 of wood with an average revenue and cost of S/.357 and S/.230 per m^3 respectively.

b) Baseline Scenario: Agriculture and Livestock, along with Artisanal Brazil nuts activity

Revenues under this scenario will be generated by livestock and agriculture activities[23], also the harvesting of low value-added Brazil nuts and the small-scale logging activities will continue in remaining forest areas (assumptions of these activities will maintain its main characteristics as the scenario above).

The agriculture activity of this scenario corresponds to corn production, carried out by small farmers through the practice of slash and burn of forest, even though, in the project area the main agriculture is of subsistence and exists few small local commercial agriculture. The average productivity of corn is estimated in 1,014 kg per hectare, low performance compared to national average (3,962[24] kg per hectare). In the livestock activity, the maximum productivity of meat considered is 45 kg per hectare of pasture. The profitability of livestock activity, especially near to Puerto Maldonado and

[20] The low value added of Brazil nuts activity refers to the lack of harvesting techniques and international certifications that allow better prices in the market.
[21] Information obtained from “La cadena de valor de la castaña amazónica”, Autor corporativo: Comité Técnico Multisectorial de la Castaña - 2006.
[22] Information obtained from Annual Operatives Plans (AOP).
[23] Information obtained from “Strategies for Conservation along the Interoceanic Highway in Madre de Dios, Peru: A spatial economic analysis” prepared by GRADE, March 2010.
[24] Ministry of Agriculture - DGIA, 2008

Las Piedras (very close to the proposed project area), reach a top value of US$140 hectare per year, and decreases the farther it is of the downtown or the Interoceanic highway. This scenario considers an average profitability for both agriculture and livestock activities of S/.192.5 hectare.

This analysis works with an average of 800 hectares[25] per concessionaires and a conservative annual historical invasion risk rate is used, 1.04% per year, to calculate the alternative land use activities, the artisanal Brazil nuts and small-scale logging activity in remaining forest areas.

c) REDD Project in Brazil Nuts Concessions excluding GHG credit revenues

Project revenues will be generated by processing and commercializing high value-added Brazil nuts. The analysis will demonstrate the financially attractiveness of the proposed project[26].

The estimated production is based on the storage capacity, operational processes and acquired technology of the plant. The raw material supply will be gradual, reaching a production level of approximately 3,000 tons of Brazil nuts in shell. Final products will be traded mainly in international markets.

The REDD Project in Brazil Nuts Concessions includes an organized monitoring system and permanent surveillance in all Brazil nuts concessions, currently this activity has been performed inefficiently by Brazil nuts concessionaires due to lack of economic resources. The project will certify the Brazil nuts concessions with organic certification, thus achieving better revenues, harvesting and processing techniques of the Brazil nuts.

Clear comparison of the financial indicators

As a result of the investment analysis of each activity, the following financial indicators were compared:

The activities proposed in the Castañeros REDD Project (peeled, process and transformation of Brazil nuts, monitoring and surveillance), without the GHG credit revenues, shows lower rate of return 18.7% compared to other scenarios analysed. The proposed project estimates a total investment of approximately US$1.6 million for machinery and equipment to implement the Brazil nuts processing plant.

Artisanal Brazil nuts activity (low value-added) has a return rate of 53.1% over the next 10 years; the concessionaire's investment is very small, less than US$0.01 million. In this scenario, the main problem that generates the latent deforestation of the area is the reduction of productivity due to loss of standing Brazil nuts forest. This would have an impact on the economy and cost-effectiveness of the concessionaires in the long term.

[25] Real evidence of Brazil nuts concessionaires' database from Bosques Amazonicos

[26] In fact BAM will support 100% of the costs of the Project in turn of a percentage of the sales in carbon credits and from the Brazil nut processing plant. Investments include: 1) implementation of the Brazil Nuts processing plant, 2) work capital for the harvesting activities of Brazil Nuts concessionaires' partners of the project, 3) formalization of the documentation of each Brazil Nuts concession in order to meet the terms of the contracts, 4) implementation expenses of the project.

Baseline Scenario (Agriculture and Livestock, along with Artisanal Brazil nuts activity in remaining forest), even if these activities require more efficient management techniques and investment to be sustainable, this scenario has higher rate of return in the absence of the project, IRR 56.1%. This is explained because the artisanal Brazil nut activity profitability will be reduced over the years due to the deforestation grows in the area. It is estimated that in ten years, approximately 10% of the hectares of Brazil nut concessions turn into alternative land use activities such as livestock and agriculture. The scenario estimates a total investment of approximately US$0.01 million.

Table 12. Indicators Summary

	IRR	Payback Period	Investment (million US$)
Castañeros REDD Project excluding GHG credit revenues	18.7%	< 7 years	1.6
Artisanal Brazil nuts Activity (low value-added)	53.1%	<3 years	0.01
Alternative land use activities (Agriculture and Livestock)	56.1%	<3 years	0.01

Compiled by author

Principal comparison conclusions from the financial indicators

The artisanal Brazil nuts scenario is currently developed with low technology, lack of sustainable management policies and without international certifications. Therefore, the market price is less than the one obtained with the Castañeros REDD Project. However, the return on investment of this scenario is higher than the proposed project due to the private funding *Habilito* (nonetheless, fails to perceive a higher price for the Brazil nuts).

The Brazil nuts concessionaires in Madre de Dios are not attractive to the financial system; consequently it is hard for them to start off a high value implementation project without private initiatives. Comparing the scenarios proposed the highest average investment becomes from Castañeros REDD Project which also has the longest payback period (seven years) making this scenario less attractive that the alternative land use or artisanal Brazil nut activity (both scenarios have three or less than three years of payback period).

It is possible that in long term the Brazil nuts concessionaires could be organized, implement organic certification to their concessions and improve standard harvesting activity; however the high costs of these activities will have a negative impact in the concessionaires' profits. Consequently, the scenario will not be sustainable and the deforestation process will increase due to land invasion risk by grazing, burning, migrant farmers and informal mining.

There is also a high trend of international markets that become rigorous with organic certification; therefore, the artisanal harvesting methods should be higher than traditional methods in Madre de Dios in order to get better Brazil nuts quality.

Due to the project is located near to a couple of Natural Protected Areas, Tambopata Reserve and the Bahuaja - Sonene National Park, it is highly beneficial to develop conservation activities to preserve biodiversity and prevent progressive deforestation in the area.

The investment comparison analysis determined that other land use scenarios 8the baseline scenario and the alternative scenario) have better financial indicators (IRR, Payback Period and Average Investment) than the proposed project excluding GHG credit revenues. As consequence, the Castañeros REDD Project without the financial benefits from the VCS is not financially the most attractive alternative. Therefore the Sub Step 2d -Sensitivity Analysis was developed.

Sensitivity Analysis

To develop this analysis, we made the stress test of -5% and 5% on costs parameters of each activity, due to it is a key variable to quantify the impact on IRR. The chart below reflects the impacts. This analysis shows that the proposed project without carbon component revenues is less profitable that other land use scenarios even if reduce cost is considered.

Table 13. Sensitivity Analysis

Scenario	Δ Costs	IRR
Brazil Nuts REDD project excluding GHG credit revenues	-5%	22.7%
	0%	18.7%
	5%	14.5%
Artisanal Brazil nuts Activity (low value-added)	-5%	56.3%
	0%	53.1%
	5%	49.9%
Alternative land use activities among Artisanal Brazil nuts activity (low value-added)	-5%	59.6%
	0%	56.1%
	5%	52.6%

Compiled by author

After the sensitivity analysis it is concluded that the proposed project without the financial benefits from the VCS is unlikely to be financially most attractive, consequently, following the T-ADD tool the Step 4 - Common practice analysis was done.

Common Practice Analysis

An analysis was performed over the collected data of different projects that were carried out in the Brazil nut concessions. It was evident that the NGO *Asociación para la Conservación de la Cuenca Amazónica* (ACCA) has an important presence in the Brazil nut sector. They have developed several projects and have led the entire implementation process of formalization and management across the sector since year 2001.

As the projects implemented inside the Brazil nut concessions in the past ten years (since 2000) are discussed and compared with the REDD activities proposed by Bosques Amazonicos - BAM, it appears that the projects implemented **FAILED IN COMPARISON** with REDD activities, according to the following indicators of relevance:

- **There is no experience in REDD in the proposed area**. None of the analyzed projects considered to reduce CO_2 emissions by controlling deforestation and degradation, likewise, none of the projects considered to control the direct threats to the Brazil nut forests. The Castañeros REDD Project is proposed as

the first project for avoiding unplanned deforestation and degradation practiced in the project area; and it bases its activity in monitoring and safeguarding the concession areas as well as in generating added-value to the products, among others.

- **Coverage:** The projects analyzed only have coverage (in areas and beneficiaries) of an average of 50 families reaching (in the case of the ACCA projects) to a maximum of 200 Brazil nut concessionaires (summation of several processes), to which they have received technical assistance, have ordered their concessions and have developed plans to manage their concessions (a situation which is required every year). These projects helped to formalize the legal ownership of the concession.
  Another fact to be considered is that proposed projects to date have had a lifetime of no more than 4 years, while the Castañeros REDD Project is intended to last until 2040.

- **Economic valuation:** The projects analyzed do not have a proposal to generate their own businesses that can add value to the product. They have focused on generating processes of formalization and management, activity that today, still continues as a pending task. The only successful experience of economic improvement is the project executed by CASAL SAC., but it only benefits 25 Brazil nut producers.

- **Articulation and association for development:** The experiences gained with Brazil nut producers are oriented to groups of interest focused on sectors, which have made impact on certain issues and groups of Brazil nut families. The association for the Brazil nut development was not promoted, which constitutes a significant difference from the activities proposed by BAM, an association aimed not only to defend their areas, but also to promote the management of forests with the increased value by the environmental services.

The conclusion of the whole additionality analysis shows that the **Castañeros REDD Project is an additional project**[27]**.**

2.6 Methodology Deviations

N/A.

3 QUANTIFICATION OF GHG EMISSION REDUCTIONS AND REMOVALS

3.1 Baseline Emissions

To carry out the process and quantification of Baseline Emissions, indications set forth in modules BL-UP, X-STR, C-AB, E-BB, were followed. Baseline emissions were determined considering the deforestation rate calculated for RDD and the deforestation model that located the deforestation every year. Following is a summary of the main

[27] For further details of the additionality analysis, please revise T-ADD module or excel document *Scenarios Calculations.xlsx*

processes and equations; details are presented on each module developed for the project.

STRATIFICATION

Stratification for carbon stocks consist in grouping forest areas in homogeneous groups in terms of carbon stocks, using stratification factors (such as type of forest/vegetation, type of soil/geology, management) that could affect carbon stocks, so that less sample parcels would be required to reach certain level of precision.

For the stratification of the project area, the Forest Map of the ZEE study of Madre de Dios (IIAP, 2009) has been used. It is a multidimensional model with physiographic, floristic, physiognomic and ecological variables. The use of an existing map is outlined in the ***Approach A*** for stratification of the GOFC-GOLD Sourcebook (2010), and the Forest Map in question complies with all the requirements. The Sourcebook also recommends having a maximum of ten strata; therefore they were grouped according to their type of vegetation and physiography. The following Table shows the ZEE forest strata present in the PA, with the final re-stratification

Table 14. Simplified Forest Strata for the Project based on the ZEE strata

	Code	Forest Type ZEE	Simplified Stratification	Code
A		**FOREST**	**FOREST**	
11	BPTbi	Low flooded terraces with bamboo (paca) forest	Flooded terraces forest	**BTl**
2	BTbi	Low flood terrace forest		
3	BTm	Mid terrace forest	Terraces forest	**BT**
4	BTaC	High terraces forest with Brazil nut stands		
28	BTaPa	High terrace forest with swamp areas		
6	BCb	Low hills forest	Low hills forest	**BCb**
7	BCbS	Low hills forest with *Shiringa* stands		
B		**FOREST WITH BAMBOOS (PACAL)**	**FOREST WITH BAMBOOS (PACAL)**	
12	BPTm	Mid terrace with bamboo (paca) forest	High and mid terrace with bamboo (paca) forest	**BPT**
13	BPTa	High terrace with bamboo (paca) forest		
15	BPCb	Low hills with bamboo (paca) forest	Low hills with bamboo (paca) forest	**BPCb**
16	BPCbS	Low hills with bamboo (paca) forest and *Shiringa* stands		
C		**BAMBOOS (PACAL)**	**BAMBOOS (PACAL)**	
20	Ptbi	Bamboos of low flooded terraces	Bamboos (Pacal)	**P**
21	PTm	Bamboos of mid terraces		
22	PTa	Bamboos of high terraces		
23	PCb	Bamboos of low hills		
IV		**OTHER AREAS**	**OTHER AREAS**	
1	BLlm	Meandering plains forest	Swamp Trees	**PA**
29	PaA	Swamp trees		
99		Water bodies	**Others (Without Carbon)**	**NB**

The following table shows the final stratum in the Project Area and Leakage:

Table 15. Stratum area for the PA and LB

Stratum	Code	Project Area	Leakage Belt
		Ha	Ha
Low Hills Forest	BCB	31,085.44	112,637.26
Low Hills with Bamboo Forest	BPCB	12,267.28	57,436.57
High and Mid Terrace with Bamboo Forest	BPT	28,939.78	71,313.04
Terraces Forest	BT	204,712.10	403,979.93
Flooded Terraces Forest	BTI	2,193.44	19,127.80
Pacal (Bamboos)	P	6,221.01	13,605.36
Swamp Trees	PA	5,276.44	40,182.37
Others (Without Carbon)	NB	871.1	5,465.98
Total		**290,695.49**	**718,282.05**

As stated before, the stratum NB is not included in the calculations because it does not have carbon stocks, thus the total forest area does not include its areas.

ESTIMATION OF CARBON STOCKS BEFORE AND AFTER DEFORESTATION

a) Forest carbon stocks (Initial Use)

As in Table 10, only the above- and belowground biomass pool was included in the calculation of carbon stocks of forest strata. A summary of the steps of CP-AB module followed are presented below[28]:

- A carbon inventory was carried out, through a stratified sampling of 58 fix area plots inside the PA.
- The individuals included in the inventory were Trees, Palms and Bamboos.
- The parameters measured were DBH, total and commercial height and tree health.
- The conversion from field parameters (DBH in case of trees and TH in case of palms) to biomass was done by the use of allometric equations from recognized researchers. In case of bamboos, a fixed biomass per individual was used (taken from studies of bamboos forest in Colombia).
- The subsequent conversion from biomass to carbon stock was done by multiplying standardized factors as: Carbon Fraction, Ratio of Molecular Weight of CO_2 to carbon for AG carbon stocks, and Root-to-shoot Ratio for BG carbon stocks.

[28] A complete explanation of the steps followed to estimate the carbon stocks can be seen in CP-AB module.

The following table shows the tons of CO_2/ha for each stratum of the project.

Table 16. Carbon Stocks per Stratum in the Project Area (t CO_2/ha)

Stratum		Above ground	Below ground	Cstock
Code	Name	t CO_2e ha^{-1}	t CO_2e ha^{-1}	t CO_2e ha^{-1}
BTI	Flooded terraces forest	314.39	75.45	**389.84**
PA	Swamp trees	749.38	179.85	**929.23**
BPT	High and mid terrace with bamboo (paca) forest	402.93	96.70	**499.63**
BT	Terraces forest	761.48	182.76	**944.24**
P	Bamboos (Pacal)	608.06	145.93	**753.99**
BCB	Low hills forest	822.93	197.50	**1,020.43**
BPCB	Low hills with bamboo (paca) forest	365.85	87.80	**453.65**

With this information it was determined the initial carbon stock in the Project Area and then the annual loss due to deforestation. The following table shows the annual carbon stock that would be lost in baseline for the first 10 years of the project, according to the deforestation projected for each stratum. During the 31 years of life of the project, there would be a loss of 89'217,396 tCO_2 due to the total elimination of 100,296.7 ha of forest in the Project Area. In Table 17 there is the same estimate for the first 10 years of the project, which imply 30'228,270 tCO_2 due to the total elimination of 34,199.7 ha deforested.

Table 17a: Carbon Stock of the areas to be deforested in the Project Area in Baseline

Carbon stock changes in initial (pre-deforestation) forest classes in Project Area																Total C stock change in initial forests	
Strata i		BTI		PA		BPT		BT		P		BCB		BPCB		Cumulative	Annual
T	Year	ha	t CO_2-e	ha	t CO_2-e	ha	t CO_2-e	ha	t CO_2-e	ha	t CO_2-e	ha	t CO_2-e	ha	t CO_2-e	t CO_2-e	t CO_2-e
1	2010	56	22,010	54	50,122	40	20,149	2,983	2,816,427	18	13,683	20	20,062	261	118,231	3,060,684	3,060,684
2	2011	100	39,108	85	78,695	180	90,168	5,925	5,594,298	52	39,529	42	42,695	515	233,489	6,117,983	3,057,299
3	2012	126	49,130	116	108,206	314	156,660	8,808	8,316,955	78	58,914	85	86,934	774	351,035	9,127,833	3,009,851
4	2013	167	65,048	159	148,022	468	233,983	11,853	11,191,929	109	82,099	138	140,946	1,083	491,220	12,353,246	3,225,413
5	2014	191	74,285	188	174,254	566	282,845	14,855	14,026,919	133	100,343	208	211,933	1,305	592,071	15,462,649	3,109,403
6	2015	247	96,098	229	212,665	675	337,247	17,803	16,810,026	176	132,651	307	313,270	1,617	733,628	18,635,586	3,172,937
7	2016	276	107,497	255	236,555	782	390,895	20,578	19,430,346	243	183,583	394	401,747	1,947	883,418	21,634,039	2,998,453
8	2017	303	118,109	315	292,766	895	447,312	23,223	21,927,860	322	242,877	451	459,874	2,242	1,016,971	24,505,768	2,871,729
9	2018	344	134,223	367	341,482	953	476,025	26,026	24,574,358	432	325,356	501	510,800	2,486	1,127,656	27,489,900	2,984,132
10	2019	382	148,962	435	403,783	1,035	517,079	28,578	26,984,290	511	385,410	547	558,639	2,712	1,230,107	30,228,270	2,738,371

Table 17b: Carbon Stock of the areas to be deforested in the Leakage Belt in Baseline

Carbon stock changes in initial (pre-deforestation) forest classes in Leakage Belt																Total C stock change in initial forests	
Strata i		BTI		PA		BPT		BT		P		BCB		BPCB		Cumulative	Annual
T	Year	ha	t CO_2-e	ha	t CO_2-e	ha	t CO_2-e	ha	t CO_2-e	Ha	t CO_2-e	ha	t CO_2-e	ha	t CO_2-e	t CO_2-e	t CO_2-e
1	2010	117	45,789	496	460,931	160	79,841	4,995	4,716,575	23	17,104	44	44,753	162	73,409	5,438,401	5,438,401
2	2011	272	105,924	914	849,255	329	164,468	9,611	9,075,206	64	47,891	117	119,341	505	229,144	10,591,230	5,152,829
3	2012	401	156,234	1,533	1,424,482	554	276,800	14,207	13,414,321	153	115,547	191	194,958	860	390,369	15,972,709	5,381,480
4	2013	519	202,416	2,110	1,960,360	783	391,146	18,869	17,816,743	259	194,985	273	278,291	1,265	573,776	21,417,717	5,445,008
5	2014	648	252,528	2,581	2,398,807	977	488,115	23,473	22,163,950	356	268,343	354	361,623	1,623	736,372	26,669,738	5,252,021
6	2015	819	319,149	3,128	2,906,580	1,122	560,400	28,118	26,549,712	521	392,632	430	438,784	2,140	970,776	32,138,032	5,468,294
7	2016	1,023	398,739	3,722	3,458,854	1,249	624,122	32,985	31,145,862	658	496,016	565	576,643	2,654	1,203,808	37,904,043	5,766,011
8	2017	1,275	496,999	4,198	3,901,047	1,367	682,806	37,911	35,796,750	777	585,716	690	703,700	3,229	1,464,740	43,631,759	5,727,716
9	2018	1,533	597,814	4,799	4,458,942	1,504	751,314	42,520	40,148,717	888	669,716	810	826,127	3,786	1,717,668	49,170,298	5,538,539
10	2019	1,734	676,029	5,330	4,953,131	1,575	787,078	47,383	44,740,583	982	740,413	976	995,879	4,409	2,000,325	54,893,438	5,723,140

b) Carbon stocks of Post-Deforestation Land-uses

The document developed in the BL-UP module explains the complete analysis of the Study which determined the future activities in the areas post-deforestation. This study is the "Monitoring of the land use between Puerto Maldonado and Iñapari corresponding to section 3: Interoceanic Highway for 1990, 2000 and 2005"[29] held in October 2007.

In the case of the Brazil Nut Project, land use will change to: Farming, Pastures or Livestock, Farmland and Infrastructure (the farming class is considered as a mixed surface between pastures and agriculture), based on the following proportions:

Farmland	: 3.25%
Pasture	: 51.79%
Farming	: 39.01%
Infrastructure (*)	: 2.32%
Illegal mining	: 3.62%

(*)Increase in urban areas, roads.

To set the carbon stock of these new land uses, information from each of the systems was considered according to studies[30] conducted in the Peruvian jungle which is presented below:

Pasture	: 18.63 t CO_2/ha
Farmland (Corn)	: 31.75 t CO_2/ha

Corn was used as it is the main crop developed in the Project Area and because it has a higher stock (more conservative) compared to rice, which is also an important crop in the region[31].

The stock of farming (mixed of pastures and croplands) use was estimated conservatively by using the highest carbon stock of its components, in this case, farmland: 31.75 t CO_2/ha

The stock in infrastructure and illegal mining is zero.

Table 18 shows deforested areas in the first 10 years of Baseline, divided between different post-deforestation-activities according to the percentages already mentioned; and in Table 19, the post-deforestation stocks per year in such areas.

[29] CDC, UNALM, Frankfurt zoological society, INRENA, 2007
[30] Alegre, J. Arevalo, L. Ricse, A. Reservas de Carbono según el uso de la tierra en dos sitios de la Amazonia Peruana. Agroforestería para la Producción Animal en América Latina - II - Memorias de la Segunda Conferencia Electrónica (Agosto de 2000-Marzo de 2001). FAO
[31] Agrarian Agency of MDD

Table 18a: Post-Deforestation Land-Use Areas set out in the Project Area

Area of post-deforestation classes established on deforested areas within the Project Area							
Strata f		Deforestation for Pastures	Deforestation for Farming*	Deforestation for Agriculture (Corn)	Deforestation for Infrastructure	Deforestation for Illegal Mining	Total
% historic		51.79%	39.01%	3.25%	2.32%	3.62%	Cumulative
T	Year	ha	ha	ha	ha	ha	ha
1	2010	1,777.2	1,338.8	111.6	79.7	124.2	3,431.9
2	2011	3,572.7	2,691.3	224.3	160.2	249.7	6,899.1
3	2012	5,334.5	4,018.4	334.9	239.2	372.9	10,301.3
4	2013	7,238.1	5,452.4	454.4	324.6	506.0	13,977.2
5	2014	9,034.1	6,805.3	567.1	405.1	631.5	17,445.4
6	2015	10,902.5	8,212.7	684.4	488.9	762.1	21,053.2
7	2016	12,674.5	9,547.5	795.7	568.3	886.0	24,475.1
8	2017	14,370.8	10,825.3	902.1	644.4	1,004.6	27,750.7
9	2018	16,109.3	12,134.9	1,011.3	722.3	1,126.1	31,108.0
10	2019	17,710.4	13,341.0	1,111.8	794.1	1,238.0	34,199.7

Table 18b: Post-Deforestation Land-Use Areas set out in the Leakage Belt

Area of post-deforestation classes established on deforested areas within the Leakage Belt							
Strata f		Deforestation for Pastures	Deforestation for Farming*	Deforestation for Agriculture (Corn)	Deforestation for Infrastructure	Deforestation for Illegal Mining	Total
% historic		51.79%	39.01%	3.25%	2.32%	3.62%	Cumulative
t	Year	ha	ha	ha	ha	ha	ha
1	2010	3,105.4	2,339.3	194.9	139.2	217.1	5,996.8
2	2011	6,116.6	4,607.6	384.0	274.3	427.6	11,811.6
3	2012	9,269.1	6,982.3	581.9	415.6	647.9	17,899.1
4	2013	12,468.2	9,392.1	782.7	559.1	871.6	24,076.8
5	2014	15,542.1	11,707.6	975.7	696.9	1,086.5	30,012.6
6	2015	18,785.9	14,151.1	1,179.3	842.4	1,313.2	36,276.5
7	2016	22,193.1	16,717.8	1,393.2	995.1	1,551.4	42,856.1
8	2017	25,605.5	19,288.3	1,607.4	1,148.2	1,789.9	49,445.7
9	2018	28,916.7	21,782.5	1,815.3	1,296.6	2,021.4	55,839.7
10	2019	32,308.8	24,337.7	2,028.2	1,448.7	2,258.5	62,389.9

Table 19a: Annual Post-Deforestation Carbon Stock in the Project Area

Carbon stock changes in final (post-deforestation) non forest classes in Project Area												Total C stock change in final post-deforestation classes	
Strata f		Cause of deforestation										Cumulative	Annual
		Pastures		Farming		Agriculture (Corn)		Infrastructure		Illegal Mining			
t	Year	ha	t CO_2-e	ha	t CO_2-e	ha	t CO_2-e	ha	t CO_2-e	ha	t CO_2-e	t CO_2-e	t CO_2-e
1	2010	1,777	33,110	1,339	42,506	112	3,542	80	-	124	-	79,157	79,157
2	2011	3,573	66,560	2,691	85,448	224	7,121	160	-	250	-	159,129	79,971
3	2012	5,335	99,383	4,018	127,585	335	10,633	239	-	373	-	237,600	78,471
4	2013	7,238	134,846	5,452	173,113	454	14,427	325	-	506	-	322,385	84,785
5	2014	9,034	168,306	6,805	216,068	567	18,006	405	-	632	-	402,380	79,995
6	2015	10,902	203,113	8,213	260,752	684	21,730	489	-	762	-	485,595	83,215
7	2016	12,674	236,125	9,547	303,133	796	25,262	568	-	886	-	564,520	78,925
8	2017	14,371	267,727	10,825	343,703	902	28,643	644	-	1,005	-	640,073	75,553
9	2018	16,109	300,117	12,135	385,285	1,011	32,108	722	-	1,126	-	717,510	77,437
10	2019	17,710	329,944	13,341	423,576	1,112	35,299	794	-	1,238	-	788,819	71,309

Table 19b: Annual Post-Deforestation Carbon Stock in the Leakage Belt

Carbon stock changes in final (post-deforestation) non forest classes in Leakage Belt												Total C stock change in final post-deforestation classes	
Strata f		Cause of deforestation										Cumulative	Annual
		Pastures		Farming*		Agriculture (Corn)		Infrastructure		Illegal Mining			
t	Year	ha	t CO_2-e	ha	t CO_2-e	ha	t CO_2-e	ha	t CO_2-e	ha	t CO_2-e	t CO_2-e	t CO_2-e
1	2010	3,105	57,854	2,339	74,272	195	6,190	139	-	217	-	138,316	138,316
2	2011	6,117	113,953	4,608	146,291	384	12,191	274	-	428	-	272,435	134,119
3	2012	9,269	172,683	6,982	221,687	582	18,475	416	-	648	-	412,844	140,409
4	2013	12,468	232,283	9,392	298,201	783	24,851	559	-	872	-	555,335	142,490
5	2014	15,542	289,549	11,708	371,717	976	30,978	697	-	1,086	-	692,244	136,909
6	2015	18,786	349,981	14,151	449,299	1,179	37,443	842	-	1,313	-	836,723	144,479
7	2016	22,193	413,457	16,718	530,789	1,393	44,234	995	-	1,551	-	988,480	151,757
8	2017	25,606	477,031	19,288	612,403	1,607	51,036	1,148	-	1,790	-	1,140,470	151,990
9	2018	28,917	538,718	21,783	691,595	1,815	57,635	1,297	-	2,021	-	1,287,949	147,478
10	2019	32,309	601,912	24,338	772,723	2,028	64,396	1,449	-	2,259	-	1,439,031	151,083

ESTIMATION OF THE TOTAL CHANGE OF CARBON STOCKS IN BASELINE

The purpose of this step was to complete the baseline assessment by calculating changes in the carbon stocks. Based on changes in the land use from initial classes (or stratum) of forest to final classes (non-forest), considering changes in the respective stocks, it was estimated the total change in carbon stocks for the reference period of the project (until 2040) equal to 86'904,039 t CO_2 and for the first 10 years of the project equal to 29'439,451 t CO_2.

Table 20a: Estimation of the Total Change of Carbon Stocks in Baseline in Project Area

Classes		Total C stock change in initial forests		Total C stock change in final post-deforestation classes		Total baseline carbon stock change in Project Area	
		cumulative	annual	cumulative	annual	annual	cumulative
t	Year	t CO_2-e	t CO_2-e	t CO_2-e	t CO_2-e	t CO_2-e	t CO_2-e
1	2010	3,060,684	3,060,684	79,157	79,157	2,981,526	2,981,526
2	2011	6,117,983	3,057,299	159,129	79,971	2,977,328	5,958,854
3	2012	9,127,833	3,009,851	237,600	78,471	2,931,379	8,890,233
4	2013	12,353,246	3,225,413	322,385	84,785	3,140,628	12,030,861
5	2014	15,462,649	3,109,403	402,380	79,995	3,029,408	15,060,269
6	2015	18,635,586	3,172,937	485,595	83,215	3,089,721	18,149,990
7	2016	21,634,039	2,998,453	564,520	78,925	2,919,528	21,069,518
8	2017	24,505,768	2,871,729	640,073	75,553	2,796,176	23,865,695
9	2018	27,489,900	2,984,132	717,510	77,437	2,906,695	26,772,390
10	2019	30,228,270	2,738,371	788,819	71,309	2,667,062	29,439,451

Table 20b: Estimation of the Total Change of Carbon Stocks in Baseline in Leakage Belt

Classes		Total C stock change in initial forests		Total C stock change in final post-deforestation classes		Total baseline carbon stock change in Leakage Belt	
		Cumulative	Annual	Cumulative	Annual	Annual	Cumulative
t	Year	t CO_2-e	t CO_2-e	t CO_2-e	t CO_2-e	t CO_2-e	t CO_2-e
1	2010	5,438,401	5,438,401	138,316	138,316	5,300,085	5,300,085
2	2011	10,591,230	5,152,829	272,435	134,119	5,018,710	10,318,794
3	2012	15,972,709	5,381,480	412,844	140,409	5,241,071	15,559,865
4	2013	21,417,717	5,445,008	555,335	142,490	5,302,518	20,862,382
5	2014	26,669,738	5,252,021	692,244	136,909	5,115,111	25,977,494
6	2015	32,138,032	5,468,294	836,723	144,479	5,323,816	31,301,309
7	2016	37,904,043	5,766,011	988,480	151,757	5,614,254	36,915,563
8	2017	43,631,759	5,727,716	1,140,470	151,990	5,575,726	42,491,289
9	2018	49,170,298	5,538,539	1,287,949	147,478	5,391,060	47,882,349
10	2019	54,893,438	5,723,140	1,439,031	151,083	5,572,057	53,454,406

3.2 Project Emissions

The GHG emissions by sources from the project implementation are not being included in the final calculations since they have proved to be insignificant. The project implementation activities considered for the calculation were: Forest monitoring and surveillance, construction of checkpoints, construction and activity of tree nursery, and activity of Brazil nut processing plant (see E-FFC module for more details). The emissions from biomass burn inside Leakage Belt in the with-project case were also accounted, as required in step 5.2.5 of M-MON.

ESTIMATION OF EMISSIONS

The GHG emissions from these activities were not included in the calculation since they were less than 5% of the total increases in emissions, estimated with the T-SIG tool. This exclusion is resumed next by presenting the resulting GHG emissions per activity, which can be further revised in the excel document attached: Ex-Ante GHG Emissions in the with-project case.xlsx

a. Forest monitoring and surveillance

Concessionaires will organize a Ground Team of Monitoring and Surveillance, formed by 12 people divided into sub-teams of two people for each of the 6 Checkpoints that will also be implemented.

A weekly preventive patrolling system will be implemented throughout the boundaries of the project area, highlighting some critical points.

The Forest Surveillance Committee will be formed by active members of the Federation, who will directly receive the reports and findings of the Monitoring and Surveillance Team.

A protocol is being elaborated to gather graphic information and statements to legally prosecute those ecological crimes committed within the project area.

The patrolling system includes 4 different river routes as well as a number of routes along roads per sectors. For each means of transport we have estimate the fuel (gasoline) consumption per month.

Table 21: Consumption of gasoline from Monitoring and Surveillance activity

	Total gallons
River	170
Roads	90
Month	**260**
Year	**3120**

Next, we have converted these measurement units (gallons) into tonnes of carbon dioxide (t CO_2) using the formulas provided at E-FFC Module:

Table 22: Emissions for Monitoring and Surveillance activity due to consumption of fuel (annual emissions)

Machinery and Equipment	Annual Consumption (L)	Density kg/L	NCV TJ/GG	Fuel Surveillance TJ	Emission Factor t CO2/TJ	EFC, Surveillance t CO2-e
Gasoline	11,793.60	0.7407	44.75	0.390914499	69.3	27.09

b. Construction of checkpoints

A total of 6 checkpoints will be constructed in our area. All of the Checkpoints will be located in strategic places in order to monitor and control illegal logging activities, migratory agriculture and mining activities in the area of the project.

First, we propose to adapt the 4 premises of the Agricultural Agencies, located in the road axis of Planchon, Alegria, Mavila and Alerta. The arrangement of these offices will include: placement of mesh nets (mosquito nets), painting of furniture and installing equipment.

To monitor the Brazil nut forests next to the river, two more checkpoints will be implemented considering the availability of land, construction materials and workforce. It is assumed that for their construction, local materials will be employed.

Furthermore, two extra checkpoints are planned to be constructed in areas with larger concentration of Brazil nut concessionaires (in support of the 4 first mentioned), more likely in Varsovia o Lucema, and another one in Nuevo San Juan. These offices will have a small size (16 m^2) and shall be constructed using rustic materials from the surroundings, to allow their mobility.

We set the estimation of emissions from this activity to zero since we will use already constructed infrastructure. Also, the new infrastructure to be implemented does not present emissions from transportation of materials or from use of machinery, as the materials used will be those available in the area and the construction of the premises will be artisanal.

c. Brazil nut processing plant

The implementation of the Brazil nut processing plant presents emissions mainly for the equipment installed and used to process the nuts. We have estimated the consumption per machine per hour, per day and finally per year (see spreadsheet *Plant's Energetic Consumption*). The steps for obtaining the CO_2 are the same applied for the first activity estimation.

The resulting emissions are presented next:

Table 23: Emissions (t CO_2) from Processing Plant

Machinery and Equipment	Annual Consumption	Unit	Annual Consumption	Unit	Emission Factor	Total Emissions t CO_2/year
Electric Energy	659,723.3	KW-hour	659.72	MW-hour	0,472 t CO_2/MW-hour	311.39
Caloric Energy	2,186,520,000.0	Kcal	9.15	TJ	69.3 t CO_2/TJ	633.98
Total						945.37

d. Tree Nursery

The emissions calculated for this activity mainly proceed from the transport of construction materials and annual inputs like sand, soil, seeds, etc. We have not considered emissions of N_2O from applying nitrous fertilizers inside the Tree Nursery, in spite of having this applications planed, because E-NA Module states that when it happens in tree nurseries outside Project Area, they may be considered as negligible.

The items considered can be seen in spreadsheet *Tree Nursery Calculations and Tree Nursery Emissions*, and are based on the preliminary design of the implementation and operation of the tree nursery, made by Engineer J. Chavez, who is also in charge of the Forest Plantation and tree nursery of the Campo Verde Project (Reforestation of Pastures in Campo Verde with native species, Pucallpa, Peru, validated by VCS in 2009).

The production capacity of the projected nursery at a first stage will be of 60 000 seedlings. It is expected that the production will be duplicated in time.

The result from all expected transport and machinery emissions per year, considering its maximum capacity is:

Table 24: Emissions from implementation and operation of Tree Nursery

Total Emissions			
$E_{FC,TreeNursery}$ =	**$\sum(E_{FC1}, E_{FC2}, E_{FC3}, E_{FC4})$ =**	**5.53**	**11.066**

e. Biomass Burning in the Leakage Belt in the with-project case

The step 5.2.5 of M-MON module specifies that any emissions from biomass burning as means of forest clearance inside Project Area or Leakage belt should be accounted.

For the ex-ante estimations, we are considering biomass burning inside LB coming from the deforested areas estimated in the with-project case ($A_{DefLB,i,u,t}$), which can be found in the excel document *Castañeros REDD Project Calculations v5.xlsx* (spreadsheet *Auxiliar 2*).

By following the same steps undertaken to account emissions from biomass burning in the Project Area in baseline, we estimated the total expected emissions from LB. They can be seen in the following table.

Only the emissions for the first 10 years are presented, and the estimations for the whole project longevity can be seen in spreadsheet *LB biomass burn emission*.

Table 25: GHG emissions due to biomass burning in forest strata as part of deforestation activities inside Leakage Belt in the with-project case

		Total GHG Emissions				
		CH_4		N_2O		Total
		Cumulative	Annual	Cumulative	Annual	Cumulative
T	Year	t CO_2-e	t CO_2-e	t CO_2-e	t CO_2-e	t CO_2-e
1	2010	61,514	61,514	26,708	26,708	**88,222**
2	2011	119,798	58,284	52,013	25,305	**171,811**
3	2012	180,668	60,870	78,441	26,428	**259,110**
4	2013	242,257	61,589	105,182	26,740	**347,439**
5	2014	301,663	59,406	130,974	25,793	**432,638**
6	2015	363,516	61,852	157,829	26,855	**521,344**
7	2016	428,735	65,220	186,146	28,317	**614,881**
8	2017	493,522	64,787	214,274	28,129	**707,796**
9	2018	556,169	62,647	241,474	27,200	**797,643**
10	2019	620,904	64,735	269,580	28,106	**890,484**

TESTING SIGNIFICANCE OF GHG EMISSIONS

The T-SIG tool allowed us to exclude the increase of emissions from these activities by measuring the relative contributions of the emissions by sources (project activities) using the equation (IPCC 2003, Eq. 5.4.1):

$$RC_{E_i} = \frac{E_i}{\sum_{i=1}^{I} E_i}$$

Where:

RCEi = Relative contribution of each source to the sum of project and leakage carbon stocks

Ei = Carbon stocks by sources

i = Index for individual sources of project and leakage stocks

Table 26: Significance in GHG Emission sources for the With-Project Case

Emission	Relative contribution	RC_{Ei} (%)	Rank	Sum of RC_{Ei} (%)
$\Delta C_{BSL,unplanned}$ t CO_2-e	0.97	96.85	3	**96.85**
GHG Emissions from Burning Biomass in LB in the with-project case t CO_2-e	0.03	3.12	2	
Emissions of Project Activities (ex-ante) t CO_2-e	0.00035	0.035	1	

The project activities were combined to form the **Emissions of Project Activities (ex-ante)** column.

As can be seen in the above chart, none of the estimated emissions can be considered as significant, as they don't account for at least the 5% of the total emissions. Therefore, these emissions are not being included in the final calculations of total emission reductions attributable to the project activity.

This can be checked in more detail in E-FCC and T-SIG modules.

3.3 Leakage

To determine the leakage indications set forth in module LK-ASU were followed, and this section contains a summary thereof.

The Project Area is located in the provinces of Tahuamanu (covering the District of Tahuamanu) and Tambopata (covering the districts of Tambopata, Laberinto and Las Piedras).

However, only the districts of Tahuamanu and Las Piedras were considered to calculate the proportion of deforestation by leakage, as only 5.4% of Laberinto is included in the project area (quite unrepresentative) and Tambopata has 70% of its population in the city of Puerto Maldonado, which is outside the project area and has very different economic activities (mostly services as it is the largest urban area in the region).

The information required for the calculation was obtained from the National Census of 2007[32], and is shown in the following table.

[32] Data Consultation System of Settlements and Disperse Population. National Census 2007: XI of Population and VI of Housing. INEI

Table 27: Population by Economic Activity and Residence Period in the Zone

P6a+: Activity by group	Las Piedras			Tahuamanu			TOTAL			
	If 5 years ago - Lived in this District	If 5 years ago - Did not live in this District	Total	If 5 years ago - Lived in this District	If 5 years ago - Did not live in this District	Total	Total If 5 years ago - Lived in this District	Total If 5 years ago - Did not live in this District	Total population	%
Agriculture - cattle raising, hunting and forestry	869	133	1,002	354	99	453	1,223	232	1,455	40.39
Mining and quarrying	13	19	32	-	1	1	13	20	33	0.92
Fishing	5	4	9	3	-	3	8	4	12	0.33
Construction	26	21	47	196	333	529	222	354	576	15.99
Manufacturing industries	130	49	179	36	92	128	166	141	307	8.52
Retail Trade	166	46	212	45	30	75	211	76	287	7.97
Wholesale trade	5	1	6	2	3	5	7	4	11	0.31
Transport, storage and communications	143	32	175	30	50	80	173	82	255	7.08
Hotels and restaurants	106	24	130	23	24	47	129	48	177	4.91
Teaching	26	15	41	27	20	47	53	35	88	2.44
Private households and domestic services	34	19	53	4	5	9	38	24	62	1.72
Pub. Admin. and defence	12	9	21	12	28	40	24	37	61	1.69
Other act. Com. Serv. and personal	20	8	28	11	11	22	31	19	50	1.39
Health and Social services	9	15	24	5	6	11	14	21	35	0.97
Sell, maintenance and repair of motor vehicle & motorcycle	15	12	27	-	7	7	15	19	34	0.94
Real state act., business and rents	4	6	10	-	3	3	4	9	13	0.36
Electricity supply, gas and water	2	-	2	-	2	2	2	2	4	0.11
Unspecified economic activity	88	21	109	22	11	33	110	32	142	3.94
Total	1,673	434	2,107	770	725	1,495	**2,333**	**1,127**	**3,602**	**100**

Of all the activities the population carries out, only Agriculture and Livestock, presented under the same cell of the table, and Mining are considered as a direct cause of deforestation. Taking the sum of both districts it is represented that 41% of the population is engaged in activities that cause deforestation, of which only 7% are migrants.

Table 28. Population Responsible of Deforestation by Residence Period in the area

Activities	% with more than 5 years in area	% with less than 5 years in area	Total Population %
Causing Deforestation (Agriculture, Livestock, Mining)	34.31	7.00	**41.31**
Not Causing Deforestation	33.51	25.18	**58.69**
TOTAL			**100.0**

Estimation of Leakage inside the Leakage Belt

According to the module, the estimated carbon stock changes and the GHG emitted in the Project Area should be multiplied by a factor less than 1 which represents the percentage of deforestation that would be displaced in the Leakage Belt.

This factor has been obtained by analyzing the activities that cause deforestation within groups of people in the districts of Tahuamanu and Las Piedras, as mentioned above.

Table 29: Percentage expected at the Interior of the Leakage Belt.

Actors	Deforester Activity	Deforesters by Residence Time %	Deforesters by Activity %	Proportion not changed by Project Activity	Expected Proportion of Inhabitants engaged in Deforestation %		
Migrants	Agriculture - livestock	7.00	6.44	0.10	0.64	1.20	**5.0**
	Mining		0.56	1.00	0.56		
Residents	Agriculture - livestock	34.31	33.95	0.10	3.40	3.76	
	Mining		0.36	1.00	0.36		
		41.31	41.31				

As estimated above, 34.31% of deforestation in the project area will be carried out by residents and 7.0% by migrants. However, in both cases there are people who will be dedicated to agriculture, livestock or mining. Conservatively, it is believed that people engaged in mining activities, whether be residents or migrants, will not change their line of business, as mining is currently the largest activity that produce revenues in the region, and which growth in recent years evidence a tendency to a further increase[33].

With the farmers, whose activity is often of subsistence and from which they obtain a low revenue, the REDD Project aims to work and conduct surveillance, monitoring and training

[33] Artisanal Mining Assessment in Madre de Dios. Mosquera *et al*. International Conservation Foundation, 2009

activities for the implementation of sustainable activities. This is why it is estimated that 10% (worst scenario) of such population will not change their line of business and will maintain the deforestation activity.

Therefore, with these data, it is estimated that the population that will cause deforestation and will migrate to the Leakage Belt will be 5%.

In the case of the project and according to the Model of Deforestation in the region of Madre de Dios, the areas to be deforested within the Project Area will be 34,199.7 ha in 2019 and 100,296.7 ha by year 2040 (expiration of the REDD Project).

The total emissions of the project would be equal to 30'204,781.5 tCO_2 in 2019 and 89'162,855.8 tCO_2 by 2040. Multiplied by 0.05 (factor determined as the displacement of areas to the Leakage Belt) is equivalent to 1'510,239.1 and 4'458,142.8 tCO_2 respectively of emissions by deforestation displacement of the Project Area to the Leakage Belt. This should be verified during monitoring.

Estimation of leakage outside the Leakage Belt

Once the deforestation displacement to the leakage belt area is determined, it was also estimated the displacement to areas outside the leakage belt. To that end it has been defined the total area of forest available nationwide (TOTFOR), and reduce it only to areas, a buffer of 5Km, that would go around the roads, navigable rivers and other accesses that will facilitate the conversion of the land. Forest protected areas (PROTFOR) and areas of forest management (MANFOR) can be excluded.

$$AVFOR = TOTFOR - PROTFOR - MANFOR$$

The forest area nationwide has been considered as there is no information of the total area of 5Km of roads and rivers. The national TOTFOR in the Peruvian jungle is of 70'180,130.4 ha (PROCLIM, 2000). The PROTFOR[34], considering protected areas within the forest area is of 16'452,255.72 ha in total. Nationwide the areas of forest management are 8,586,493.5[35] ha (7,480,783 ha of timber concessions and 1'105,710 of non-timber concessions: Brazil nuts, Rubber, reforestation, wildlife, etc.)

AVFOR = 70´180,130.4 - (16´452,255.72 ha + 8,586,494 ha)

AVFOR = 45,141,381.13

The proportion of the forest area in the Leakage Belt with relation to the national area is given by

$$PROP_{LB} = LBFOR / AVFOR$$

[34] Information of the Forest Bureau of the Ministry of Agriculture
[35] It was considered the NPA located in the Peruvian Jungle

The LBFOR area was defined as the total forest area in the LB minus managed areas inside the LB. The areas under active management are represented by Forest Timber Concessions (16,788.71 ha) and Ecotourism and Conservation Concessions (10,347.01 ha).

The Brazil nut concessions present in the LB (598,374.25 ha) are not being considered for the total managed areas in this calculation, because they are under the same conditions and suffer the same risk of deforestation as the PA (composed by this kind of concessions) . Their legal status as a "concession" will not prevent the possible leakage.

$$PROP_{LB} = \frac{718{,}282.33 - (16{,}788.71 + 10{,}347.01)}{45{,}141{,}381.13}$$

$$PROP_{LB} = 0.01531$$

According to the methodology, the stratification of AVFOR by carbon stock has to be made. There are studies of carbon stock nationwide, in different stratum or types of forests. However, such studies have not been homogenized to date. At a country level, there is an on-going work. . For this step, the data established for Peru in the Second Communication on Climate Change[36] was used to derive the country average carbon stock: the emissions by land use change in natural forests for period 1990 – 2000 (56,827 GG CO_2 equivalent) divided by the deforested areas on the same period (149,631.76 has). The resulting carbon stock for available forest outside LB is 379.779 t CO_2/ha

The average of the carbon stock in the Leakage Belt has been determined based on the average carbon stock by stratum, and the representation of each in the Leakage Belt (LB) (weighted average), being equal to 688.39 t CO_2

$$PROP_{CS} = C_{OLB} / C_{LB}$$

$$PROP_{CS} = 379.779 / 688.39\ tCO_2/ha$$

$$PROP_{CS} = 0.55$$

An important value to calculate the leakage outside the Leakage Belt is the proportion of migrant residents ($PROP_{IMM}$) that presumably will go into the region to carry out activities involving deforestation. This $PROP_{IMM}$ is equal to 0.7 and was determined based on the data presented in Table 30. The detail is shown in the table below.

Table 30: Proportion of Migrant Population which Deforests in the Project Area.

Inambari Population	Deforester Migrants N°	Deforester Migrants %	**$PROP_{IMM}$**
3602	252	7.00	**0.07**

[36] http://www.minam.gob.pe/dmdocuments/SCNCC-MINAM.pdf (page 72).

Then the proportional leakage of the areas with migrant population (LK_{PROP}) will be:

$$LK_{PROP} = PROP_{IMM} * (1-PROP_{LB}) * PROP_{CS}$$

$$LK_{PROP} = 0.07 * (1 – 0.01531) * 0.55$$

$$LK_{PROP} = 0.03803$$

Finally, the leakage caused by deforestation actors that will be displaced outside the Leakage Belt, will be equal to the subtraction of the carbon stock changes in Baseline and the changes in stock in a Scenario with project, multiplied by the LK_{PROP}.

$$\Delta C_{LK-ASU,OLB} = \left(\Delta C_{BSL,LK,unplanned} - \Delta C_{P,LB}\right) * LK_{PROP}$$

To year 2019 (the first 10 years of the project):

$$\Delta C_{LK\text{-}ASU,OLB} = (53'454,406.38 – 34'301,679.25) * 0.03803$$

$$\Delta C_{LK\text{-}ASU,OLB} = 728,319.72\ tCO_2$$

To year 2040 (all years with Project accreditation):

$$\Delta C_{LK\text{-}ASU,OLB} = (161'714,949.47 – 103'772,414.80) * 0.03803$$

$$\Delta C_{LK\text{-}ASU,OLB} = 2'203,377.63\ tCO_2$$

Emissions of Leakage Prevention Activities

The activities proposed for the project were designed to reduce deforestation inside the Project Area and the Leakage Belt, given that the latter is principally formed by other Brazil nut concessions. Thus, the activities cannot be divided in leakage prevention activities and project activities inside PA. The proposed activities in previous points (1.8 and 1.13) of the present document

The emissions arising from the implementation of these activities were estimated ex-ante according to E-FFC and were already included in the GHG project activity emissions.

Total Estimations of Leakage due to Unplanned Deforestation Displacement

$$\Delta C_{LK\text{-}AS,unplanned} = \Delta C_{LK\text{-}A\ SU\text{-}LB} + \Delta C_{LK\text{-}ASU\text{-}OLB} + GHG_{LK,E}$$

To year 2019 (the first 10 years of the project):

$$\Delta C_{LK\text{-}AS,unnplaned} = 1'510{,}239.08 + 729{,}442.14 + 0$$

$$\Delta C_{LK\text{-}AS,unnplaned} = 2'238{,}558.80\ tCO_2$$

And,

To year 2040 (all years with Project accreditation):

$$\Delta C_{LK\text{-}AS,unnplaned} = 4'458{,}142.79 + 2'203{,}377.63 + 0$$

$$\Delta C_{LK\text{-}AS,unnplaned} = 6'661{,}520.43\ tCO_2$$

3.4 Summary of GHG Emission Reductions and Removals

The total net of GHG reductions of the REDD Project are calculated as follows:

$$C_{REDD,t} = \Delta C_{BSL} - \Delta C_P - \Delta C_{LK}$$

Where,

$C_{REDD,t}$ = Total GHG emission reduction

ΔC_{BSL} = Net emissions under baseline

ΔC_P = Net emissions under project scenario

ΔC_{LK} = Net emissions by leakage

As shown in the calculations developed, there is no variation in carbon stocks by deforestation in the with-project case (ex-ante), as the Castañeros REDD Project will carry out activities to avoid the projected deforestation in 100%. On the other hand, there is no sufficiently reliable estimation about the increase in biomass by the actions of enrichment in the Project Area. Therefore, based on the monitoring to be carried out calculations ex post will be made for this item.

The emissions due to leakage inside and outside the Leakage Belt that have been calculated following Module LK-ASU amount to 2'238,559 tCO_2 for the first 10 years. The percentages and indexes found in the different steps of the estimation are based in the analysis of the official information on the population, as the National Census of 2007 and current studies of the area carried out by NGO's and different researchers.

Therefore, the Total Reduction of GHGs Emissions in the Project Area would be equal to 27'966,223 tCO_2 (30'204,782 – 2'238,559 tCO_2) for the first ten years and 82'501,335 tCO_2 for the entire life of the project. However, the project should be monitored to verify stock changes by deforestation (unlikely to occur) and if the leakage established (ex-ante) is in fact attributable to the project or the amount has been overestimated and increase the carbon stock in a project scenario by enrichment in the project area.

Estimation on the VCS buffer

The Buffer retention is estimated as a percentage of the subtraction between the Total Emissions by Unplanned Deforestation in Baseline and the Emissions in the Scenario with Project, regardless of the discounts by leakage. Previously, each one has to subtract their emissions by burning of fossil fuels and the incorporation of nitrogen.

The retention rate is determined according to the risk classification of the project, using the VCS tool for AFOLU of Risk of Non Permanence. According to the calculations, it has a total percentage of 20% buffer.

Therefore the retention of Buffer Credits to year 2019 should be:

$$\text{Buffer}_{\text{UNPLANNED}} = \{(30'204{,}782 - 0^*) - 0^{**}\} \times 20\% = 6'040{,}956\ tCO_2$$

And to 2040 (end of the accreditation period):

$$\text{Buffer}_{\text{UNPLANNED}} = \{(89'162{,}856 - 0^*) - 0^{**}\} \times 20\% = 17'832{,}571\ tCO_2$$

** It was already explained that the emissions due to the burning of fossil fuels and the incorporation of nitrogen fertilizers in baseline were not considered.*

*** There are no changes in carbon stocks in Scenario with Project (ex - ante) due to the planned prevention activities, and because none of them have considered using fertilizers.*

Uncertainty Analysis

The analysis of uncertainty of carbon stocks was developed according to the module X-UNC.

The assumptions made were:

- The uncertainty from emissions should be accounted as zero, since we used a conservative number (55%) in its calculation, and it is the percentage taken from literature.

- The uncertainty from Pools: Dead-wood, Litter, Soil organic, Wood products; and sources: Fossil fuel combustion and N_2O emissions from nitrogen application, were not analysed as they are not included in baseline calculations.

- The uncertainty resulting from calculations to estimate aboveground biomass, based on measured tree variables (DBH, specific density), is already included in the biomass equation itself

More details can be seen in X-UNC module. The resulting uncertainty is below 15% (14.452%), therefore the Total GHG emission reduction does not need to be adjusted.

Estimation of Verified Carbon Units

Considering what is indicated in the module, to know the verifiable carbon units in time t, the adjustment by uncertainty should be carried out as well as the reduction by risk buffer. For the

development of this item it has been estimated the VCU of each year, as evidenced in the table below.

$$VCU_t = \left(Adjusted\_C_{REDD,t_2} - Adjusted\_C_{REDD-t_1}\right) - Buffer_{TOTAL} \quad (8)$$

Where:

VCU_t	Number of Verified Carbon Units at time $t = t_2 - t_1$; VCU
$Adjusted\_C_{REDD,t2}$	Cumulative total net GHG emissions reductions at time t_2 adjusted to account for uncertainty; t CO_2-e
$Adjusted\_C_{REDD,t1}$	Cumulative total net GHG emissions reductions at time t_1; t CO_2-e
$Buffer_{TOTAL}$	Total permanence risk buffer withholding; t CO_2-e

Table 31: Verifiable Carbon Units in the first 10 years of the Project

T	Year	$\Delta C_{BSL,unplanned}$	ΔC_P	$\Delta C_{LK-AS,unplanned}$	$C_{REDD,t}$	$Buffer_{UNPLANNED}$	VCU_t
1	2010	3,059,017	-	225,165	2,833,852	611,803	**2,222,049**
2	2011	3,054,734	-	221,117	2,833,617	610,947	**2,222,670**
3	2012	3,007,584	-	221,789	2,785,794	601,517	**2,184,278**
4	2013	3,222,291	-	233,362	2,988,929	644,458	**2,344,471**
5	2014	3,108,132	-	225,100	2,883,031	621,626	**2,261,405**
6	2015	3,170,055	-	231,040	2,939,015	634,011	**2,305,004**
7	2016	2,995,445	-	226,267	2,769,178	599,089	**2,170,089**
8	2017	2,868,885	-	219,414	2,649,471	573,777	**2,075,694**
9	2018	2,982,248	-	222,566	2,759,682	596,450	**2,163,232**
10	2019	2,736,392	-	212,739	2,523,653	547,278	**1,976,375**
Total		**30,204,782**	**-**	**2,238,559**	**27,966,223**	**6,040,956**	**21,925,266**

In conclusion, there will be 21'925,266 tCO_2 of verifiable carbon credits during the first 10 years, and 64'668,764 tCO_2 during the entire life of the project.

Table 32: Verifiable Carbon Units of the Project by 2040

T	Year	$\Delta C_{BSL,unplanned}$	ΔC_P	$\Delta C_{LK-AS,unplanned}$	$C_{REDD,t}$	$Buffer_{UNPLANNED}$	VCU_t
1	2010	3,059,017	-	225,165	2,833,852	611,803	**2,222,049**
2	2011	3,054,734	-	221,117	2,833,617	610,947	**2,222,670**
3	2012	3,007,584	-	221,789	2,785,794	601,517	**2,184,278**
4	2013	3,222,291	-	233,362	2,988,929	644,458	**2,344,471**
5	2014	3,108,132	-	225,100	2,883,031	621,626	**2,261,405**
6	2015	3,170,055	-	231,040	2,939,015	634,011	**2,305,004**
7	2016	2,995,445	-	226,267	2,769,178	599,089	**2,170,089**
8	2017	2,868,885	-	219,414	2,649,471	573,777	**2,075,694**
9	2018	2,982,248	-	222,566	2,759,682	596,450	**2,163,232**
10	2019	2,736,392	-	212,739	2,523,653	547,278	**1,976,375**
11	2020	2,684,869	-	210,692	2,474,177	536,974	**1,937,203**
12	2021	2,680,340	-	209,822	2,470,518	536,068	**1,934,450**
13	2022	2,828,895	-	216,801	2,612,094	565,779	**2,046,315**
14	2023	2,716,337	-	209,056	2,507,280	543,267	**1,964,013**
15	2024	2,865,953	-	216,433	2,649,519	573,191	**2,076,329**
16	2025	2,847,690	-	214,871	2,632,819	569,538	**2,063,281**
17	2026	2,866,540	-	214,758	2,651,782	573,308	**2,078,474**
18	2027	2,875,892	-	216,601	2,659,290	575,178	**2,084,112**
19	2028	2,932,417	-	214,719	2,717,698	586,483	**2,131,214**
20	2029	2,721,669	-	208,645	2,513,024	544,334	**1,968,690**
21	2030	2,858,240	-	210,327	2,647,913	571,648	**2,076,265**
22	2031	2,899,531	-	212,144	2,687,387	579,906	**2,107,481**
23	2032	2,903,580	-	213,906	2,689,674	580,716	**2,108,958**
24	2033	2,854,887	-	212,438	2,642,450	570,977	**2,071,472**
25	2034	2,817,604	-	208,307	2,609,297	563,521	**2,045,776**
26	2035	3,067,278	-	219,323	2,847,955	613,456	**2,234,499**
27	2036	2,745,288	-	203,453	2,541,835	549,058	**1,992,777**
28	2037	2,852,771	-	208,924	2,643,848	570,554	**2,073,294**
29	2038	2,688,560	-	202,671	2,485,889	537,712	**1,948,177**
30	2039	2,677,524	-	201,438	2,476,086	535,505	**1,940,581**
31	2040	2,572,210	-	197,632	2,374,578	514,442	**1,860,136**
Total		**89,162,856**	**-**	**6,661,520**	**82,501,335**	**17,832,571**	**64,668,764**

4 MONITORING

4.1 Data and Parameters Available at Validation

Data Unit / Parameter:	Map of Forest / Non-forest Coverage in the Reference region.
Data unit:	n/a
Description:	Map that shows the stratification and location of forest and non-forest areas in the Reference Region at the beginning of the accreditation.
Source of data:	Landsat satellite images.
Value applied:	n/a
Justification of choice of data or description of measurement methods and procedures applied:	The Landsat images have the adequate resolution and they are an available tool to all public.
QA/QC procedures to be applied:	Through the accuracy assessment.
Any comment:	The stratification is based on the Ecological and Economic Zoning of the Region of Madre de Dios, that was developed by the IIAP in 2009 and it is used by the regional government as its official source. Non-forest has been determined as beach and water bodies areas. In addition, there are other areas that are access roads (rivers, bridges, alternate roads, the Interoceanic Highway).

Data Unit / Parameter:	Map of Forest Coverage in the Project Area.
Data unit:	n/a
Description:	Map that shows the stratification and location of forest areas in the Project area at the beginning of the accreditation.
Source of data:	Landsat satellite images.
Value applied:	n/a
Justification of choice of data or description of measurement methods and procedures applied:	The Landsat images have the adequate resolution and they are an available tool to all public.
QA/QC procedures to be applied:	Through the accuracy assessment.
Any comment:	The stratification is based on the Ecological and Economic Zoning of the Region of Madre de Dios, that was developed by the IIAP in 2009 and it is used by the regional government as its official source. Non-forest has been determined as beach and water bodies areas. In addition, there are other areas that are access roads (rivers, bridges, alternate roads, the Interoceanic Highway). To date there is no other use but forest usage.

Data Unit / Parameter:	Map of Forest Coverage in the Leakage Belt.
Data unit:	n/a
Description:	Map that shows the stratification and location of forest in the Leakage belt at the beginning of the accreditation.
Source of data:	Landsat satellite images.
Value applied:	n/a
Justification of choice of data or description of measurement methods and procedures applied:	The Landsat images have the adequate resolution and they are an available tool to all public.
QA/QC procedures to be applied:	Through the accuracy assessment.
Any comment:	The stratification is based on the Ecological and Economic Zoning of the Region of Madre de Dios, that was developed by the IIAP in 2009 and it is used by the regional government as its official source. Non-forest has been determined as beach and water bodies areas. In addition, there are other non-forested areas that used as access roads (rivers, bridges, Interoceanic Highway, alternate roads).

Data Unit / Parameter:	Carbon stock of the sources in the forest stratum.
Data unit:	T CO_2 e / ha
Description:	Carbon stock by stratum in baseline before deforestation.
Source of data:	Determined from inventory's results carried out inside the Project Area (2011).
Value applied:	BTI 389.84 PA 929.23 BPT 499.63 BT 944.24 P 753.99 BCB 1,020.43 BPCB 453.65
Justification of choice of data or description of measurement methods and procedures applied:	Inventories have been carried out in 58 plots established inside the Project Area. The next steps were followed: - Parcels were built in the different stratum. - DBH (Diameter Breast Height) and HT (Total Height) were taken from each individual found. - It was determined the aerial biomass based in the Chavé formula for trees and Winrock for palm trees. - Factor 0.24 was used to determine the root biomass according to module CP-AB. For the inventory design, many regional inventories' procedures and results were consulted.
Any comment:	The exact data for each stratum is found in module CP-AB.

Data Unit / Parameter:	Change in the land use.
Data unit:	%
Description:	Percentages of the project area that will change the land use after deforestation.
Source of data:	Determined according to the studies of land use carried out in the region of Madre de Dios. - CDC, UNALM, SZF, INRENA 2007. And the potential mining area in PA.
Value applied:	39.01 % Farming 3.25 % Farmland 51.79 % Pasture 2.32% Infrastructure 3.62% Mining
Justification of choice of data or description of measurement methods and procedures applied:	The study mentioned has been carried out in areas that include the Project Area, or next to them. Furthermore, this data is updated and actors that are also in our areas have been considered.
Any comment:	n/a

Data Unit / Parameter:	Emissions by biomass burning
Data unit:	T CO_2 e
Description:	Tons of CO_2 equivalents, coming from emissions of CH_4 and N_2O by forest burning and agriculture residues.
Source of data:	Factors of module E-BB were used (table 2.6 and 2.5) for tropical forest. Likewise, it was used the combustion factor of table 2.6 by agriculture biomass burning. The deforested forest percentage that is burnt has been taken from official sources[37].
Value applied:	Used values: - 55 % of the deforested forest is burnt. - Combustion factor Tropical Humid Forest = 0.5 Agriculture Residues (Corn) = 0.8 - Emission Factor Tropical Forest = 6.8 (CH_4) and 0.2 (N_2O) Agriculture Residues = 2.7 (CH_4) and 0.07 (N_2O).
Justification of choice of data or description of measurement methods and procedures applied:	The percentage of 55% is moderate. Some experts consulted consider that 100% of hectares that are torn down are burnt.
Any comment:	n/a

[37] Deforestation map of the Peruvian Amazon – 2000. MINAM (2009).

4.2 Data and Parameters Monitored

Data and Parameters Monitored for Baseline Renewal

Data Unit / Parameter:	Regional Forest / Non-forest Cover Benchmark Map
Data unit:	n/a
Description:	Map that shows the location of forest and non-forest areas in the Reference Region RRD at the beginning of the accreditation.
Source of data:	Landsat satellite images and ground truthing
Justification of choice of data or description of measurement methods and procedures applied:	The Landsat images have an adequate resolution and they are an available tool to all public. The map shall have a minimum accuracy of 90%.
Frequency of monitoring/recording:	At minimum 3 times over the baseline.
Value applied:	n/a
Monitoring equipment:	GPS MAP 60 CSX, Photographic camera to by used the accuracy assessment
QA/QC procedures to be applied:	Through the accuracy assessment.
Any comment:	The forest cover will be stratified using the Forest Classes of the Ecological and Economic Zoning (ZEE) of the Region of Madre de Dios. It was developed by the IIAP in 2009 and the regional government uses it as its official source.

Data Unit / Parameter:	Project Forest Cover Benchmark Map.
Data unit:	n/a
Description:	Map showing the location of forest areas in the Project Area at the beginning of each monitoring period.
Source of data:	Landsat satellite images and ground truthing.
Justification of choice of data or description of measurement methods and procedures applied:	The Landsat images have the adequate resolution and they are an available tool to all public. The map shall have a minimum accuracy of 90%.
Frequency of monitoring/recording:	At minimum every 10 years prior to baseline renewal.
Value applied:	n/a
Monitoring equipment:	GPS MAP 60 CSX, Photographic camera to by used the accuracy assessment
QA/QC procedures to be applied:	Through the accuracy assessment.
Any comment:	The forest cover will be stratified using the Forest Classes of the ZEE of the Region of Madre de Dios. In case of detecting deforested areas inside Project Area, they will be displayed in the map.

Data Unit / Parameter:	Leakage Belt Forest Cover Benchmark Map.
Data unit:	n/a
Description:	Map that shows the location of forest in the Leakage belt at the beginning of each monitoring period.
Source of data:	Landsat satellite images and ground truthing.
Justification of choice of data or description of measurement methods and procedures applied:	The Landsat images have the adequate resolution and they are an available tool to all public. The map shall have a minimum accuracy of 90%.
Frequency of monitoring/recording:	At minimum every 10 years prior to baseline renewal.
Value applied:	n/a
Monitoring equipment:	GPS MAP 60 CSX, Photographic camera to by used the accuracy assessment
QA/QC procedures to be applied:	Through the accuracy assessment.
Any comment:	The forest cover will be stratified using the Forest Classes of the ZEE of the Region of Madre de Dios. In case of detecting deforested areas inside Leakage Belt area, they will be displayed in the map.

Data Unit / Parameter:	A_i
Data unit:	Ha
Description:	Total area of each stratum i.
Source of data:	Value taken from ZEE
Justification of choice of data or description of measurement methods and procedures applied:	
Frequency of monitoring/recording:	At minimum every 10 years prior to baseline renewal.
Value applied:	
Monitoring equipment:	n/a
QA/QC procedures to be applied:	n/a
Any comment:	n/a

i	Code	Project Area	Leakage Belt
1	BPCb	12,267.3	57,436.6
2	BPT	28,939.8	71,313.0
3	BCb	31,085.4	112,637.3
4	BT	204,712.1	403,979.9
5	BTI	2,193.4	19,127.8
6	P	6,221.0	13,605.4
7	PA	5,276.4	40,182.4
Total Area (ha)		**209,695.5**	**718,282.3**

Data Unit / Parameter:	$A_{RRD,\ unplanned,\ hrp}$
Data unit:	Ha
Description:	Total deforested area during the Historical Reference Period in the RRD.
Source of data:	Valued taken from the analysis of Landsat satellite images.
Justification of choice of data or description of measurement methods and procedures applied:	The Landsat images have the adequate resolution and they are a free and available tool to all public.
Frequency of monitoring/recording:	At minimum every 10 years prior to baseline renewal.
Value applied:	Mining strata = 25,527.0 Positive Opportunity Cost strata = 53,826.6 Negative Opportunity Cost strata = 28,851.92
Monitoring equipment:	Landsat images following the procedures describe in the M-MON module
QA/QC procedures to be applied:	Accuracy assessment
Any comment:	Monitored for purpose of baseline revisions.

Data Unit / Parameter:	CF
Data unit:	t C t^{-1} d.m.
Description:	Carbon fraction of dry matter.
Source of data:	Value taken from IPCC 2006 INV GLs AFOLU Chapter 4 Table 4.3
Justification of choice of data or description of measurement methods and procedures applied:	The value chosen is 0.47 t C t-1 d.m.
Frequency of monitoring/recording:	Once per crediting period
Value applied:	0.47
Monitoring equipment:	n/a
QA/QC procedures to be applied:	Verification of literature
Any comment:	To be used in biomass different to tree biomass.

Data Unit / Parameter:	CF_j
Data unit:	t C t^{-1} d.m.
Description:	Carbon fraction of biomass for tree species j.
Source of data:	Value taken from IPCC 2006 INV GLs AFOLU Chapter 4 Table 4.3.
Justification of choice of data or description of measurement methods and procedures applied:	The value chosen is 0.49 t C t-1 d.m. for Tropical Forests.
Frequency of monitoring/recording:	Once per crediting period
Value applied:	0.49
Monitoring equipment:	n/a
QA/QC procedures to be applied:	Verification of literature
Any comment:	n/a

Data Unit / Parameter:	D_j
Data unit:	t d.m. m^{-3}
Description:	Basic wood density in t d.m. m^{-3} for species j.
Source of data:	National species-specific densities. For species-specific wood densities not available, it is used the regional average wood density value (0.60 t d.m.m-3- tropical America) from Reyes 1992 and Brown, S. 1997.
Justification of choice of data or description of measurement methods and procedures applied:	Species densities have been taken from different sources of national species-specific researches being the main ones: - Evaluation of mechanical and physical properties and probable uses of the wood of 20 species in Jenaro Herrera, Loreto – Perú (Aróstegui and Acevedo). - Summary of technical information of 32 tree species. Peruvian Confederation of Wood. 2008. CPM. CITE Madera. - Global wood density database. (Chavé et al., 2009).
Frequency of monitoring/recording:	Once per crediting period
Value applied:	various
Monitoring equipment:	n/a
QA/QC procedures to be applied:	Verification of literature
Any comment:	n/a

Data Unit / Parameter:	D_{mn}
Data unit:	t d.m. m^{-3}
Description:	Mean wood density of commercially harvested species.
Source of data:	National species-specific densities. For species-specific wood densities not available, it is used the regional average wood density value (0.60 t d.m.m-3- tropical America) from Reyes 1992 and Brown, S. 1997.
Justification of choice of data or description of measurement methods and procedures applied:	Species densities have been taken from different sources of national species-specific researches being the main ones: - Evaluation of mechanical and physical properties and probable uses of the wood of 20 species in Jenaro Herrera, Loreto – Perú (Aróstegui and Acevedo). - Summary of technical information of 32 tree species. Peruvian Confederation of Wood. 2008. CPM. CITE Madera. - Global wood density database. (Chavé et al., 2009).
Frequency of monitoring/recording:	Once per crediting period
Value applied:	various
Monitoring equipment:	n/a
QA/QC procedures to be applied:	Verification of literature
Any comment:	n/a

Data Unit / Parameter:	f_j (X,Y)
Data unit:	t d.m. tree^{-1}
Description:	Allometric equation for species j linking measured tree variable (s) to aboveground biomass of living trees, expressed as t d.m. tree^{-1}
Source of data:	The Chavé equation for trees and Winrock equation for palm trees.
Justification of choice of data or description of measurement methods and procedures applied:	Both formulas have been taken from: - Pearson, T., Walker, S. and Brown, S. 2005. Sourcebook for Land Use, Land-Use Change and Forestry Projects. Winrock International and the World Bank Biocarbon Fund. 57pp. - Chave, J, et. Al. 2005. Tree allometry and improved estimation of carbon stocks and balance in tropical forests. Oecología 145: 87-99.
Frequency of monitoring/recording:	For the first verification
Value applied:	Eq. Pearson *et al*: $AGB = 6.666 + 12.826 xH^{0.5} x LN (H)$ Eq. Chavé, et al: $AGB= \rho*\exp (-1.499+2.148*\ln (DBH) + 0.207(\ln (DBH)^{2}) – 0.0281*(\ln (DBH)^{3}))$,
Monitoring equipment:	n/a
QA/QC procedures to be applied:	Each one of the methods referred below has an own quality control system (re-measurement of 30 trees / destructive sampling of 5 trees) that we will follow in case of using that method.
Any comment:	The validation of the equations will be performed with either of both methods presented in VMD0015 module: - Limited Measurements - Destructive sampling

Data and Parameters Monitored for Verification

Data Unit / Parameter:	Project Forest Cover Monitoring Map
Data unit:	n/a
Description:	Map evidencing location of forest land in the Project Area at the beginning of each verification period. It has to be evidenced if within the Project area there are deforested areas.
Source of data:	Landsat satellite images and ground truthing.
Justification of choice or description of measurement methods and procedures applied:	The minimum accuracy shall be 90%.
Frequency of monitoring/recording:	Prior to every verification event, or at least every 5 years.
Value applied:	Same as the coverage map at the beginning of the project. No deforestation is contemplated within the project area.
Monitoring equipment:	Software GIS, available satellite images, GPS, professional monitoring equipment in field.
QA/QC procedures to be applied:	Permanent verification of the area of the project surfaces.
Any Comment:	There will be permanent surveillance carried out by the monitoring equipment. The forest cover will be stratified using the Forest Classes of the ZEE of the Region of Madre de Dios.

Data Unit / Parameter:	Leakage Belt Forest Cover Monitoring Map
Data unit:	n/a
Description:	Map evidencing the location of forest land in the Leakage Belt at the beginning of each verification period. It has to be evidenced if there are deforested areas.
Source of data:	Landsat satellite images and ground truthing.
Justification of choice or description of measurement methods and procedures applied: Frequency of monitoring/recording:	The minimum accuracy shall be 90%. Prior to every verification event, or at least every 5 years.
Value applied:	For review in LK-ASU
Monitoring equipment:	Software GIS, available satellite images, GPS, professional monitoring equipment in field.
QA/QC procedures to be applied:	Permanent verification of the area of the project surfaces. Also, through the accuracy assessment.
Any comment:	The forest cover will be stratified using the Forest Classes of the ZEE of the Region of Madre de Dios. The surveillance covers parts of the LB area.

Data Unit / Parameter:	Degradation PRA Results
Data unit:	n/a
Description:	If positive results are obtained, then $A_{deg,i}$ is estimated.
Source of data:	PRA
Justification of choice or description of measurement methods and procedures applied:	The PRA will be executed in form of interviews and/or surveys to local actors with the purpose of identifying the existence of depredation potential within the area of the project due to: · Extraction of firewood. · Illegal logging If the >= 10% of the surveys indicate that there is a risk of depredation then the procedures to verify and estimate the depredation should be executed. An additional result of the PRA would be the penetration distance that should be applied to calculate the area with depredation potential (buffer area).
Frequency of monitoring/recording:	Every 2 years.
Value applied:	Degradation is considered 0 at the beginning of the project (ex-ante).
Monitoring equipment:	PRA sociologist in charge with focusing criteria.
QA/QC procedures to be applied:	There would be templates to carry out surveys and/or interviews.
Any comment:	n/a

Data Unit / Parameter:	Results of Limited Degradation Survey
Data unit:	Stumps
Description:	Verification of degradation processes in the project area.
Source of data:	Field measurements.
Justification of choice or description of measurement methods and procedures applied:	Sampling transects with known length and width, are distributed across the buffer area with the purpose of identifying if there are new tree-stumps. Transects should cover a surface of no less than 1% of the buffer area.
Frequency of monitoring/recording:	Each time the PRA indicates there is degradation potential to the project area.
Value applied:	Degradation is considered 0 at the beginning of the project (ex-ante).
Monitoring equipment:	GPS, compass, tape line.
QA/QC procedures to be applied:	Trained staff for field measurement.
Any comment:	n/a

Data Unit / Parameter:	$A_{DefPA,iu,t}$
Data unit:	Ha
Description:	Deforested area in the Project area in stratum i converted to land use u.
Source of data:	Project Forest Cover Monitoring Map
Justification of choice or description of measurement methods and procedures applied:	Preparation maps forest and non-forest following the methodology employed to prepare maps during reference period.
Frequency of monitoring/recording:	Prior to every verification event, or at least every 5 years.
Value applied:	It has been considered to be zero for project scenario (ex-ante)
Monitoring equipment:	Software GIS, available satellite images, verification in field with GPS and professional equipment.
QA/QC procedures to be applied:	n/a
Any comment:	n/a

Data Unit / Parameter:	$A_{DefLB,iu,t}$
Data unit:	Ha
Description:	Deforested area in the Leakage belt by type of forest.
Source of data:	Leakage Belt Forest Cover Monitoring Map
Justification of choice or description of measurement methods and procedures applied:	Preparation maps forest and non-forest following the methodology employed to prepare maps during reference period.
Frequency of monitoring/recording:	Prior to every verification event, or at least every 5 years.
Value applied:	In *Castañeros REDD Project Calculations v5.xlxs*
Monitoring equipment:	Software GIS, available satellite images, verification in field with GPS and professional equipment.
QA/QC procedures to be applied:	n/a
Any comment:	Ex-ante values calculated using the formula suggested in M-MON module

Data Unit / Parameter:	$A_{DegW,i}$
Data unit:	Ha
Description:	Area under potential degradation process.
Source of data:	GIS delineation and ground truthing.
Justification of choice or description of measurement methods and procedures applied:	The buffer area shall be composed from all access points. The length is obtained from the PRA results, and the width shall be equal to the length.
Frequency of monitoring/recording:	Must to be repeated each time the PRA indicate a potential for degradation.
Value applied:	Degradation is considered 0 at the beginning of the project (ex-ante).
Monitoring equipment:	GIS software
QA/QC procedures to be applied:	n/a
Any comment:	All the access points were identified but ex-ante, no areas under potential degradation exists in the PA.

Data Unit / Parameter:	$A_{DECKS,i,t}$
Data unit:	Ha
Description:	Area of logging decks in stratum i at time t.
Source of data:	Field measurements or post-harvest reports based on field measures.
Justification of choice of data or description of measurement methods and procedures applied:	A systematic sampling to ensure all decks within area logged are identified and a conservative estimate of area produced.
Frequency of monitoring/recording:	At least every 5 years.
Value applied:	n/a
Monitoring equipment:	GPS MAP 60 CSX, Software Arc GIS
QA/QC procedures to be applied:	For field measurements, before recording the coordinates, the technician will wait a few minutes until GPS is stabilized in 3D (12 channels) to assure that the margin of error won't be larger than ± 15 meters (which depends on the type of the GPS used). Randomly verification of 10% field data by technical forestry
Calculation method:	Data is obtained by default from the GPS
Any comment:	n/a

Data Unit / Parameter:	$A_{DistPA,q,i,t}$
Data unit:	Ha
Description:	Area impacted by natural disturbance in the project stratum i converted to natural disturbance stratum q at time t; ha.
Source of data:	Satellite images and ground verification.
Justification of choice of data or description of measurement methods and procedures applied:	Minimum monitoring unit equal to a minimum of 11 Landsat pixels or one hectare.
Frequency of monitoring/recording:	At least every 5 years or prior to a verification event.
Value applied:	0
Monitoring equipment:	Fire Information for Resource Management System (FIRMS), GPS Map 60 CSX, satellite images
QA/QC procedures to be applied:	Contrast the information from the Remote sensing with field verification
Any comment:	Ex ante estimated as zero hectares.

Data Unit / Parameter:	$A_{ROAD,i,t}$
Data unit:	Ha
Description:	Area of roads in stratum i at time t.
Source of data:	Post-harvest assessment reports and maps.
Justification of choice of data or description of measurement methods and procedures applied:	The area of roads is based on the length of roads times the average width of roads. Systematic samplings may be used to estimate the width of roads, achieving a precision equal or less than 15% of the mean at 95% confidence interval.
Frequency of monitoring/recording:	At least every 5 years or prior to a verification event.
Value applied:	n/a
Monitoring equipment:	GPS MAP 60 CSX, Software Arc GIS
QA/QC procedures to be applied:	Verification of results. Data was re-evaluated by a skilled technician to establish the measurement error, which must not be higher than 10%. Otherwise, data should be taken again.
Any comment:	n/a

Data Unit / Parameter:	$A_{RRL,forest,t}$
Data unit:	Ha
Description:	Remaining area of forest in RRL.
Source of data:	Images Satellite
Description of measurement methods and procedures to be applied:	Images satellite interpretation
Frequency of monitoring/recording:	Every 5 years or prior to a verification event.
Value applied:	n/a
Monitoring equipment:	GPS MAP 60 CSX, Software Arc GIS
QA/QC procedures to be applied:	n/a
Any comment:	The same procedures used for analysing images will be followed.

Data Unit / Parameter:	AP_i
Data unit:	Ha
Description:	Total area of degradation sample plots in stratum i.
Source of data:	Ground measurement.
Description of measurement methods and procedures to be applied:	The sampling plan must be designed using plots systematically placed over the buffer zone so that they sample at least 3% of the area of the buffer zone.
Frequency of monitoring/recording:	Every time the Limited Degradation Survey indicates degradation (existence of stumps), or at least every 5 years.
Value applied:	It has been determined as "0" the ex-ante depredation within the project area.
Monitoring equipment:	GPS, field equipment: tape line, compass. And field staff.
QA/QC procedures to be applied:	Trained staff for field measurement.
Any comment:	There is no evidence of depredated areas or parcels ex-ante within the project area.

Data Unit / Parameter:	$C_{DegW,i,t}$
Data unit:	T CO_2-e
Description:	Biomass carbon of trees cut and removed through illegal logging and charcoal extraction degradation process from plots measured in stratum i at time t.
Source of data:	Field measurement.
Description of measurement methods and procedures to be applied:	- The diameter of the tree-stumps will be assumed as DBH. If the stump is a large buttress, then other individuals of the same specie standing next to it should be measured and a ratio DBH/Diameter of buttress at stump height. The ratio shall be applied to the measured stumps to estimate the likely DBH of the cut tree. - With DBH data, the carbon stock of individuals deforested will be calculated using the same allometric equation used in CP-AB. - It will be assumed that all stock will be send to the atmosphere.
Frequency of monitoring/recording:	Every time there is a degradation event or at least every 5 years.
Value applied:	It has been determined as "0" for the ex-ante depredation within the project area.
Monitoring equipment:	GPS, field equipment: tape line, compass. And field staff.
QA/QC procedures to be applied:	n/a
Any comment:	Ex-ante estimated as zero.

Data Unit / Parameter:	$C_{AB\_tree\_dest,i}$
Data unit:	T CO_2-e ha^{-1}
Description:	Carbon stock in aboveground tree biomass assumed to be killed per unit area resulting from the creation of the skid trail in stratum i.
Source of data:	CP-AB.
Justification of choice of data or description of measurement methods and procedures applied:	It is assumed that $C_{AB\_tree\_dest,i}$ = $C_{AB\_tree,i}$ in the baseline.
Frequency of monitoring/recording:	Frequency: Every 5 years or prior to a verification event.
Value applied:	n/a
Monitoring equipment:	n/a
QA/QC procedures to be applied:	n/a
Any comment:	Carbon stock for each stratum will be multiplied by the area affected by skid trail.

Data Unit / Parameter:	$C_{BB\_tree\_dest,i}$
Data unit:	T CO_2-e ha^{-1}
Description:	Carbon stock in belowground tree biomass assumed to be killed per unit area resulting from the creation of the d trail in stratum i.
Source of data:	$C_{AB\_tree\_dest,i}$
Justification of choice of data or description of measurement methods and procedures applied:	The root-to-shoot used in baseline (0.24) will be applied to $C_{AB\_tree\_dest,i.}$
Frequency of monitoring/recording:	Every 5 years.
Value applied:	n/a
Monitoring equipment:	n/a
QA/QC procedures to be applied:	n/a
Any comment:	Carbon stock for each stratum will be multiplied by the area affected by skid trail.

Data Unit / Parameter:	L_{sk}
Data unit:	m
Description:	Length of skid trail sk.
Source of data:	Post-harvest assessment reports and maps.
Justification of choice of data or description of measurement methods and procedures applied:	A systematic sampling may also be used, if reports are insufficient.
Frequency of monitoring/recording:	Every 5 years.
Value applied:	n/a
Monitoring equipment:	GPS MAP 60 CSX
QA/QC procedures to be applied:	Verification of results. Data was re-evaluated by a skilled technician to establish the measurement error, which must not be higher than 10%. Otherwise, data should be taken again.
Any comment:	n/a

Data Unit / Parameter:	$V_{EXT,z,i,t}$
Data unit:	m^3
Description:	Volume extracted from logging stratum z in stratum i at time t.
Source of data:	Records and reports (based on field measurements) documenting amount of wood extracted within project boundary.
Justification of choice of data or description of measurement methods and procedures applied:	Documentation includes : Delineation of the location. Total area logged in the Project area. Methods used to measure the amount of wood extracted. Both the greater and smaller diameter of the log will be measured, as well as its total length. The Smalian formula will then be used to estimate the volume of wood extracted: $V=[\pi/4\ (A+a)/2]*L$ Where: V = Volume A = Area of the section with greater diameter a = Area of the section with smaller diameter L = Total length Methods to catalogue the volume of wood felled and extracted.
Frequency of monitoring/recording:	Every 5 years or prior to a verification event.
Value applied:	n/a
Monitoring equipment:	Forms designed for FSC certification
QA/QC procedures to be applied:	Verification of results. Data was re-evaluated by a skilled technician to establish the measurement error, which must not be higher than 10%. Otherwise, data should be taken again.
Any comment:	n/a

Data Unit / Parameter:	$V_{EXT,j,z,i,t}$
Data unit:	m^3
Description:	Volume of timber extracted of species j for logging stratum z, in stratum i at time t.
Source of data:	Records of wood extracted.
Justification of choice of data or description of measurement methods and procedures applied:	Procedures will be the same applied to the estimation of the volume extracted from logging stratum z in stratum i at time t ($V_{EXT,\ z,\ i,\ t}$).
Frequency of monitoring/recording:	At least every 5 years or prior to a verification event.
Value applied:	n/a
Monitoring equipment:	Forms designed for FSC certification
QA/QC procedures to be applied:	Verification of results. Data was re-evaluated by a skilled technician to establish the measurement error,

	which must not be higher than 10%. Otherwise, data should be taken again.
Any comment:	n/a

Data Unit / Parameter:	W_{SKID}
Data unit:	m
Description:	Mean width of skid trails.
Source of data:	Reported measures.
Justification of choice of data or description of measurement methods and procedures applied:	FSC Post-harvest assessment reports or other procedure described in M-MON if reports are not sufficient.
Frequency of monitoring/recording:	Prior to a verification event.
Value applied:	n/a
Monitoring equipment:	GPS MAP 60 CSX
QA/QC procedures to be applied:	Verification of results. Data was re-evaluated by a skilled technician to establish the measurement error, which must not be higher than 10%. Otherwise, data should be taken again.
Any comment:	n/a

4.3 Description of the Monitoring Plan

The Monitoring Plan has been carried out following the guidelines of module M-MON (Approved VCS Module VMD0015).

The purpose of the monitoring is to have all information necessary to assess the development of the Project activities, possible deviations between what was estimated and what is real, and finally, the calculation (ex-post) of net GHG reductions attributed to the project and the leakage occurred.

This document presents the parameters evaluated to be used in the calculation ex-ante, and parameters to be evaluated during the life of the project, especially on each Monitoring and Evaluation of the Baseline.

The Monitoring will be carried out a maximum of every 5 years, and the Revision of Baseline every 10 years. During each period all data will be gathered according to the occurrence of each programmed activity (PRA, training courses, etc.) and of those that will be avoided (fires, depredation, use of fertilizers, etc.).

The gathering of information will be carried out directly in field, and indirectly by using satellite images, as well as representative studies of the area and official information if necessary.

Organization and Responsibilities

The design and execution of the Project and its Monitoring is handled by a multidisciplinary technical team, duly qualified and with experience in Project development. In addition, it is supported by recognized institutions related to the Amazon investigation as the IIAP and AIDER.

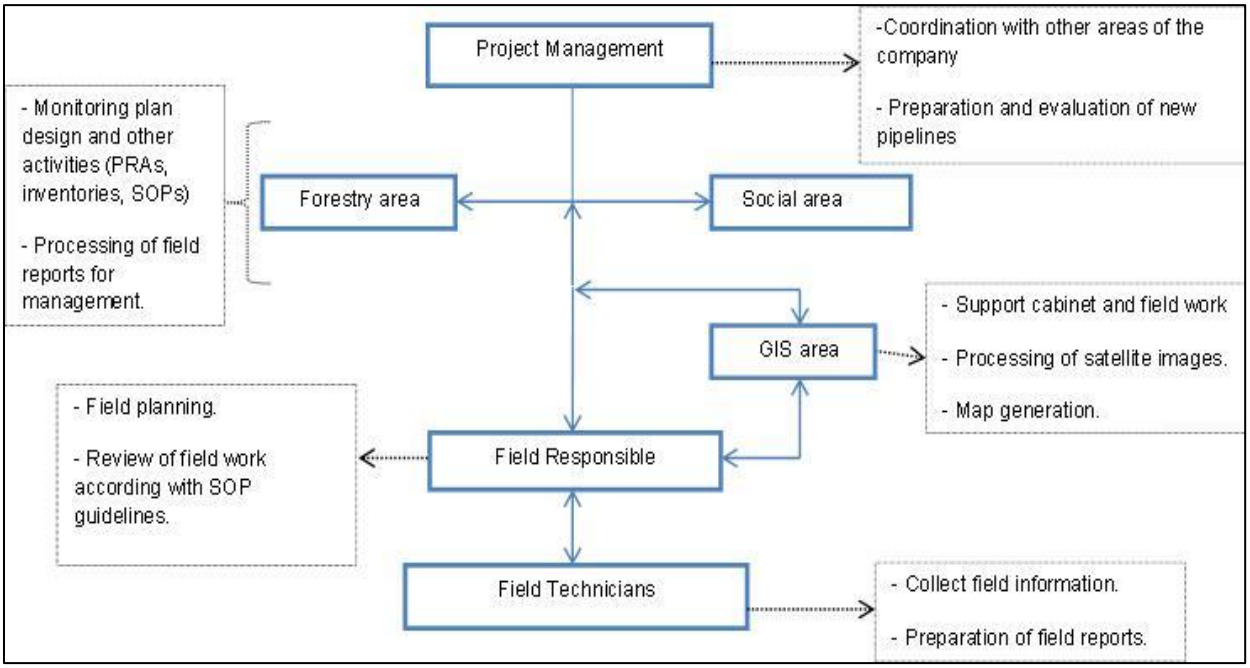
Specialists in forest, social, and economic areas lead the team, who are in charge of defining the objectives and provide guidelines to the correct development of the activities.

The Head of Monitoring is in charge of the implementation. He organizes the work and staff in field and keeps the Specialists informed about everything that is in progress through periodic reports of the activities and permanent communication about the outcome and contingencies arising out.

The field staff is in charge of gathering all parameter information that will be monitored to evaluate the performance of the project. They will be constantly trained to improve their skills in the use of: standard procedures to collect information, measurement instruments, and outcome processing, etc.

It is worth to mention that all staff will be permanently in contact to coordinate the activities, discuss problems and difficulties arising out and take relevant decisions, so there will be a feedback at all level. The organizational chart is presented hereunder:

Figure 4: Organizational chart of the team in charge of monitoring



Information Management

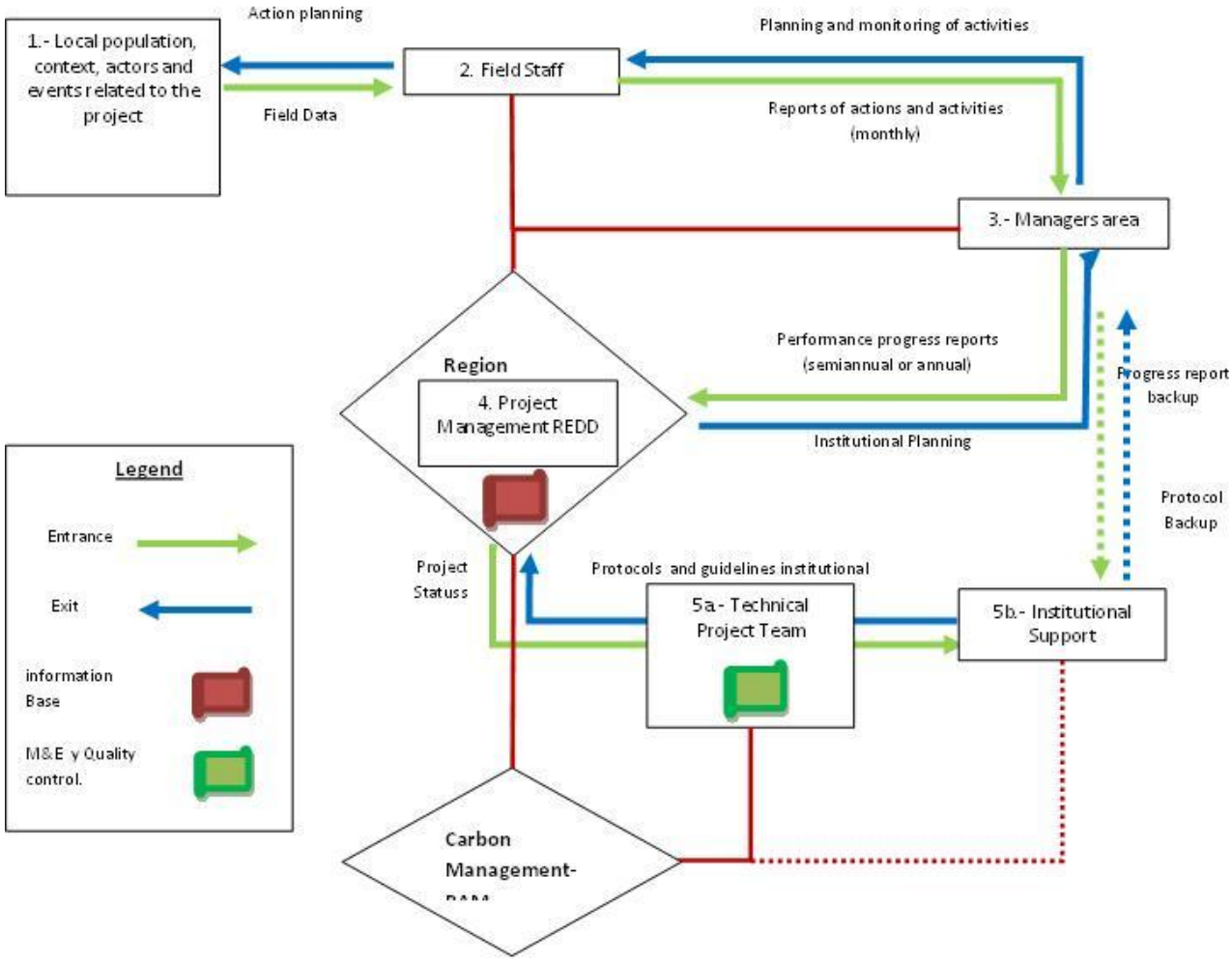
As already mentioned, there will be Standard Operating Procedures (SOPs) that will guide the monitoring activities, limiting the change that the incorporation of new staff members would cause. There will also be forms for each parameter that will allow documenting them clearly and consistently through time. Even though they are standard forms, additional information considered as relevant by the field operator can be included.

Furthermore, unique procedures will be fixed (SOPs Quality Control) for the management, processing and archive of the gathered information with the purpose to secure information and availability to any subsequent revision.

To that end, it has been determined that all physical data of field forms and reports generated will be stored in a safe space specially enabled to the purposes thereof, as well as using a codification that will avoid errors in time and/or activities referred thereto.

Likewise, all data shall have to be digitized in Excel or Word documents, according to each type and following the forms format, saved in files with the same code used in all hard copies, sent to the headquarters of the company and regularly updated. Information flow is presented herein below:

Figure 5: Information Flow among the staff in charge of Monitoring



In-House Audit

Use of SOPs will minimize the error information to handle the project, both in terms of procurement (field survey) as well as in processing and storage.

It will also let knowing the uncertainty in the monitoring of each parameter, as required by module X-UNC, and keep it within the allowed range.

As additional information conservation measures, there will be:

- Training

It includes training of the staff in general in different roles to play within the structure of the project. However, in the aim to always have quality information, training will be prioritized at the critical points of management, which are the field collection and processing (head of evaluation and monitoring, field staff and GIS specialist). All staff must pass an induction process prior to execution of any activity related to monitoring.

- Field Verification

For each measurement made directly in the field, especially in the case of inventory (carbon stock, growth, degradation, etc.) or use of satellite images, verification will be designed to meet the statistical criteria allowing corroborating reliability of the information.

It will also be verified that the staff using the SOPs in their daily activities would do it without any difficulty.

- Reviewing monitoring reports before delivery and storage

Prior to the delivery of the reports to the headquarters, the Head of Monitoring and Evaluation will review all reports that have been made in field and by sub processing, in order that the information reaching the next team is completely cleared.

5 ENVIRONMENTAL IMPACT

The project will not have a negative impact on biodiversity resulting from its activities. On the contrary, it considers enhancing capabilities in the project zone communities in order to safeguard forest areas and, with that, protect the biodiversity and the areas of wild fauna species habitat. The main threat that the biodiversity of the Project zone has to face is the loss of habitat due to deforestation and degradation and that is precisely what the project will avoid.

Also, as the Brazil Nut is considered a vulnerable species according to Supreme Decree No. 043-2004 AG, the project will implement proper management and processing for its trade, which will help to maintain and secure this kind of predatory actions that may cause its extinction.

The project will ensure that 290,695.5 ha of forest keep their ecological functions and that sustainable management is developed in them. Also, in the 718,282.3 ha of the Leakage Belt, the project will try not to increase the deforestation activities committing to reduce the tendency of the deforestation rate in those areas, as per the model developed.

Table 33: Environmental impact summary regarding components such as climate, biodiversity and communities

Environmental Factors	Socio - Environmental changes	Project Activities									
		Monitoring and Surveillance	Installation of tree Nursery	FEPROCAMD Organization	Early Alert and Complaints Management System	Brazil Nut Processing Plant	Brazil Nut and Second Products Certification	Cooperation Agreements and Alliances with MDD Regional Government	Local Campaigns	Forestry Management in Brazil Nut Areas	Training Plan
Climate	Increase of carbon reserves due to plantations enrichment and others.	na	b	na	na	Na	na	na	B	B	B
	Decrease of carbon reserves due to direct activities of the Project	na	na	na	na	Na	na	na	Na	Ns	Na
	Reduction of deforestation rates and forest degradation	b	na	na	b	B	na	b	B	B	B
	Project leakages	a/m	na	na	na	Na	na	na	Na	Na	B
	Increase of others GHE due to machineries and equipment	a/ns	a/ns	na	na	a/ns	na	na	Na	na	Na
Communities	Improved organization for sustainable activities at the forest	b	B	B	b	B	b	b	Na	b	B
	Increase of income of concessionaires	b	B	Na	b	B	b	na	na	b	B
	Raise awareness to communities	na	B	Na	na	B	b	b	b	b	B
	Increase of job vacancies	B	B	Na	na	B	na	na	na	na	Na
	Increase of services and trades (restaurants, hostels,etc)	na	na	Na	na	B	na	na	na	na	Na
	Change in traditional subsistence activities	na	B	Na	na	B	na	b	b	na	B
	Forest conservation and ecosystem flows for the local inhabitants	B	B	B	b	B	b	b	b	b	B
	Movement of activities causing deforestation (miners, farmers, etc)	a/m	Na	Na	na	Na	na	na	na	na	Na

	Conflict with deforestation agents	a/m	Na	Na	na	Na	na	na	na	na	Na
Biodiversity	Impact to vegetation areas	ns	Ns	Na	na	Ns	na	na	na	ns	Na
	Land Use Change	a/m	Ns	Na	b	Na	na	b	b	b	B
	Impact to endemic species	Na	Na	Na	b	Na	b	b	b	b	B
	Impact to threatened, vulnerable species of species under threat.	B	Na	Na	b	Na	b	b	b	b	B
	Impact to water resource	B	Na	Na	b	Na	b	b	b	b	B
	Habitats: nesting, feeding, migration	B	Na	Na	b	Na	b	b	b	b	B
	Impact caused by erosion or mechanical disturbances	Na	Na	Na	na	Na	na	na	na	ns/m	Na
	Impact to natural protected areas (for example, due to leakages, areas protection, etc)	B	Na	Na	b	Na	na	b	b	na	B
	Human activities: fishing, hunting, flora collection.	ns/m	Na	Na	na	Na	na	b	b	ns/m	B
	Inclusion of liquid and solid inorganic waste	ns/m	ns/m	Na	na	ns/m	na	na	na	ns/m	Na

Na = not applicable / ns = not significant / b = beneficial / a = adverse / m = measures

6 STAKEHOLDER COMMENTS

Stakeholders are all those people or organizations concerned and/or involved with REDD Project, which as local stakeholders constitute the basis for the development of the citizen participation strategy.

The constant previous work field allowed identifying the stakeholders comprehensively. On-going workshops and the conduction of interviews and surveys to prepare the Assessment of the Condition of Brazil Nut Concessioners in Madre de Dios has allowed to have a record of the stakeholders and involved parties in the project.

In these workshops issues concerning the relations between different stakeholders and the population were covered. Also, issues related to economic, political, social impacts as well as the access to resources were also addressed.

The technique that helped achieving this target was interviews, oriented to the main stakeholders of the Project Area, including representatives of NGOs, companies, social based organizations, community boards, state authorities, among other social representative stakeholders that show interest around the Brazil nut sector.

Interviews

Table 34: Inside the FEPROCAMD

N	Association	Interviewee	Position
1	Agroforestry and Brazil nut Producers Association of Alerta	Jeronimo Quispe Quispe	President
2	Agroforestry and Brazil nut Producers Association of Alerta	Santiago Taype Chuyma	Vice – president
3	Association of Brazil nut Producers and Extractors of Shiringayoc	Angel Augusto Cespedes Tapia	President
4	Association of Brazil nut Producers and Extractors of Shiringayoc	Eduardo Palomino Melo	Secretary
5	Agroforestry Association of Alegria, Alto Malecón San Carlos and Annexes	Carlos Narciso Moreno Fuller	Vice – president
6	Association of Brazil nut Producers of Alegria	Sara Hurtado Orozco	President
7	Brazil nut Agroforestry Association of Carmen Rosa	Aristegui Reategui Trigoso	President
8	Brazil nut Agroforestry Association of Varsovia	Andres Sucso Chanco	Delegate
9	Brazil nut Agroforestry Association of Varsovia	Zoila Norma Racua Guerra	Treasurer
10	Association of Brazil nut Producers and Extractors of Loreto	David Astorima Huamantica	President
11	Association of Brazil nut Producers and Extractors of Planchon	Cornelio Bolivar Vizarreta	President
12	Association of Brazil nut Producers and Extractors of Planchon	Rafael Lorenzo Jara Quispe	Vice – president
13	Association of Brazil nut Producers and Extractors of Mavila	Euloterio Jurado Frisancho	President
14	Association of Agricultural and Forestry Extractors and Producers of La Novia.	Braulio Valencia Valencia	President

Table 35: Other stakeholders/organizations

N	Organization	Informant	Charge
1	Community of Varsovia	Domingo Quispe Pinedo	President
2	Community of Mavila	Angélica Mejía López	E x – president – Mavila
3	CASAL – Alegría	Eulogio Quispe Chayna	Manager
4	ASCART	Luis Aguilar bravo	President
5	RONAP	Alejandrina Huesembe A.	President

Table 36: Institutions

N	Institution	Informant	Charge / function
1	PRONATURALEZA	Héctor Vílchez	Coordinator
2	RAINFOREST	Billy Echevarria	Coordinator
3	SPDA	Ramón Rivero	Regional Coordinator
4	ACCA	Gilbert Martínez Maceda	Field Coordinator
5	UNAMAD	Gabriel Alarcón Aguirre	Forest Engineer. Forest and Geographical Information Specialist
6	Special Project - GOREMAD	Ernesto Vargas Guevara	Forest Engineer

These interviews were designed by the community relations area and were applied by the consulting company Social Consulting SAC, a company engaged by the REDD Brazil Nut Concessioners Project to prepare the Strategic Plan of FEPROCAMD. The methodology considered the SWOT assessment of the Brazil nut sector.

Below is a matrix of the stakeholders involved and mentioned by respondents as important for the project. In this sense, today, a more detailed work is carried out at an institutional or organizational level as well as their interests around the project, their perceptions and institutional alliances working with or would work on the project.

Table 37: Stakeholders Matrix in the project

STAKEHOLDERS AND OTHERS INVOLVED IN THE REDD BRAZIL NUT FARMERS PROJECT				
Institution / Organization	**Areas**	**Relationship with the Activities of the REDD Brazil nut Farmers Project**	**Status**	**Type of Involvement**
Madre de Dios Regional Government				
GOREMAD	President and Regional Council	Inter-institutional policy commitments and agreements and REDD regulatory framework	Involved	Positive
Regional Natural Resource Management	Territorial System. Ecological and Economic Zoning. Management and staff	Inter-institutional policy commitments and agreements and REDD regulatory framework	Stakeholder	Positive
Regional Economic Development Management	Participatory Budget. Management and staff	Local economic development actions and projects that contribute to the REDD project	Involved	Neutral
Social Development Management	Participatory Budget. Management and staff	Local social development actions and projects that contribute to the REDD project	Involved	Neutral
Special Project of Madre de Dios	Roads Program and economic infrastructure	Monitoring of indicators	None	Neutral
Local Municipalities				
Provincial municipality of Tambopata	Mayor's Office, City Council. Participatory Budget	Social, economic and environmental project managements that contribute to the REDD project	Involved	Neutral
District municipality of Laberinto	Mayor's Office, City Council. Citizen Participation Program. Economic, Productive and Social Development Management, Participatory Budget	Social, economic and environmental project managements that contribute to the REDD project	Involved	Neutral
District municipality of Las Piedras	Mayor's Office, City Council. Citizen Participation Program. Economic, Productive and Social Development Management, Participatory Budget	Social, economic and environmental project managements that contribute to the REDD project	Involved	Neutral
District municipality of Tambopata	Mayor's Office, City Council. Citizen Participation Program. Economic, Productive and Social Development Management, Participatory Budget	Social, economic and environmental project managements that contribute to the REDD project	Involved	Neutral
Provincial municipality of Tahuamanu	Mayor's Office, City Council. Participatory Budget	Social, economic and environmental project managements that contribute to the REDD project	Involved	Neutral

District municipality of Tahuamanu	Mayor's Office, City Council. Citizen Participation Program. Economic, Productive and Social Development Management, Participatory Budget	Social, economic and environmental project managements that contribute to the REDD project	Involved	Neutral
Decentralized Ministries - Madre de Dios				
Regional Agricultural Office	Forestry and Wildlife Office	Sustainable management assistance to Brazil nut areas. Monitoring and Surveillance activity	Stakeholder	Positive
	National Agricultural Sanitation Service – SENASA (*for its Spanish acronym*)	Coordination of technical training campaigns for handling, promotion and defense of Brazil nut	Involved	Neutral
	National Water Authority (regional level)	Monitoring and surveillance system. MARCs	Involved	Neutral
Regional Production and Fishery Office	Fisheries Development Fund – FONDEPES (*for its Spanish acronym*)	Entity in which sustainable projects will be negotiated with the local population in the project area	Involved	Neutral
	Ministry of Production - PRODUCE	Monitoring of indicators	None	Neutral
Regional Energy and Mines Office	Small-scale Mining and Mining Planning Area	Entity to be influenced for the promotion, regulation and planning of informal and small-scale mining	Involved	Negative
Regional Environment Office	SERNAMP (protected natural areas of Madre de Dios). Environmental Prosecutor's Office	Inter-institutional commitments and agreements on REDD policies and regulations	Stakeholder	Positive
Regional Education Office	Environmental Education, Inter-cultural Education and Sporting Areas	Coordination of environmental education campaigns	Involved	Neutral
Regional Foreign Trade and Tourism Office - DIRCETUR	Regional headquarters	Coordination of Brazil nut activity and tourism promotion campaigns	Involved	Neutral
Regional Health Office	Environmental Health, Nutrition and Maternal and Infant Health Areas	Coordination of environmental health campaigns	Involved	Neutral
Regional Housing Office	Commission for the Registration of Informal Property - COFOPRI	Legal improvement of concessions (boundary)	Involved	Neutral
Ministry of Labor and Employment Promotion (MTPE)	Regional Headquarters	Monitoring of indicators	None	Neutral
National Compensation and Social Development Fund - FONCODES	Regional Headquarters	Entity in which productive projects are negotiated	Involved	Neutral
Cabinet Council Presidency				
Executive Branch Public Ministry	Joint Office of the Tahuamanu Provincial Prosecutor and the Tambopata Provincial Prosecutor on Crime Prevention in Environmental Matters	Coordination of research, surveillance and control actions related to criminal acts against the rights of Brazil nut farmers	Involved	Neutral
Forestry Resources and Wildlife Control Agency - OSINFOR	Regional Headquarters	Coordination of actions for the correct application of legal standards and protection against possible unsubstantiated actions against Brazil nut farmers	Involved	Neutral
National Institute of Statistics and Data Processing - INEI	Regional Headquarters	Monitoring of indicators	None	Neutral
Autonomous organizations				

Ombudsman's Office	Ombudsman's Office of Madre de Dios	Public defense claims and rulings, surveillance and supervision actions related to fundamental Brazil nut farmers rights	Involved	Neutral
Universities (UNAMAD y UNSAC)	Professors and students of the Forestry, Agro-industrial and Ecotourism faculties	Will be convened for training events and as REDD project staff	Involved	Positive
FONDEBOSQUE	Regional Headquarters	Project management	Involved	Neutral
CIVIL SOCIETY				
Educational Institutions				
Educational and technological institutions	Professors and students of Education, Accounting and Informatics faculties	Will be convened for training events and as REDD project staff	Involved	Neutral
Educational Institutions	Teachers and students	Participants of Environmental Education training courses and REDD projects	Involved	Neutral
NON-GOVERNMENTAL ORGANIZATIONS				
International organizations	ACCA, CESVI, International Conservation, Pro Naturaleza, WWF, Rain Forest Alliance	REDD cooperation partnerships and agreements	Involved	Neutral
National organizations	CAMDE Peru	REDD cooperation partnerships and agreements	Stakeholder	Positive
TRADE ORGANIZATIONS				
Madre de Dios Miners' Federation	All grassroots associations involved in the REDD project zone	Surveillance and Control System MARCs.	Involved	Negative
Native Federation of Madre de Dios River and Tributaries - FENAMAD	Includes grassroots community organizations in the REDD project zone	Coordination of project management, training and other activities	Involved	Neutral
Departmental Federation of Brazil nut Producers of Madre de Dios	All grassroots associations and Brazil nut stakeholders involved in the REDD project area	REDD Brazil nut Farmers Project	Stakeholder	Positive
Departmental Agrarian Federation of Madre de Dios FADEMAD	All grassroots associations involved in the REDD project zone	Coordination and arrangements for the cleanup of adjacent Brazil nut concessions	None	Neutral
MEDIA				Neutral
Television	Regional, private, open signal and closed signal channels (TV Cable)	Means of communication for the project.	Involved	Neutral
Radio	Madre de Dios, La Exitosa, etc.	Means of communication for the project.	Involved	Neutral
Newspapers	El Jaque, Ojo, Aja, El Trome	Means of communication for the project.	Involved	Neutral
PRIVATE INSTITUTIONS				
Brazil nut companies	El Bosque EIRL, Candela Perú, La Nuez, El Sol, La Selva, etc.	Companies that will compete with the new Brazil nut company promoted by the REDD Project.	Involved	Negative
Madre de Dios Chamber of Commerce		Monitoring of Indicators	None	Neutral

CONIIRSA		Monitoring of Indicators	None	Neutral
ISUR		Monitoring of Indicators	None	Neutral
Bosques Amazonicos SAC	Private Company	Proponent of the REDD Brazil nut Farmers Project	Stakeholder	Positive
LOCAL ORGANIZATIONS				
Community organizations (includes towns and sparsely populated areas)	Community President and Board of Directors Lieutenant governor and municipal agent	Planning arrangements and community management of the REDD project	Involved	Positive
Farmers	Farming associations and interest groups	Participation in training and economic project management	Involved	Positive
Brazil nut Concessionaires	Brazil nut associations and interest groups	Implementing agents, participants and beneficiaries of the REDD Brazil nut Farmers Project	Stakeholder	Positive
Timber concessionaires	Timber associations and interest groups	Coordination of forestry promotion and protection actions	Involved	Neutral
Churches	Catholic and Evangelical	None	None	Neutral
APAFA	Parents' Associations of educational centers included in the REDD project zone	REDD dissemination and training campaigns	Involved	Positive
Educational institutions	Primary and secondary schools in all the towns within the project zone	Assistance in environmental education campaigns and monitoring of indicators	Involved	Positive
Health Centers	Towns in the project zone	Monitoring of indicators	None	Neutral
Mothers' Club	Towns in the project zone	Community relationships and support	None	Neutral
Glass of Milk Association	Towns in the project zone	Community relationships and support	None	Neutral

Consultation Process - Applied Work Strategy:

Stages: The steps followed to spread 6.1 and execute the consultation process and REDD agreements with the Brazil Nut Concessioner followed a community consultation protocol which has been readjusted along the way, depending on the circumstances.

1. **Coordination with leading Brazil Nut Concessioners:** REDD Project began a consultation and project dissemination process, establishing relations with key leaders in each sector. The project placed special emphasis on contacting EACH AND EVERY leader acknowledged by Brazil nut concessioners. To this end, BAM staff visited all the towns they live in, duly identifying and verifying the authenticity and representativeness of the leaders in each area.

2. **Dissemination of the Project among leading Brazil Nut Concessioners:** Once the contacts were made, the possibility of implementing a REDD Brazil Nut Concessioners project was explained and publicized. These presentations involved working meetings between BAM and key leaders of the Brazil nut concessioners in each sector as in Puerto Maldonado.

3. **Visit to the BAM/Campo Verde Experience:** In order to raise awareness about the REDD Project and ensure that Bosques Amazonicos is recognized as an experienced

and reliable institution, all key leaders in each sector were contacted, Pucallpa was visited and the experience obtained by the REDD project in the Campo Verde estate owned by Bosques Amazonicos was demonstrated. Brazil nut stakeholders were thus made aware of the real potential for a REDD project in Madre de Dios and the valuable experience gained by BAM in carrying out such projects.

4. **Establishment of commitments, intent letter:** Once the possibility of implementing a REDD project was demonstrated and publicized, commitments at institutional level were established and an intent letter between BAM and the once FEDECAM was signed. We consider that this is the most important step because the agreements and commitments are established over this stage where the terms are negotiated.

5. **Organizational strengthening and technical assistance:** One of the established agreements was, seeing the increased social, legal and political fragmentation of the Brazil nut farmer sector, the demands of the key leaders was to support the organizational strengthening of the sector.

6. **Signing of the framework agreement:** This activity took place previous to the democratic process taken place by the Federation of Brazil Nut Concessioners of Madre de Dios (FEPROCAMD), where the base representatives elected and ratified their representatives (new executive concession). Following this reconstitution assembly, a session took place where in the presence of the key representatives and leaders of the Brazil Nut Concessioners and BAM the terms and agreements of the association for the execution of the REDD Project between BAM and the Brazil Nut Concessioners (through the FEPROCAMD) were agreed and defined. This framework agreement has been distributed physically to all of the base associations of FEPROCAMD.

7. **Consultation process and affiliation of Brazil Nut Concessioners:** Subsequently, the REDD Brazil Nut project (through the Bosques Amazonicos / FEPROCAMD partnership, with technical assistance from CAMDE PERU) carried out an affiliation campaign, organizing talks, workshops and work groups with Brazil Nut Concessioners to disseminate the proposal and distributing previous information in each sector. Currently, due to the wide welcome, the dissemination process continues for the affiliation of new Brazil Nut Concessioners with talks, workshops and direct attention in the different sectors and in our office in Puerto Maldonado. Special emphasis was placed on urging Brazil Nut Concessioners to participate with a PREVIOUS FREE AND INFORMED CONSENT.

8. **Signing of the agreement:** Based on this consultation and affiliation process, Brazil nuts concessioners decided whether or not participate in the project. The participation of the Brazil Nut concessioner begins with the signing of a Carbon Rights Transfer Agreement, whereby the concessionaire transfers his carbon sequestration services rights to FEPROCAMD and these are then transferred to Bosques Amazonicos (as defined in the framework agreement). The environmental services will only be originated by the execution of conservation and preservation activities in benefit of the forest that the concessionary develops. The Brazil Nut concessioner commits to conserve his Brazil

Nut forest, to comply with the commitments with the state, and to waiver the carbon sequestration service rights. This cession of rights will take place for a lapse of 30 years.

In annex 8 is the detailed description of workshops and meetings with concessionaries related with consultation process.

Process of public dissemination of the REDD Project - Criteria used for communication strategy

In order to apply its institutional communications strategy, Bosques Amazonicos SAC organized its Communications area, which is responsible for establishing the company's protocols and communication policies for the company in general and for its REDD projects in particular. In this respect, Bosques Amazonicos is producing its communications strategy for the Madre de Dios department, involving cross-cutting institutional actions at three levels: 1) international, national and regional institutional image, 2) project promotion and dissemination and 3) specific communication and advocacy activities for each project.

Therefore, the national and regional scope of BAM's actions this year are mainly due to its institutional presence in the Madre de Dios region through two large REDD projects (Brazil Nut Concessioners and Reforestation stakeholders). As a result of these actions, the company is establishing direct and indirect relations with various institutions involved in regional development.

In order to ensure the effectiveness of BAM's presence in the region, the communications area followed a protocol of basic steps to establish an institutional communication strategy, a regional communication strategy applied to Madre de Dios and a communication strategy for the REDD Brazil Nut Concessioners Project.

- Step 01: Analysis of the stakeholders involved
    - Production of a data base[38] (directory) of institutional stakeholders relevant to the BAM institution, with a vision and mission similar to those of the company's activities and projects. This directory contains general information regarding their institutional profile, objectives, communication strategies, inter-institutional relations and areas of involvement.
    - Production of a media directory (television, radio, newspapers, etc.). This directory must contain general information regarding their public or private institutional nature, communication strategies, costs and work methods. Organize this data base upon the function of each project (in this case to the REDD Brazil Nut Concessioners Project). The idea was to identify relevant stakeholders, current action strategies and potential affinities, risks and hazards.

[38] To establish a data base of communication coverage, relationship connectors are identified and characterized based on geographic factors, institutional affinities and partnerships in the respective activities.

- Step 02: Diagnosis of the communications strategy at the stakeholders' involvement level.

A survey was conducted to identify communication strategies in local public areas, given the need to know how local people communicate, how information is transmitted and through which communication agents (radio, assemblies, etc.). This is a fundamental step for identifying spokesmen; their perception of communication and their appraisal of information and knowledge.

- Step 03: Institutional Communication and Project Strategies.

With a data base of various institutions and the media on the one hand and having identified and characterized our spokesmen (public agents, beneficiaries, etc.), a communication strategy was drawn up, at an institutional level first of all and then at a project level.

- Step 04: Communication Plan.

Once the communication strategy and guidelines were established, Community Communication plans were drawn up (at a project level). This is when the operational aspects of the communication strategy were established.

Local factors and dynamics were taken into account for the work plan, which became a source of information for the Annual Operating Plan (AOP) of the institution and the project.

Project's Program of Communication Activities

In the framework of these guidelines, BAM`s communication area has performed various activities for the adequate public dissemination for the REDD Brazil Nut Concessioners Project.

In annex 9 there is a detailed description of activities implemented related to public dissemination of the project.

ANNEX 1: EMERGENCY DECREE N.012-2010

Based on the map included in the Emergency Decree that establishes a zone of mining exclusion, that allow to do mining in that area, some Brazil nut concessions are potentially affected by mining, as can be seen in following chart.

OVERLAP BETWEEN BRAZIL NUT CONCESSIONS AND MINING PETITIONS

	# of BN concessions	Ha overlapped
Concessionaries that have joined the project	10	9,369
Concessionaries that haven't joined the project	68	37,905
TOTAL CONCESSIONARIES	78	47,275

The ED gives the preferential rights to whom had any kind of right to develop an activity previously granted, which in all the cases belong to the Brazil nut concessionaries. Specifically, the ED mentions in the Article 7 that holders of rights for mining activity already given only could implement its activity when they obtain previously the approval of the environmental certificate and this certificate only may be approved (in areas where mining petition overlaps a forest concession) if they receive a positive technical opinion of National Forest Authority, which is unlikely to happen as they have been forest concessions per decades. An additional requirement sets that once miners have the environmental certificate approved, they will need to have the right to use the land surface, which is already given to the Brazil Nut Concessioners.

Even though, the ED causes a significant threat over Brazil nut concessions overlapped with mining petitions, the ED also gives a legal protection to concessionaries that, of course, needs to be enforced with the support of the project activities. As it is being implemented already, the project is already implementing a Control and Surveillance System, which includes legal support and alliance with the Police and the Attorney to guarantee the enforcement of the law. Additionally, it must be highlighted that new petitions are forbidden in areas outside allowed in ED.

ANNEX 2: COMMUNITY TRAINING PLAN

I. INTRODUCTION

The following plan starts with the proposal that the management and sustainable exploitation of the existing natural resources in the forest of the REDD Brazil Nut Concessioners Project area (from now on the project) is a resource of sustainable life for the socioeconomic development of the population settled in the project zone.

In these towns, the population present some characteristics which have determined the tone of this proposal, so, are farmhouses with their main activity being the forest (lumber and Brazil Nut) and farming, with a great presence of complementary activities to this particular activity (trade and services). Besides, a constant search has been identified for spaces (land and resources) in order to exploit them. This pressure over the resources makes us seriously consider the need to impulse a learning process of the correct management of the natural resources in a sustainable manner, in order to make this population viable in the future.

But, we find that one of the biggest problems that is endangering this affirmation is the evidence of an inadequate management of the natural resources on behalf of the local population. This problematic is the motivational axis of the proposal included in this Plan.

In order to revert this situation, as part of the proposal the Project is gestating, is that it suggests the need to devise a Communal Training Plan for the communities of the project area. In this sense, the plan intends to contribute to the decrease of the pressure over the natural resources exerted by the intensive extractive activity (informal mining, traditional farming and the inadequate lumber exploitation) because this represents a danger to the future sustainability of this population.

For the purposes of developing the current Community Training Plan the following methodology was developed:

1. Field observation
2. Quick community poll
3. Interviews to authorities and leaders
4. Workshops with interest groups
5. Document development

This document Intends to be a guide, a framework of the operational capacity of the diverse proposals of the development of the capacities the project will implement with the community. This Plan organizes the activities and the products the training should consider.

II. FOUNDATION

Traditionally, the training plans were considered as pedagogical packets which had to comply with a thematic and progressive purpose. Within lays its potential and usefulness. So much so that many projects up to this moment only develop this level. This idea has been changing with the progress of more efficient and effective techniques and methodologies. We have some examples in the following proposals: “learning doing”, “adult school” “empowerment” as well as in the various participative pedagogical approaches and techniques which are a trend (field schools, CEFE, etc.),

Now one can say that the communal training programs have become effective and efficient tools for development, they are a means to generate abilities, skills and competence in the population. As a result, they are a means to check the progress indicators, as well as being subject to project tracking and evaluation.

Such is it, that this Program considers a proposal that seeks to establish connectors of KNOWLEDGE, VALUES AND PRACTICES between the project´s proposal and the need and demand of the local population. Within it, it is clear THAT knowledge, values and practices are developing (subject matter) and HOW they will be implemented (methodology).

Objectives

As a general objective or purpose, it is intended to contribute to decrease the pressure over the forest and its indiscriminate use by the population located in the project area, and, the expected result is that the inhabitants use and conserve the forest in a sustainable manner. Parting from the impulse towards a more balanced and sustainable forest management, the productive utilization of these will be possible, allowing better benefits for the families of the neighboring communities to the Concession.

At the specific objectives level it is intended to:

- Disseminate, promote and establish the sustainable management of the forest in the towns adjacent to the Project, with the participation of the district town council, the base organizations and organized inhabitants.
- Increase the knowledge and values related to the forest and the environment in the local inhabitants.
- Promote sustainable economic alternatives, such as agroforestry, management of other forestal products, fish farming, ecotourism, experiential tourism.
- Increase the knowledge, attitudes and practices in good forestal and agroforestry practices.
- Strengthen the technical and operative abilities of the competent authorities.
- Develop and improve the technical abilities of the Brazil Nut concession´s management.

Target population

The Plan will cover the acting population involved in the project area (review actors and those involved in the project), this implies the populated centers of all 4 districts.
Among the direct beneficiaries we identify mainly, the interest groups who have access to the natural resources, to the ones who have direct and indirect connection to the administration, management or use (economic productive associations, communal and local government organizations). Among the indirect beneficiaries we identify all of the population.

III. ACTION LINES

The Communal Training Plan intends to train, assess and monitor the Project in four large action lines. In order to organize the activities of the proposal five action lines have been established:

- Promotion and dissemination
- Organizational strengthening
- Environmental management
- Environmental education
- Technical management of natural resources

In order to apply these action lines it is necessary to acknowledge the participants and organizations connected and involved in the proposal and their acting profile. For this matter, the participants and those relevantly involved in the project proposal have been identified, and a thematic proposal is established, which will guide the type of work and ability to be developed.

Even though these thematic are important, they will not be the only ground upon which the project proposal will be based on. It will be enriched in the process of ongoing consultation, the agenda and the demands established in the project operation. The importance of these connectors lays in the fact that it

allows us to establish safe ties in terms of effectiveness and efficiency. This is a direct work with our target population.

MATRIX 01: ACTORS AND LINES OF COMMUNITY TRAINING		
SECTOR / ORGANIZATION OBJECTIVE		**LINES OF TRAINING**
PUBLIC INSTITUTIONS	Ministry of Agriculture	Alliance / Strategic Partnership for broadcast, promotion and training
	Ministry of Environment	Alliance / Strategic Partnership for broadcast, promotion and training
	Regional government of Madre de Dios	Alliance / Strategic Partnership for broadcast, promotion and training
DISTRICT MUNICIPALITY	Managements of economic, social and environmental development	District and local development planning
		Environmental, forest and agricultural management
COMMUNITY ORGANIZATION	Community Organization	Local Development Planning
		Organizational Strengthening
		Training in project management
	Leaders	Local Development Planning
		Promotion and broadcast of the Castañeros REDD Project
PRODUCTIVE ECONOMIC ORGANIZATIONS	Forestry	Good forestry practices
		Management, harvesting and post-harvest of Brazil nuts
		Corporate and Organizational Strengthening
		Reforestation and silvicultural practices
		Training in project management
		Environmental services and REDD
	Agriculture	Capacity building in agroforestry
		Good agricultural practices
		Training in project management
	Mining	Environmental education
		PAMA Management and other EIA
EDUCATIONAL INSTITUTIONS	Teachers	Promotion and broadcast of the Castañeros REDD Project
	Student body	Promotion and broadcast of the Castañeros REDD Project Environmental education

IV. PROMOTION AND DIFFUSION

Objectives

1. Make known to the local population, the work the Project is developing, establishing mutual recognition between the project's proposal and the population's requirements.
2. Build a coexistence relationship of "good neighbors" between the Project and the local population, by promoting a proposal to develop an "institutional and Project image".

Foundation

Promotion and diffusion are basic components of the Project as long as the intention is the active participation of the community and its involvement in the local development process. This is why, the mutual recognition of the project's proposal and the local inhabitants is a necessary step for a work development without doubts or false perceptions.

In this regard, the promotion and diffusion activities point to the motivation and awareness of the population and local authorities in order for them to assume in an active and organized manner the sustainable recuperation of the forest; this motivation, not only allows technical actions, but are necessary for the collection and demonstration of the knowledge and values of the population to promote and enrich them. Besides, in this field, we can measure the participation and initiative of the inhabitants of the farmhouses, projecting the task to identify and form future leaders, who will manage and apply the environmental concepts, and will direct their efforts to the radiation of the project's proposal.

The training will be geared towards:

- Project's field staff.-They are the players of the execution of activities and main people trainers for their field work. They must have their concepts, importance and means to obtain the proposed objectives clear.
- Authorities, representatives, base and productive economic organizations of the Project area districts.- They are the inhabitants and organizations, that due to their role in the community are collective and arrival spaces for the objectives proposed by the project.
- Local community population.- they are the people directly and indirectly involved in the project's proposal.

MATRIX 02: PROMOTION AND BROADCAST		
N	**Strategic lines**	**Activities**
1	Documents of communication management of the Project	Design and production of broadcast materials
2		Promotion and broadcast plan development (communication)
3	Consultation, commitments and agreements	Consciousness raising workshops for authorities, officials and local leaders
4		Coordination at the level of communal authorities for the establishment of information and interests between the project and the local population
5		Consultation and agreement between the Castañeros REDD project and community representatives
6	Center of institutional broadcast and communication	Castañeros REDD project office as a center of information and promotion
7		Community surveillance and monitoring centers as centers of promotion and information
8		Communal and municipal offices as places for promotion and information
9	Broadcast of the Castañeros REDD Project	Regular tours and rides to the towns
10		Community relations
11		Community informational campaigns
12		Participation in meetings and community assemblies
13		Broadcast workshops coordinated with public institutions and private related institutions
14	Community participation in the REDD promotion and broadcast	Targeted training to local leaders and officials
15		Targeted training to local leaders and officials of strategic local organizations 7
16		Training of REDD community promoters
17	Support for the implementation of cultural, environmental and educational events, issues in the context of local events and celebrations.	

V. ORGANIZATIONAL STRENGTHENING

Objectives

1. Improve (impulse and strengthen) the organizations (mainly related to the forest) in the achievement of its collective objectives.
2. Develop abilities and skills in the planning and execution of local economic productive development plans.
3. Impulse the participation and commitment of the organized population in the decisions and activities towards local development.

Foundation

We are based on the premise that, it is necessary to understand that when we refer to organizations (federations, associations, committees, clubs, etc.) we do not speak of hierarchies. The organizations are not one above the other, they are not one first and then the other, the organizations are spaces, that have an action radius, a performance dimension, a sense and a particular use. The relationships that are established among them are mainly communicative; if we turn this communication democratic then this will smoothen the way for mutual recognition, self-affirmation and learning (exchange of experiences).

Then it is necessary to understand that the organization is the middle and not the end of the development, this switch of vision will allow us to visualize other aspects not pointed out by the traditional focus of the organization. In this sense the organizational strengthening goes through:

- Raise the flow of dialogic communication. We understand that an organization is basically a network of democratic communication. It is necessary to raise the equity in the flow of information and reflection.
- Search for the institutionalization of the organization, is to have the recognition, the validation and the performance. It is prioritizing the dynamic and not the structure, it is "turning it productive and not consumer oriented".
- Develop the output and input of the whole organization, this is the basis for the strengthening because it fundamentally points out or indicates the achievement or not of the development objectives.

The Amazonian populations are experts forming organizations, but also, they quickly forget for what or why they were created. This mainly points out the "fragility" of the group. This short term life of the organizations is reinforced by the "lack of representation" (explanation of this phenomenon is the aggravation of the individuality and to the high negative experience organization wise). What is the organizational strengthening supported upon? Basically in recognizing the participants and their development searching strategies, these are:

The authorities, key leaders and community and organization leaders. They are the representative participants and/or delegates of the communities, it is necessary to recognize them as such. If we detect a weakness due to the organizational fragility of some communities, and because of the possible questioning of the authorities and leaders, this is necessarily a starting point because of the fact they are key players of formality and legality.

The objective of training the local authorities is to strengthen them in environmental, forest and agricultural management from the municipality, training of the organization leaders have as an objective to strengthen them in their management sector or collective. Additionally, it is necessary to identify the communal leaders, they are the ones who generate local dynamics, and they have the capacity to represent, mobilize, organize and project the collective demands with much more certainty.

Local development plans. This effort to recognize, reflect, require and act upon their development proposal (problems, vision, objective and activities) is the basic input; it is in summary the process to follow in every human community: think, decide and act. In order to obtain this it is necessary to facilitate

the strengthening of the authorities and communal leaders, starting from the origin of their local development plans.

The training will be directed towards:

- Project's field staff. They are the key players of the execution of activities and main trainers because of their field work. The concepts, importance and ways to obtain the routed objectives must be clear.
- Authorities and representatives of the districts and populated centers.- Are the people who by their position in the community will be listened to and will reply all of the concepts and objectives proposed by the Project.
- Local economic productive organizations.- are the groups and people involved directly in the project's proposal.

MATRIX 03: COMMUNITY AND ORGANIZATIONAL STRENGTHENING		
N	**Strategic lines**	**Activities**
1	Design and development of the plan for strengthening of local organizations	
2	Establishment of information, agreements and mutual commitments	Consciousness raising workshops for authorities, officials and local leaders
3		Work meetings and signing of agreements and covenants
4	Promotion of local development plans to the municipal authorities and community	Identification of collective and group demands
5		Facilitating the development of strategic planning for local development
6		Facilitating the development of organizational and community management documents
7		Participation in assemblies and community work meetings
8	Organizational strengthening of REDD proponents groups	Consciousness raising workshops for authorities and stakeholder leaders
9		Workshops, discussions and training about leadership. organizational strengthening, and others
10		Facilitating the development of organizational management documents
11		Targeted advice and training to local leaders and officials
12		Legal advice and support to organizations
13	Support for holding events for organizational and community strengthening organized by REDD stakeholders	

VI. Environmental and Forest Management

Objectives

1. Create awareness and impulse entrepreneurship around the knowledge, problematic, care and maintenance of the environment.
2. Generate learning experiences and values regarding the environment in the youth and the organized population.

Foundation

As in all groups upon which conservation and natural resource sustainable management proposals will be implemented, this proposal must have a solid basis on the educational process. This justifies itself even more when it is known that our competition's local population has no experience in similar proposals which are developed in the Project.

The generation of new knowledge and values – in this case those related to conservation – in the local population, is the longest and most difficult process to achieve. This seeks to achieve the sensitization of the population in the environmental thematic.

This line of work sustains itself in part of the Project's work which will impulse local governments to develop and implement public campaigns on environmental education for group organizations, organized women, education centers, but especially, that it reaches those groups that develop productive economic activities. Throughout the work development it is expected to establish strategic alliances with institutions such as the Agricultural and Environmental offices in environmental related subjects, the Education office in educational campaigns regarding the environment and local municipalities in basic environmental healthy and balanced services.

The training will be directed towards:

- Project's field staff. - They are the key players of the execution of activities and main trainers because of their field work. The concepts, importance and ways to obtain the routed objectives must be clear.
- Authorities and representatives of the districts and populated centers. - Are the people who by their position in the community will be listened to and will reply all of the concepts and objectives proposed by the Project.
- Schoolchildren and teachers of educational institutions. - They are the ones called upon to participate in this line. In this target population lays the biggest educational compromise and the sustainability of the proposal.
- Local Population. - They are the ones called upon to develop an environmentally friendly culture; they are the receivers and collective executors of the proposal.

MATRIX 04: ENVIRONMENTAL EDUCATION		
N	**Strategic lines**	**Activities**
1	Design and development of the environmental education plan	
2	Establishment of mutual interests and commitments	Consciousness raising workshops for authorities, officials and local leaders about environment
3		Identification of local environmental problems and demands (health, sanitation, threatened fauna, AVC etc.)
4		Generating partnerships and agreements with institutions related to environmental education
5	Implementation of environmental education plan at the community level	Technical training workshops for authorities, leaders and community services organizations friendly to the environment
6		Production and distribution of spots and environmental education materials (calendars, posters, brochures, etc.)
7	Implementation of environmental education plan at the level of schools	Distribution of educational materials and educational campaigns
8		Workshop on broadcast and appreciation of the environment for teachers and students
9		Training courses in Agroforestry, bio gardens (familiar, educational), experimental agroforestry plots, etc. .
10	Support for the implementation of environmental education events organized by REDD interest groups.	

VII. TECHNICAL MANAGEMENT OF FORESTAL RESOURCES

Objectives

1. Aid authorities and local leaders to develop technical skills for the management and use of the forests.

2. Aid environmental and forestry organizations to develop technical skills in the adequate management of the forests natural resources.
3. Develop technical skills for agroforestry good practices.

Foundation

It is necessary to promote local government's involvement through the creation of activities, alliances and agreements in environmental management and use. Although the municipalities have a leadership role to fulfill in the environmental management, we conceive this will only be sustainable as long as it involves and commits the population, in such manner that it legitimizes Municipal action and it converts itself in a regulating entity and more of a promoter than a watchdog.

For this matter, the local development plans must establish the lines to work on in reference to environmental management. To achieve an adequate local/municipal management in the districts it is necessary to implement in their activities a line of work in environmental management, as well as in its strategic operative planning.

For the optimal achievement of this line of action a knowledge of the legal guidelines related to the use of the Natural Resources, besides having a political and legal context that promotes and facilitates environmental management and impulses the adequate use of the forests resources in the project's area.

The training will be directed towards:

- Project's field staff.- They are the key players of the execution of activities and main trainers because of their field work. The concepts, importance and ways to obtain the routed objectives must be clear.
- Authorities and community leaders.- They are the people that because of their position in the community are the creators, administrators and watchdogs of the environmental well-being.
- Forestry and agricultural economic productive groups. They are the people directly involved in the execution of forest management. They are the owners of the forest areas and therefore their important and participation is decisive for the proposal.

MATRIX 05: ENVIRONMENTAL MANAGEMENT		
N	**Strategic lines**	**Activities**
1	Design of the training plan in Environmental Management	
2	Establishment of shared commitments for environmental management	Consciousness raising meetings for environmental management, environmental services and REDD
3		Alliances and agreements with authorities
4	Participation and advice in environmental management to local authorities and community organizations	Participation in land use
5		Participation in ecological and economic zoning
6		Facilitation of courses and local broadcast workshops to the community in environmental management
7		Advice and support to authorities and community representatives in environmental management
8		Participation in inter-sectorial environmental spaces.
9	Consulting and training in environmental management to forestry companies	Training and advice to forestry organizations in environmental management
10		Support and participation in environmental management and political events
11	Support for the implementation of events organized by REDD interest groups	

VIII. TECHNICAL MANAGEMENT OF FORESTAL RESOURCES

Foundations

The forestry activity is composed of a series of technical, political and legal processes; which as a whole make the sustainable and profitable use of the natural resources of the Peruvian jungle. The users (concessionaires and owners) of the forest must be the active players that promote the orderly use and sustainable management of the forest to obtain the ecological conservation of the ecosystem with a consistent economic and social benefit of the population. It is pointed out that the achievement of these goals is reached through theoretical and applicative training, developing forestry models and the consulting and technical assistance of technical institutions specialized in the matter.

To achieve these goals it is very important that forest users (associations, concessionaire businesses or owners) are well organized with members having a proper assignment of functions. This will allow them to negotiate with different institutions, implement joint activities in benefit of every single person that belongs to the business. It will also allow them to be represented before private, public and international entities.

The sustainable management and use of the natural resources, especially of the Brazil Nut, existent in the forest concessions of the project area, is the first necessary step to develop a sustainable and successful business. In order for this to take place, it is necessary to project the future expansion of the business capacities, so much as an economic institution as in the development of forest management abilities and skills of its members.

This expansion of capacities (in this case taken as a forest management training plan), has as an objective to generate positive changes in the adequate and sustainable management of the Brazil Nut forest concessions. This achievement is only possible showing they can manage their own resources in an organized manner, with a business like attitude and with an adequate use of the natural resources.

It is worth mention, that these objectives will only be reached, throughout a constant theoretical and practical training, the advice and continuous monitoring of the different activities proposed.

The training plan develops a methodology base on theoretical-practical workshops, through which it is intended to create continuous learning under a logical sequence. These workshops must be framed within a facilitation proposal that follows through and monitors the obtained apprenticeship. It is recommended that this facilitation takes place in a continuous and sustained manner, given that all learning is achieved through the ¨"learn doing" technique. It is in acting, in the starting up learning process that the training achievements and results are reflected.

The training is directed towards:

- Project's field staff. They are the key players of the execution of activities and main trainers because of their field work. The concepts, importance and ways to obtain the routed objectives must be clear.
- Concessionaires, associations and forestry businesses. They are the people directly involved in the execution of timber yielding and non-timber yielding forest management. The relevance of the Brazil nut player will be highlighted, given they are the forest users in the project area, therefore, their importance and participation is decisive for the proposal.

TOPICS FOR PERMANENT TRAINING IN BUSINESS AND IN BRAZIL NUT`S FOREST ACTIVITY

Forest Policies.- It is important that forest users are fully aware of the forest policy, laws, rules and norms that regulate the tenure and execution of activities in order to take a critical active part through district and regional organizations that represent them.

Business organization.- It is very important that businesses are well organized with members having a proper assignment of functions. This will allow them to negotiate with different institutions, implement joint activities in benefit of every single person that belongs to the business.

Sustainable Forest Management Plan.- Registers the activities and actions to be applied in order to obtain optimum growth of natural resources, utilizing methodologies to reach the sustainability and profitability of the forest. They are divided into two main activities:

- Silvicultural activities: thinning, environmental release, reforestation, enrichment, etc.; and in which cases and steps they should be carried out.
- Exploitation and extraction activities: species classification according to its commercial use, forest exploitation and low impact methods, etc.

Commercialization / Markets.- Business training in commercialization is essential, they must be capable to administer the sale of products originating from their forests managed with estimates or prices that recognize their efforts. Every Business produces counting on a market where to offer their products. The location of potential markets is a requisite in order to conceive management and transformation strategies.

Industrialization.- This activity will depend upon the implementation of the machinery and tools that will give added value to the pieces, sawn lumber and other than wood products that will commercialize. Industrialization is a future activity; its success is found in the businesses organization, the management potential with institutions to implement equipment and machinery, and the location of potential markets.

Because of the extensive knowledge needs regarding forest activity within the Brazil Nut sector, we will only cover certain key points. Therefore, within the required acting forest fields we have three aspects with a prioritized need for the implementation and starting of the business plan. The business organizational aspect, the knowledge and starting of the Forest Management Plan and the technical use aspects of the product. These three themes will allow us to support the proposed training plan.

In order for this to take place, the present training plan's objective is to develop knowledge and related practices to the three points identified as necessary for the project's implementation:

1. Management and business development training.

Objectives:

- Develop organizational and business capacities.
- Generate apprenticeship related to the business like attitude.
- Promote formalization, recognition and legalization of the business.

Product Commercialization.- Business training in commercialization is essential, they must be capable to administer the sale of products originating from their forests managed with estimates or prices that recognize their efforts. Every Business produces counting on a market where to offer their products. In this field, the devising of commercial strategies and the generation of negotiation abilities are requisites to achieve effective transactions that produce satisfactory profits.

Business development does not end with the execution of workshops and apprenticeships "in the classroom", most of the business success depends upon the tracking and monitoring of these apprenticeships. On the other hand, the success of the business will be subject to the economic and market dynamics, as well as the participation and compromise of the stakeholders. A serious problem that affects many firms is precisely the corruption and fund embezzlement cases. These cases are very difficult to resolve only with training.

2. Knowledge and practice of the Forest Management Plan.

Objectives:

- Get to know and socialize within the Brazil nut forest concessions, the forest management plan and the Annual Operating Plan. Technical and legal Documents.
- Learn the use of these documents at business administration, forest management and exploitation level.

The Forest Management Plan will allow us to plan the different activities for the management and use of the resources, applying sustainability, profitability and environmental impact criteria. The Management Plan will also be tied to a Market Strategy to obtain the sale of forest products and the complete success of the activity.

The Annual Operating Plan (AOP) is an instrument for the short term operative planning (the operative year) and for the control and monthly and yearly monitoring of the activities considered in the General Forest Management Plan (GFMP).

Silviculture.- Part of identifying the need of silvicultural interventions. Where, the methods to stimulate and manage natural regeneration must have a high priority, while the plantation is considered as a complementary measure in areas where natural regeneration is not enough, or where there are natural openings or might be caused by the exploitation intervention.

The silvicultural decisions are taken based upon the condition of the remaining forest and its capacity to regenerate after one or more exploitation intervention.

Reforestation in degraded areas.-This is another subject for training very necessary for Brazil Nut concessions.

3. Skills and abilities development for the Brazil Nut forest use

The packages of technology and techniques for the good use of forest Brazil Nut are diverse, we detail some that have been identified by the concessionaries as necessary:

- Reforestation and Brazil nut enrichment.
- Seed selection techniques and germination treatment.
- Brazil Nut collection techniques (handling of *payoles* and baskets).
- Highway and access roads clearing techniques.
- Adequate use of warehouses and solar drying pans.
- Equipment and technology management to improve the quality of the Brazil nut.
- Identification of alternatives such as: existing products in the market that are derived from the Brazil nut (by-products) and others.
- Dissemination and training on the good use of other resources in the Brazil nut forest.
- Dissemination of forest seals and certifications applied to Brazil nut concessions.
- Experience Exchange in forest management, Brazil nut processing, added value product development, quality and marketing.

ANNEX 3: PROOF OF TITLE

These agreements are available in the BAM offices on request.

ANNEX 4: COMPLIANCE WITH LAWS, STATUTES AND OTHER REGULATORY FRAMEWORKS

Table 1: Environmental Legislation

Norm	Effective Date	Relevant articles demonstrating compatibility with the layout/implementation of the Project
STATE CONSTITUTION	October 31st, 1993	The Constitution includes a chapter establishing the State policy with regard to the environment and natural resources. Article 66 of the Constitution declares all natural resources to be national heritage. That being the case, it is the organic law that establishes the conditions for their use and their transfer to private parties. With respect to the National Environmental Policy, article 67 of the Constitution recognizes innovative ways of natural resource use, affirming State's dedication to develop mechanisms for conservation and sustainable use of its biological diversity. In that sense, article 68 concludes by affirming that it is the State's obligation to promote biodiversity conservation and conservation of the Protected Natural Areas.
LAW 27308 LAW ON FORESTS AND WILDLIFE	July 8th, 2000	The objective of this Law is to regulate and supervise the sustainable use and conservation of forest resources and wildlife of the country, making their use compatible with the progressive valorization of the forest's environmental services, in accordance with what is established in the Articles 66 and 67 of Peru's Constitution, in the General Environmental Law, in the Law N.26821, Organic Law on the Sustainable Use of Natural Resources and the international conventions enforced by the Peruvian state. The law details the permitted modes of forest resource use in the concessions (forestry and non-forestry) as well as the required permits (for forests on private property, secondary forests and forest plantations) and authorizations (for dry forest and nurseries). The law stipulates that all use of forest products and of wildlife is subject to payment of state royalties. It recognizes the contribution of the private sector to the development and commercialization of environmental services, including Emissions Reduction through Avoided Deforestation (REDD).
SUPREME DECREE 14-2001-AG REGULATION OF THE LAW ON	April 10th, 2001	It is important to note that it regulates the modes of forest resource use. Among these are conservation concessions, concessions for the use of the forest products (among them Brazil nut), reforestation

Norm	Effective Date	Relevant articles demonstrating compatibility with the layout/implementation of the Project
FORESTS AND WILDLIFE		concessions and forestry concessions. Article 360, indicates that the forestry concessions are recognized as "Official Guardians of the National Forest Heritage in Forest Concessions" inside the extension of the granted rights, and it habilitates them to request for the effective help of the National Forestry Authority, and also appeal to the Army and Peru's National Police, if necessary.
LAW 28611 GENERAL ENVIRONMENTAL LAW	October 15th, 2005	Article VI of this law stipulates that the priority objectives of environmental management are to prevent, track and preclude environmental degradation and that if it is not possible to eliminate its causes, then other corresponding measure should be adopted, such as mitigation, recovery, restoration or eventual compensation. At the same time, Article XI mentions that the design and application of public environmental policies need to be governed by the principle of environmental governance which calls for the harmonization of policies, institutional norms, procedures, tools and information in a way that allows for an effective and integrated participation of both public and private actors in the decision-making process, in conflict management and consensus-building based on clearly defined responsibilities, legal security and transparency. Article 150 of the Law stipulates that behaviors likely to be rewarded with incentives are those measures and conducts that, thanks to the initiative of the title holder, are executed in order to reduce and/or prevent environmental contamination and the degradation of natural resources. In Article 94, the Law specifies as environmental services the protection of water resources, biodiversity protection, mitigation of greenhouse gas emissions, and protection of scenic beauty, among others. The Law suggests the State needs to establish mechanisms of valuation, reciprocation and support to these environmental services, with the aim of achieving conservation of the ecosystems, of biodiversity and other natural resources. This Article concludes by mentioning that the National Environmental Authority (Ministry of the Environment) promotes the creation of financing, pay and supervision mechanisms for environmental services,
SUPREME DECREE 12-2009-MINAM	May 24th, 2009	The preparation of the National Environmental Policy is a mandate deriving from Peru's Constitution and the

Norm	Effective Date	Relevant articles demonstrating compatibility with the layout/implementation of the Project
NATIONAL ENVIRONMENTAL POLICY		General Environmental Law and constitutes a set of guidelines, objectives, strategies and instruments of a public character whose purpose is to define and guide the activities of government entities at national, regional and local level, as well as the activities of the private sector and civil society on environmental issues. The National Environmental Policy comprises 5 objectives, four policy areas, and specific objectives and guidelines for each policy. The objective relevant for the Project is achieving conservation and sustainable use of the country's natural heritage in an efficient, equitable manner, assuring social well-being, and prioritizing an integral management of natural resources. Environmental services are being mentioned in different parts of the National Environmental Policy. The policy points out the need to promote their economic valuation through economic and financial instruments and highlights the importance of implementing forest conservation systems and of protecting forests from degradation and deforestation.
NATIONAL CLIMATE CHANGE STRATEGY [39]	In process of being restructured	The Principle 13 of the Strategy stipulates the following: 'Diminish deforestation by trying to control shifting cultivation and unplanned settlements in inappropriate forested areas resulting in land use changes.' Strategic guidelines related to the project layout are the following: (9) 'Forest ecosystems management to lower vulnerability to climate change and improve the carbon capture capacity;' and (11) 'Management of fragile ecosystems, especially mountain ecosystems, in order to decrease their vulnerability to climate change.
LEGISLATIVE DECREE 1013 LAW CREATING THE MINISTRY OF ENVIRONMENT	May 15th, 2008	This Decree establishes the Ministry of the Environment, defines its fields of competence within the sector, and regulates its organizational structure and functions. The Ministry of Environment is an executive body, governing the environmental sector, which develops, directs, supervises and executes the National Environmental Policy. As such, it serves to promote conservation and sustainable use of natural resources, biodiversity and National Protected Areas. The environmental sector includes the National Environmental Management System (as its functional

[39] The National Climate Change Strategy is currently being restructured. The institution responsible for the restructuring is MINAM's General Directorate for Climate Change, Desertification and Water.

Norm	Effective Date	Relevant articles demonstrating compatibility with the layout/implementation of the Project
		system), National System of Evaluation of Environmental Impacts, National Environmental Information System and the National Protected Areas System; as well as management of natural resources that are within its competence, management of biodiversity and climate change, soil and other thematic areas established by law.
SUPREME DECREE 006-2009-MINAM ESTABLISHES THE DENOMINATION AND ASSIGNS THE FUNCTIONING OF THE NATIONAL CLIMATE CHANGE COMMISSION IN AGREEMENT WITH THE LEGISLATIVE DECREE 1013	March 29th, 2009	The general function of the National Climate Change Commission is to carry out monitoring of the different public and private sectors involved in the matter, through the implementation of the UN Marco Convention on Climate Change, as well as to design and promote the National Climate Change Strategy, whose contents needs to guide and inform about the national, sectorial and regional development strategies, plans and projects
LAW 26821 ORGANIC LAW FOR THE SUSTAINABLE USE OF NATURAL RESOURCES	June 27th, 1997	Regulates the general framework of sustainable natural resources use since the form part of the national heritage. This law states that natural resources remaining in their source, and whether renewable or non-renewable, constitute national heritage. The products made from natural resources, obtained in accordance with this law, are owned by the holder of the rights over the natural resources which they have been granted. The rights over natural resources granted to individuals take the form of concessions, permits or authorizations, and come with conditions established in the special norms created for each resource. These especial norms include monetary reward mechanisms for the state for its granting of the rights, maintenance of effective law, conditions for its inscription in the corresponding register, as well as their transferability between individuals. This means that the control, the ownership of the fruits and products obtained in conformity with this organic law, corresponds to the holders of the rights granted to them over the areas of natural resources. The regulations related to granting of concessions for the commercialization of natural resources, both renewable and non-renewable, vary depending on the nature of such resources.
LAW 26839	July 17th,	Regulates the general framework of biodiversity

Norm	Effective Date	Relevant articles demonstrating compatibility with the layout/implementation of the Project
LAW ON CONSERVATION AND SUSTAINABLE USE OF BIODIVERSITY	1997.	conservation and the sustainable use of its components. Contains provisions concerning planning, inventory and monitoring, conservation mechanisms, farming and indigenous communities, and scientific and technological investigation. This law adopts the principles and definitions of the Agreement on Biodiversity, reserves a title to the Protected Natural Areas, which is in agreement with the provisions of the Law 26834.
LAW 28852 LAW PROMOTING PRIVATE INVESTMENT IN REFORESTATION AND AGROFORESTRY	July 28th, 2006	The objective of this law is to declare of national interest the promotion of private investment in reforestation activities using forest plantations, agroforestry and environmental services. The State promotes the use of securities from the domestic financial system and any other type of fixed or variable debt instruments that will allow the financing of forest plantation projects, of agroforestry and environmental services in the country. It is also promotes creation and development of Private Forest Investment Funds dedicated to such financing. Article 6 of the Law suggests that the State should encourage the negotiation of environmental services, particularly those of carbon sequestration, with the participation of private sector in the framework of negotiations on the topic entered into by the county.
LAW 25268 LAW DECLARING THE PROTECTION, PRESERVATION OR REFORESTATION OF NATURAL PASTURE AND EXISTING TREES IN THE NATIONAL TERRITORY TO BE OF PUBLIC NECESSITY AND NATIONAL INTEREST	June 22nd, 1990	This law declares the protection, preservation or reforestation of natural pasture and existing trees in the territory of the Republic to be of public necessity and national interest, and forbids irrational and indiscriminate exploitation and burning of pastures.
MINISTERIAL RESOLUTION 104-2009-MINAM APPROVING THE PROCEDURE FOR EVALUATION AND AUTHORIZATION OF THE GREENHOUSE	May 24th, 2009	With the approval of this procedure, the Ministry of Environment vows to provide environmental conservation, guaranteeing sustainable use of natural resources within the framework of projects developed under the Clean Development Mechanism provided for under the Kyoto protocol, forest projects, REDD projects and MDL programs. The institution authorized to give response on the acceptability of the

Norm	Effective Date	Relevant articles demonstrating compatibility with the layout/implementation of the Project
GAS EMISSIONS (GEI) AND CARBON CAPTURE PROJECT		project is the Ministry of Environment's General Directorate for Climate Change, Desertification and Water Resources.
REGIONAL ORDINANCE 007-2009-GRMDD/CR	February 17th, 2009 (date broadcasted). Not yet published in the gazette.	Approves Opinion N. 003-2009-GOREMAD/CAMAYA creating the Climate Change Technical Commission for the Madre de Dios department, which is charged with proposing short-term, medium-term and long-term measures of community sensitization and with creating plans and programs preventing the aggravation of conditions which affect the Amazon region, within the framework of responsibilities of the regional governments for sustainable management of natural resources and improvement of environmental quality, and above all, the preservation and protection of the reserves and Regional Protected Natural Areas.
REGIONAL ORDINANCE 032-2009-GRMDD/CR	Promulgated on December 4th, 2009. Pending publication in the gazette.	Approves the Ecological and Economic Zoning in Madre de Dios at a macro level, at a scale of 1:250,000, as a basic instrument of territorial planning and implementation of development policies, programs, private and public investment projects that lead to achieving sustainable development in the region. The zoning identifies the Ecological and Economic Unit on the basis of which the most appropriate use of each space is decided. This implies identification of areas with agricultural, livestock, forest , fishing, mining and energy potential, protection areas, areas of biodiversity conservation, areas of ecotourism and urban-industrial potential, among others. The Economic and Ecological Zoning of Madre de Dios establishes 20 productive zones, among them are 14 zones of livestock production and 4 zones of forest production. The use of agriculture, agroforestry, tourism, conservation, reforestation and research is recommended in all of them. These zones are graphically represented on Map 21- Simplified Ecological and Economic Zoning
LAW 27795 LAW OF TERRITORIAL DEMARCATION AND ORGANIZATION	February 24th, 2003, modified February 15th, 2006	The aim of this law is to set out basic definitions, technical criteria and procedures for territorial demarcation, which is under the exclusive jurisdiction of the Executive, in accordance with paragraph 7) of Article 102 of the Constitution, so as to achieve the consolidation of boundaries and rational organization of the territory of the Republic. This Law defines towns to be settlements larger than

Norm	Effective Date	Relevant articles demonstrating compatibility with the layout/implementation of the Project
		150 people. Settlements smaller than this are denominated as dispersed settlement.
LAW 27783 THE BASIC LAW ON DECENTRALIZATION	July 17th, 2002	Establishes the democratic and decentralized form of the state and its structure and organization at the national, regional and local level. At the same time, it defines the norms that regulate administrative, economic, productive, financial, tax and fiscal decentralization. Also, this law establishes the powers at the three levels of government and determines the goods and resources of the regional and local governments; and regulates the relations of government at its different levels. Article 36 mentions the shared responsibilities, one of them being the promotion, management and regulation of productive and economic activities in their scope and level, corresponding to different sectors, including the environmental sector.
LAW 27867 ORGANIC LAW OF REGIONAL GOVERNMENT	November 19th, 2002	Law which in its articles 9 and 10 establishes constitutional competencies, exclusive and shared among the regional governments in the matter of environment in order to promote and regulate activities or services of the environmental sector. The articles also establish exclusive competencies to promote the sustainable use of forest and biodiversity resources; and shared competencies in sustainable natural resource management, improvement in environmental quality and the preservation and administration of reserves and regional protected natural areas. Article 53 of that same Law establishes the function of the Regional Governments on issues of environment and land use planning. In order for the regional governments to be able to exercise the competencies as prescribed by this law, a transfer process of the said competencies will have to be carried out, which will have as its objective to confirm that a given level of government does indeed have the institutional capacity to assume the competencies assigned.
LEGISLATIVE DECREE 1085 CREATING THE SUPERVISORY BODY FOR FOREST AND WILDLIFE RESOURCES (OSINFOR)	June 28th, 2008	Creates OSINFOR, charged with supervising and monitoring the sustainable use of forest resources and wildlife as well as forest-based environmental services approved by the State through the diverse modalities of use as recognized by the Law on Forest and Wildlife and its regulation.

Norm	Effective Date	Relevant articles demonstrating compatibility with the layout/implementation of the Project
LAW 29263 LAW ON ENVIRONMENTAL CRIMES	October 2nd, 2008	This Law amends the types of environmental and ecological criminal offences and classifies its more serious forms, such as illegal trafficking of protected aquatic species of flora and fauna, illegal extraction of aquatic species, predation on flora and wildlife, illegal trafficking of genetic resources, crimes against forests and forest formations, among other crimes mentioned.
EMERGENCY MINING DECREE 012-2010	February 18th, 2010	Declares the gold mining plan in the Madre de Dios department to be of public necessity, national interest and executive priority, and aims to ensure the health of the population, the security of persons, tax collection, conservation of natural heritage, and the development of sustainable economic activities.
DIRECTIVE 021-2004-INRENA-IFFS	Approved in December 21st, 2004	Describe the procedures required for official recognition of the "Guardian of the National Forest Heritage in Forest Concessions".

Table 2: Labor Legislation

Norm	Effective Date	Relevant articles demonstrating compatibility with the layout/implementation of the Project
LEGISLATIVE DECREE 728 (TUO SUPREME DECREE 003-97-TR) PRODUCTIVITY AND COMPETITIVENESS LAW	March 28th, 1997	This law promotes the massive access to employment through special programs and stimulates productive private sector investment. Furthermore, it improves levels of appropriate in the country so substances, as well as combating unemployment and underemployment. Finally, ensures job security and incomes of workers, while respecting the constitutional rules of job security.
SUPREME DECREE 001-96-TR PRODUCTIVITY AND COMPETITIVENESS REGULATION	January 26th, 1996	This regulation develops and specifies the objectives and tenets of Legislative Decree 728.
LAW 29245 THIRD-PARTY SERVICES PROVIDER LAW	June 26th, 2008	This law regulates private third-party services. Also regulates the cases comes from outsourcing, the requirements, rights and obligations, and penalties for companies that distort the use of this method for corporate engagement.
SUPREME DECREE 006-2008-TR THIRD-PARTY SERVICES PROVIDER REGULATIONS	September 12th, 2008	This regulation develops and specifies the objectives and tenets of Law 29245.

Norm	Effective Date	Relevant articles demonstrating compatibility with the layout/implementation of the Project
TUO SUPREME DECREE 001-97-TR SENIORITY BENEFITS LAW	March 1st, 1997	This law regulates compensation for length of service that has the quality of social benefit provision of contingencies that causes the cessation of work and promotion of workers and their families.
SUPREME DECREE 004-97-TR SENIORITY BENEFITS REGULATION	April 15th , 1997	This regulation develops and specifies the objectives and tenets of Supreme Decree 001-97-TR
LEGISLATIVE DECREE 713 VACATION LAW	November 8th, 1991	This law regulates the consolidation of the benefits provided by the existing labor laws.
SUPREME DECREE 012-92-TR VACATION REGULATION	December 3rd, 1992	This regulation develops and specifies the objectives and tenets of Legislative Decree 713.
LAW 27735 HALF/END-OF-YEAR HOLIDAY BONUSES LAW	May 8th, 2002	This law establishes the right of workers subject to the labor of the private sector to receive two bonuses in the year, among others.
SUPREME DECREE 005-2002-TR HALF/END-OF-YEAR HOLIDAY BONUSES REGULATION	July 4th, 2002	This regulation develops and specifies the objectives and tenets of Law 27735.
LEGISLATIVE DECREE 892 PROFIT SHARING LAW	November 8th, 1996	This standard regulates the right of workers to participate in the profits of companies that develop income-generating activities.
SUPREME DECREE 009-98-TR PROFIT SHARING REGULATION	November 6th, 1998	This regulation develops and specifies the objectives and tenets of Supreme Decree 009-98-TR.
LEGISLATIVE DECREE 688 SOCIAL BENEFITS CONSOLIDATION LAW	November 5th, 1991	This law regulates social benefits for workers.
SUPREME DECREE 024-2001-TR SOCIAL BENEFITS CONSOLIDATION REGULATION	July 22nd, 2001	This regulation develops and specifies the objectives and tenets of Legislative Decree 688.
TUO SUPREME DECREE 007-2002-TR LAW ON DAYS OF WORK, HOURS AND OVERTIME	July 4th, 2002	This law regulates days of work, hours and overtime in benefit of workers. Also, proceedings for Peruvian labor authority and registries in order to organize quality and quantity of work hours. Finally, it sets the maximum days and hours of work, including for night work, and

Norm	Effective Date	Relevant articles demonstrating compatibility with the layout/implementation of the Project
		regulates overtime.
SUPREME DECREE 008-2002-TR REGULATION ON DAYS OF WORK, HOURS AND OVERTIME	July 4th, 2002	This regulation develops and specifies the objectives and tenets of Supreme Decree 008-2002-TR.
LEGISLATIVE DECREE 25593 (TUO SUPREME DECREE 010-2003-TR) LAW ON COLLECTIVE LABOR RELATIONS	October 5th, 2003	This law regulates union's freedom, i.e., all those relations through which workers can bargain collectively for better working conditions or otherwise.
SUPREME DECREE 011-92-TR REGULATION ON COLLECTIVE LABOR RELATIONS	October 14th, 1992	This regulation develops and specifies the objectives and tenets of Law on Collective Labor Relations.
LAW 28806 LABOR INSPECTION LAW	July 22nd, 2006	This law aims to regulate the labor inspection system, its composition, organization structure, powers and duties in accordance with Convention 81 of the International Labor Organization.
SUPREME DECREE 019-2006-TR REGULATION OF LABOR INSPECTION SYSTEM	September 1st, 2007	This regulation develops and specifies the objectives and tenets of Law 28806.
LAW 26636 PROCEDURAL LABOR LAW	June 21st, 1996	This law regulates all the judicial procedures that workers and employers need to do in order to access to justice.

Table 3: Health and Safety Legislation

Norm	Effective Date	Relevant articles demonstrating compatibility with the layout/implementation of the Project
LAW 29783 HEALTH AND SAFETY LAW		This law aims to promote and organize safety and health in the workplace.
SUPREME DECREE 009-2005-TR HEALTH AND SAFETY REGULATION	September 28th, 2005	The regulation aims to promote a culture of risk prevention in the country. It counts with the participation or workers, employers and the State, who through social dialogue ensure the promotion, dissemination and enforcement of relevant legislation. This regulation on safety and health in the workplace establish minimum safety and health standards, enforcement responsibilities, and rights and

Norm	Effective Date	Relevant articles demonstrating compatibility with the layout/implementation of the Project
		responsibilities of employers and employees.
MINISTERIAL DECREE 148-2007-TR REGULATION OF COMMITTEE FOR SUPERVISION OF SECURITY AND HEALTH AT WORK	May 25th, 2005	This regulation creates a Committee for supervision and enforcement of security and health at workplace.
LAW 26842 GENERAL HEALTH LAW	July 20th, 1997	This law stipulates that those who lead or manage the extraction, production, transport and trade in goods and services has an obligation to take the necessary measures to ensure the protection of health and safety of workers and third parties on their premises.
LAW 26790 SOCIAL SECURITY MODERNIZATION LAW	May 17th, 1997	This law regulates the health and social security; it is founded on constitutional principles that recognize the right to welfare and guarantee free access to services by public, private or mixed. It takes place in a framework of equity, solidarity, efficiency and ease of access to health services. By this standard promotes efficient for occupational health and integration of efforts of the entities that provide health services, whatever their nature is.
SUPREME DECREE 009-97-SA SOCIAL SECURITY MODERNIZATION REGULATION	September 8th, 1997	This regulation develops and specifies the objectives and tenets of Law 26790.
SUPREME DECREE 003-98-SA INSURANCE RISK WORK	April 14th, 1998	This standard regulates occupational accident coverage and occupational diseases to workers employed and workers who have the quality of regular member of the social health insurance and work in a workplace in which the employing entity carries out its regular activities.

Table 4: Construction Market Legislation

Norm	Effective Date	Relevant articles demonstrating compatibility with the layout/implementation of the Project
SUPREME DECREE 011-2006-VIVIENDA NATIONAL REGULATION FOR CONSTRUCTION	May 8th, 2006	This regulation organizes definitions, general principles, rights and obligations related to construction market. Furthermore, this standard provides limits and rules for buildings matters in Peru.
LAW 27792 CONSTRUCTION, SANITARY AND HOUSING MINISTER LAW	July 25th, 2002	This law regulates structure, organisms, jurisdiction and functions of Construction and Housing Minister
SUPREME DECREE 002-2002-VIVIENDA	September 09th, 2002	This regulation develops and specifies the objectives and tenets of Law 27792.

Norm	Effective Date	Relevant articles demonstrating compatibility with the layout/implementation of the Project
CONSTRUCTION, SANITARY AND HOUSING MINISTER REGULATION		
SUPREME DECREE 026-2008-VIVIENDA	September 27th, 2008	This law regulates the verification of application files license building and urban empowerment, as well as verification of the execution of projects on urban areas and building.
SUPREME DECREE 021-2009-VIVIENDA	November 20th, 2009	This standard regulates by maximum allowable values (VMA) wastewater discharges in non-domestic sewerage system to avoid deterioration of facilities, health infrastructure, machinery, equipment and ensure its proper operation, ensuring the sustainability of sewerage systems and wastewater treatment.
MINISTERIAL DECREE 507-2007-VIVIENDA	October 2nd, 2007	This regulation approves guidelines for the treatment of private investment, domestic or foreign housing, construction and sanitation sector. Also, encourage the participation of private investment be it foreign or domestic. Finally, it promotes capacity building for technical and administrative management, effective and efficient regulation and government services for the promotion of private investment projects on housing sector.
SUPREME DECREE 018-2006-VIVIENDA NATIONAL URBAN DEVELOPMENT PLAN PERU: LAND FOR PEOPLE, POLICY GUIDELINES 2006-2015	July 27th, 2006	This standard regulates specific objectives of the urban territorial management, incorporating the ecological and economic zoning in the planning of urban management (planning, institutional strengthening of regional and local governments, mechanisms and instruments of urban management). Also, regulates topics as territorial necessary financial and economic aspect; regulatory, technical, organizational, participatory and ongoing information, both in the national metropolis, intermediate cities and smaller towns and rural settlements as basis for sustainable land development.
SUPREME DECREE 004-2011-VIVIENDA URBAN DEVELOPMENT REGULATION	June 17th, 2011	This rule establishes the regulatory framework for technical and administrative procedures to be followed by municipalities nationwide, in the exercise of its powers in planning and land management, preparation planning and local and rural development.

Table 5: Food Processing / Packaging Legislation

Norm	Effective Date	Relevant articles demonstrating compatibility with the layout/implementation of the Project
LEGISLATIVE DECREE 668	September 14th, 1991	Introducing measures to ensure freedom of trade and commerce as an essential condition for development in

Norm	Effective Date	Relevant articles demonstrating compatibility with the layout/implementation of the Project
		Peru.
SUPREME DECREE 007-98-SA	September 25th, 1998	Regulation on supervision and control of food and beverage health.
LAW 26842	July 20th, 1997	This law regulates access to health services in Peru and government obligations to provided health services to all Peruvians. Also, establishes rules in order to prevent diseases related to products and
LAW 28405	November 21st, 2003	This standard establishes a mandatory labeling for industrial products manufactured for final use or consumption that are sold in Peru. These products must be label (on the product, container or package), depending on the nature of the product, the information required by this law. The objective of this regulation is to protect human health and safety of the population, the environment and safeguard the right to information of consumer and users.
SUPREME DECREE 020-2005-PRODUCE	May 26th, 2005	This regulation develops and specifies the objectives and tenets of Law 28405.
SUPREME DECREE 056-89-AG GENERAL REGULATION ON PACKAGING, TRANSPORTATION AND STOWAGE FOR AGRICULTURAL PRODUCTS MARKETING	September 12th, 1989	This regulation establishes the rules under which shall be governed in future packaging operations, transportation and stowage of agricultural products sold in wholesale markets, bus terminals on Peruvian territory and other wholesale distribution centers as well as complementary or other aspects relating to these operations.
International regulation (http://www.codexalimentarius.net/web/index_es.jsp)	-	Codex Alimentarius

ANNEX 5: STATEMENT OF THE BAM MANAGER

bam bosquesamazónicos

DECLARATION OF COMMITMENT

BOSQUES AMAZONICOS S.A.C., developer and owner of the credits that will be generated through the REDD Project in Brazil Nut Concessions in Madre de Dios - PERU, declares that has not generated any credit in any alternative standard, market and program and that has no intention to generate any other form of GHG-related environmental credit for GHG emission reductions or removals claimed under the VCS Program. This declaration is done according with VCS requirements, the standard which is applying to.

Jorge Cantuarias Falconí
General Manager
Bosques Amazónicos SAC

Jr. Monte Rosa 271 - Oficina 7B
Santiago de Surco - LIMA
Telf.: 51 1 715-1380

Km. 10 Carretera Federico Basadre
Pucallpa - UCAYALI
Telf.: 51 61 577-858

Jr. San Martín 1084
Pto. Maldonado - MADRE DE DIOS
Telf.: 51 82 795-944

INVERSIÓN PRIVADA PARA UN MUNDO SOSTENIBLE
WWW.BOSQUES-AMAZONICOS.COM

ANNEX 6: LIST OF CONCESSIONAIRES PART OF THE PA AND THEIR CENTROIDS COORDINATES

ID	Concessioner's Name	Contract Code	POINT X	POINT Y
1	Sebastian Tapuy Panduro	17-TAH/C-OPB-A-001-05	463346.35	8701436.97
2	Víctor Encinas Espinoza	17-TAH/C-OPB-A-002-09	399309.28	8702280.85
3	Eufrasia Parillo Quispe	17-TAH/C-OPB-A-003-05	467250.94	8696897.28
4	Edgar Collado Delgado	17-TAH/C-OPB-A-004-05	439345.06	8706090.69
5	Florencia Paredes Dueñas	17-TAH/C-OPB-A-004-06	479559.26	8671875.77
6	Josú Carmen Saavedra Damian	17-TAH/C-OPB-A-004-08	437166.71	8697514.76
7	Miguel Silva Pereira	17-TAH/C-OPB-A-005-05	464817.96	8719262.81
8	Flor De María Cumari De Mori	17-TAH/C-OPB-A-005-06	477412.16	8671304.22
9	Ignacio Noa Grifa	17-TAH/C-OPB-A-006-05	470414.14	8709775.53
10	Miriam Laura Quispe	17-TAH/C-OPB-A-007-06	429179.50	8688810.21
11	Asunta Olivia Díaz Moreno	17-TAH/C-OPB-A-009-06	458403.25	8705562.50
12	Carlos/Catalina Mamani C Dea Campo	17-TAH/C-OPB-A-010-06	460165.51	8698355.65
13	Juana Contreras Suclli	17-TAH/C-OPB-A-010-08	422925.46	8699006.85
14	Daniel Mamani Jaramillo	17-TAH/C-OPB-A-011-06	455170.90	8692685.41
15	Edilberto Dea Rodríguez	17-TAH/C-OPB-A-013-06	458301.88	8702334.56
16	Húctor Ernesto Pizango Navi	17-TAH/C-OPB-A-014-06	458179.41	8687741.01
17	Hilda Dea Rodríguez	17-TAH/C-OPB-A-015-06	456935.87	8698631.53
18	Josú Mario Noa Grifa	17-TAH/C-OPB-A-017-06	455298.06	8701553.62
19	Martina Sabina Mamani Cahuana	17-TAH/C-OPB-A-018-06	461744.53	8695550.08
20	Teresa Pizango Navi	17-TAH/C-OPB-A-019-06	460143.23	8690912.46
21	Ulises Arimuya Grifa	17-TAH/C-OPB-A-020-06	457185.80	8692949.01
22	Elkjaer Albert Farfán Noa	17-TAH/C-OPB-A-033-08	462666.47	8722151.83
23	Isabel Vizcarra Yatto	17-TAH/C-OPB-A-034-08	456189.82	8717243.42
24	Elena Paredes Espinoza	17-TAH/C-OPB-A-036-08	390717.00	8702769.00
25	Josú Cahuana Saravia	17-TAH/C-OPB-A-038-08	455197.42	8710035.28
26	Urias Valdúz Tapuy	17-TAH/C-OPB-A-041-08	479903.74	8712312.36
27	Rocío Luz Mamani Ancco	17-TAH/C-OPB-A-046-08	457363.84	8719960.27
28	Pascual Flores Castillejos	17-TAH/C-OPB-A-048-08	434278.85	8707455.98
29	Nelson Herrin Noa Grifa	17-TAH/C-OPB-A-051-08	468961.58	8707945.31
30	María Mory Cumary	17-TAH/C-OPB-A-053-08	458972.41	8721997.17
31	Luis Alberto Ingaruca Báez	17-TAH/C-OPB-A-056-08	439748.28	8711250.36
32	Aidú Ramírez Gastelú	17-TAH/C-OPB-A-075-08	458199.14	8715659.79
33	Lázaro Marín Rodríguez	17-TAH/C-OPB-A-076-08	455731.18	8714633.74
34	Juan Gualberto Chota Leon	17-TAH/C-OPB-J-002-04	496750.83	8694038.04
35	Alicia Fatima Noa Grifa	17-TAH/C-OPB-J-004-04	461565.35	8717997.81
36	Lina Sahuarico Begazo	17-TAH/C-OPB-J-007-03	463303.54	8716392.74
37	Madeley Tapuy Palla	17-TAH/C-OPB-J-008-03	463954.95	8704690.14

38	Luis Collque Quispe	17-TAH/C-OPB-J-009-03	459230.47	8714252.55
39	María Zaida Rodriguez Tapuy	17-TAH/C-OPB-J-010-03	459066.35	8718386.01
40	Sixto Carazas Quispe	17-TAH/C-OPB-J-011-04	482993.29	8709020.07
41	Emilio Macochoa Noa	17-TAH/C-OPB-J-012-04	455725.31	8712166.36
42	Hilario Grifa Palla	17-TAH/C-OPB-J-015-03	473248.44	8720855.98
43	Andres Cutipa Gonzales	17-TAH/C-OPB-J-017-03	499837.02	8687547.60
44	Pedro Quispe Kana	17-TAH/C-OPB-J-018-04	451697.82	8703109.27
45	Mohasi Vasquez Rolin	17-TAH/C-OPB-J-019-04	444655.72	8701149.76
46	Alejandrina Huesembe De Marchena	17-TAH/C-OPB-J-020-04	479878.17	8688668.05
47	Jeronimo Emiliano Taipe Chuima	17-TAH/C-OPB-J-021-04	439251.69	8703142.01
48	Santiago Taipe Chuima	17-TAH/C-OPB-J-023-04	435871.60	8703058.66
49	Julia Saca Alvarez	17-TAH/C-OPB-J-024-04	468109.33	8700865.78
50	Rosa Tapia De Ramirez	17-TAH/C-OPB-J-025-04	485040.25	8691807.68
51	Melchor Huaracha Yauri	17-TAH/C-OPB-J-026-04	449766.97	8697154.23
52	Wilfredo De La Peña Gonzales	17-TAH/C-OPB-J-028-04	484693.77	8694671.79
53	Carlos Antonio Valdivia Sanchez	17-TAH/C-OPB-J-030-04	476855.02	8696904.61
54	Fidel Yupanqui Dueñas	17-TAH/C-OPB-J-031-04	469366.67	8703277.03
55	Ana Jacinto Quispe	17-TAH/C-OPB-J-032-04	464524.23	8707658.62
56	Braulio Valencia Valencia	17-TAH/C-OPB-J-035-04	469812.93	8695708.33
57	Armando Mejia Lopez	17-TAH/C-OPB-J-036-04	474967.72	8699101.87
58	Encarnación Mamani Larico	17-TAH/C-OPB-J-037-04	473756.72	8696362.04
59	Enrique Tije Arasaire	17-TAH/C-OPB-J-038-04	470512.32	8698456.69
60	Adolfina Yalta Gonzales	17-TAH/C-OPB-J-042-04	478000.65	8695673.75
61	Luz Marina Grandiller Olivera	17-TAH/C-OPB-J-043-04	481679.66	8695699.97
62	Wilfredo Valdez Macochoa	17-TAH/C-OPB-J-045-04	482521.35	8715347.18
63	María Adela Moreno Tapuy	17-TAH/C-OPB-J-046-04	476783.07	8711695.75
64	Manuel Vargas Cucho	17-TAH/C-OPB-J-047-04	474312.18	8688237.93
65	Macario Dionicio Cuadros Quispe	17-TAH/C-OPB-J-048-04	472277.87	8691500.25
66	Vidal Diaz Vargas	17-TAH/C-OPB-J-049-04	472382.42	8700314.91
67	Martin Laura Herrera	17-TAH/C-OPB-J-050-04	474220.81	8702059.40
68	Rigoberto Paredes Martinez	17-TAH/C-OPB-J-051-04	477900.99	8698429.06
69	Cancio Huaman Hurtado	17-TAH/C-OPB-J-052-04	486690.44	8695973.96
70	Marcelino Cruz Apaza	17-TAH/C-OPB-J-053-04	490757.29	8696570.76
71	Miguel Farfán Gómez	17-TAH/C-OPB-J-057-04	468728.48	8687179.89
72	María Elvira Cahuana Tapuy	17-TAH/C-OPB-J-058-04	478593.13	8717664.52
73	Saturnino Demetrio Parillo Quispe	17-TAH/C-OPB-J-060-04	417969.11	8705485.01
74	Jacinto Parillo Quispe	17-TAH/C-OPB-J-061-04	466817.67	8718163.83
75	Alejandrina Mendoza Cuaresma	17-TAH/C-OPB-J-063-04	464304.79	8685481.21
76	Blanca Victoria Sahuarico De Aradivi	17-TAH/C-OPB-J-065-04	480323.00	8702233.95
77	Alberto Garcia Rojas	17-TAH/C-OPB-J-066-04	478758.63	8704953.41
78	Josú De La Cruz Carrasco	17-TAH/C-OPB-J-067-04	482858.60	8693164.75

79	Gerónimo Quispe Quispe	17-TAH/C-OPB-J-068-04	463011.87	8698727.32
80	Celinda Gonzales Carrillo	17-TAH/C-OPB-J-070-04	483513.11	8697736.24
81	Adelma Alicia Palla Dea	17-TAH/C-OPB-J-072-04	466005.31	8699154.17
82	Cipriano Tito Quispe	17-TAH/C-OPB-J-074-04	495320.56	8693729.27
83	Clemente Ccolque Champi	17-TAH/C-OPB-J-075-04	466077.90	8702869.09
84	Marcelino Sayago Ortega	17-TAH/C-OPB-J-080-04	465468.23	8696599.36
85	Laura Palla Panduro	17-TAH/C-OPB-J-084-04	483216.29	8703680.37
86	Lucio Andrús Pizango Navi	17-TAH/C-OPB-J-085-04	463525.79	8689711.64
87	Rodolfo Herrera Inuma	17-TAH/C-OPB-J-088-04	496642.81	8689543.23
88	Zenobio Grandiller Olivera	17-TAH/C-OPB-J-090-04	482071.88	8695121.03
89	Alfredo Zambrano Tapia	17-TAH/C-OPB-J-091-04	480720.69	8690681.85
90	Felix Alvarez Gonzales	17-TAH/C-OPB-J-092-04	491258.43	8700853.68
91	Mirian Marice Herbozo Reategui	17-TAH/C-OPB-J-095-04	479091.52	8685870.67
92	Miguel Antonio Grandiller Olivera	17-TAH/C-OPB-J-097-04	482105.51	8696693.26
93	Sergio Flores Lloza	17-TAH/C-OPB-J-098-04	488766.41	8701304.76
94	Cesar Gerardo Macochoa Noa	17-TAH/C-OPB-J-100-04	477817.24	8721655.57
95	David Rodriguez Grifa	17-TAH/C-OPB-J-101-04	473279.97	8717862.75
96	David Rodriguez Tenoy	17-TAH/C-OPB-J-102-04	474041.53	8704547.85
97	Juan Saavedra Meza	17-TAH/C-OPB-J-105-04	475932.71	8722821.39
98	Regina Palla De Calle	17-TAH/C-OPB-J-108-04	470683.29	8720320.20
99	Maríano Barbaro Jacinto Irco	17-TAH/C-OPB-J-109-04	477607.69	8701690.57
100	Alberto Alfredo Palla Panduro	17-TAH/C-OPB-J-115-04	486421.25	8706087.77
101	Alejandro Vilca Mamani	17-TAH/C-OPB-J-116-04	466746.53	8705249.49
102	Luis Enrique Del Aguila Sinuire	17-TAH/C-OPB-J-119-04	444258.88	8704670.39
103	María Jesús Grandiller Olivera	17-TAH/C-OPB-J-120-04	482178.37	8698222.46
104	Oscar Sahuarico Begazo	17-TAH/C-OPB-J-122-04	470655.11	8705785.63
105	Luz Eva Valdivia Sanchez	17-TAH/C-OPB-J-123-04	486789.85	8703842.64
106	Nelson Arnaldo Morey Silva	17-TAH/C-OPB-J-124-04	464978.85	8694323.55
107	Angel Augusto Cespedes Tapia	17-TAH/C-OPB-J-125-04	494108.33	8697088.74
108	Aurelio Armando Mamani Mamani	17-TAH/C-OPB-J-126-04	469884.03	8690664.02
109	Ursula Ursina Pizango Navi	17-TAH/C-OPB-J-127-04	417346.81	8699487.12
110	Julio Chambi Cahuana	17-TAH/C-OPB-J-129-04	470538.70	8727729.43
111	Juliana Parillo Quispe	17-TAH/C-OPB-J-131-04	415258.88	8703978.86
112	Eduardo Palomino Melo	17-TAH/C-OPB-J-132-04	498168.24	8690214.98
113	Victor Macochoa Machoa	17-TAH/C-OPB-J-133-04	472629.09	8698837.18
114	Hipolito Cesar Condori Limpe	17-TAH/C-OPB-J-136-04	466883.41	8691339.89
115	Nancy Rosmeri Macochoa Tapia	17-TAH/C-OPB-J-137-04	480638.75	8709497.60
116	Máximo Julio Ventura Monasterio	17-TAH/C-OPB-J-139-04	462947.60	8696342.82
117	Carlos Gongora Cabaña	17-TAH/C-OPB-J-142-04	489039.06	8694687.05
118	Paola Dulanto Chapiama	17-TAM/C-OPB-A-001-05	430057.52	8658555.20
119	Guillermo Rios Pickman	17-TAM/C-OPB-A-001-07	438861.74	8640679.77

120	Eduardo Cumari Papa	17-TAM/C-OPB-A-002-07	480190.08	8670064.19
121	Nicanor Kuno Peña	17-TAM/C-OPB-A-002-08	483146.21	8639854.06
122	Nora Albina Grifa Horiuchi	17-TAM/C-OPB-A-003-06	408335.04	8626321.11
123	Leonor Quispe Huaman	17-TAM/C-OPB-A-006-05	426575.00	8691000.00
124	Walter F Pinche Guzman/ Marilin Luz Bautista Barros	17-TAM/C-OPB-A-007-06	413104.79	8649237.91
125	María Francizca Barros Guerra	17-TAM/C-OPB-A-008-06	415960.69	8647005.06
126	Pascual Huaman Fuentes	17-TAM/C-OPB-A-009-05	478361.88	8649383.66
127	Sara Hurtado Orosco	17-TAM/C-OPB-A-009-06	476184.95	8662411.57
128	Andres Avelino Rojas Aguirre	17-TAM/C-OPB-A-010-05	437116.89	8648300.62
129	Felix Antonio Huaman Gutierrez	17-TAM/C-OPB-A-010-07	429055.82	8649144.25
130	Nimia Medina Bate	17-TAM/C-OPB-A-011-06	404849.46	8622321.46
131	Wilson Guzman Ramirez	17-TAM/C-OPB-A-014-05	435852.94	8644985.78
132	Georgina Sangama Huesembe	17-TAM/C-OPB-A-014-06	467385.99	8655405.48
133	Rosa Graciela Sanchez Arquino	17-TAM/C-OPB-A-015-07	399951.72	8630898.32
134	Bacilia Mamani Sucasaire	17-TAM/C-OPB-A-017-06	501053.71	8672824.04
135	Eloy Bernabe Cassanca Mosombite	17-TAM/C-OPB-A-018-06	440761.34	8686952.19
136	Adrian Canelos Quiróz	17-TAM/C-OPB-A-020-05	421138.62	8619978.89
137	Fredy Aliaga Condori	17-TAM/C-OPB-A-021-05	409991.65	8617322.79
138	Faustina Quispe Carrasco	17-TAM/C-OPB-A-026-07	443998.44	8668012.20
139	José Cotaluque Maihua	17-TAM/C-OPB-A-027-05	458719.60	8664761.70
140	Sonia Victoria Santibanez Caceres	17-TAM/C-OPB-A-028-06	402641.27	8623985.04
141	Julia Sahuarico Ovalle	17-TAM/C-OPB-A-029-05	402203.20	8657743.43
142	Edinson Eloy Gongora Martinez	17-TAM/C-OPB-A-032-04	473627.26	8625751.69
143	Gustavo Alejandro Rios Hermoza	17-TAM/C-OPB-A-033-07	412320.86	8629031.08
144	Héctor Cardicel Perez	17-TAM/C-OPB-A-037-05	419979.73	8644333.30
145	Jacinta Huaman Apaza	17-TAM/C-OPB-A-039-04	495333.92	8671432.76
146	Erasmo Cardicel Tananta	17-TAM/C-OPB-A-039-05	421620.58	8641716.46
147	Rocio Miluska Durand Chavez	17-TAM/C-OPB-A-041-07	425224.53	8654611.24
148	Luis Alberto Farfan Pezo	17-TAM/C-OPB-A-043-07	404516.66	8637187.59
149	Marly Villavicencio Mamani	17-TAM/C-OPB-A-044-07	373557.42	8636760.95
150	Juan Vargas Ramirez	17-TAM/C-OPB-A-045-05	424730.16	8641798.03
151	José Chavez Chambi	17-TAM/C-OPB-A-047-07	411891.77	8652199.07
152	Elmer Perez Piño	17-TAM/C-OPB-A-049-07	423513.69	8655549.17
153	Saul Abuid Vargas	17-TAM/C-OPB-A-050-05	474143.01	8654001.74
154	Dolores Chavez Yumacal	17-TAM/C-OPB-A-053-05	409139.57	8655322.16
155	Orfelinda Ochoa Pizango	17-TAM/C-OPB-A-054-05	419124.71	8652527.80
156	Juan Ernesto Rivera Lazo	17-TAM/C-OPB-A-057-05	412861.62	8636629.73
157	Raul Vargas Racua	17-TAM/C-OPB-A-058-05	490588.87	8661414.08
158	Dagui Marilu Ynuma Beyuma	17-TAM/C-OPB-A-058-07	414449.89	8675175.27
159	Eugenia Ramos Salcedo	17-TAM/C-OPB-A-059-04	470729.01	8662054.63
160	Edgar Tipula Mullisaca	17-TAM/C-OPB-A-062-07	405285.64	8662040.33

161	Oswaldo Saavedra Gongora	17-TAM/C-OPB-A-074-07	426241.12	8663189.00
162	Andres Ernesto Cachique Chapiama	17-TAM/C-OPB-A-075-07	431959.81	8677942.67
163	Liliana Solis Chalco	17-TAM/C-OPB-A-076-07	434429.51	8675507.81
164	Faustina Vicente Pauccar	17-TAM/C-OPB-A-080-07	440414.04	8670371.56
165	Jorge W. Galindo Tineo	17-TAM/C-OPB-A-107-04	449032.92	8644562.44
166	Maximo Eleuterio Tapia Santos	17-TAM/C-OPB-A-109-04	439386.22	8631017.86
167	Jorge Carlos Gonzales Irarica	17-TAM/C-OPB-A-110-04	505326.46	8671054.47
168	Carlos Revilla Gonzales / Valerio Carrasco Transferencia?	17-TAM/C-OPB-A-111-04	465317.84	8678707.83
169	Abigail Sanz Salinas	17-TAM/C-OPB-A-112-04	447625.51	8639704.12
170	Segundo Moreno Caypo	17-TAM/C-OPB-A-118-04	464391.00	8665966.91
171	Pablo Bolivar Alvarez	17-TAM/C-OPB-A-122-04	468766.81	8666628.27
172	Mateo Vargas Dueñas	17-TAM/C-OPB-A-125-04	495144.25	8641190.46
173	Leoncio Jasmani Huaraca Jaquehua	17-TAM/C-OPB-A-127-04	460834.94	8665131.55
174	Jesús Racua Rodriguez	17-TAM/C-OPB-A-131-04	485505.10	8644950.56
175	Felix Armando Arimuya Inuma	17-TAM/C-OPB-A-137-04	472942.35	8669111.47
176	Felipe Mosqueira Trujillo/Miriam Yoni Aragon Paredes	17-TAM/C-OPB-A-138-04	516874.34	8655795.60
177	David Asturima Huamantica	17-TAM/C-OPB-A-141-04	440534.45	8681496.36
178	Bethy María Antas Vasquez	17-TAM/C-OPB-A-143-04	496067.39	8676968.27
179	Jorge Castillo Pacherrez	17-TAM/C-OPB-A-146-04	447067.10	8643753.60
180	Francisco Chavez Chura	17-TAM/C-OPB-A-147-04	483946.22	8649774.35
181	Nelson Belluma Huanuyre	17-TAM/C-OPB-A-150-04	474512.15	8622420.69
182	Carmelo Moreno Cachique	17-TAM/C-OPB-A-154-04	460791.64	8669745.87
183	Jesús Econema Cacuna	17-TAM/C-OPB-A-155-04	469679.05	8673766.44
184	Justo Ticona Colquehuanca	17-TAM/C-OPB-A-158-04	414778.24	8607280.95
185	Saturnino Villafuerte Blanco	17-TAM/C-OPB-A-160-04	490739.68	8669092.82
186	Felicitas Macochoa Grifa	17-TAM/C-OPB-A-161-04	470633.21	8652396.21
187	Enrique Navio Arias	17-TAM/C-OPB-A-163-04	477628.19	8682141.47
188	Teodocia V Huaraca Maquehua/ Aurelio Layme	17-TAM/C-OPB-A-164-04	461042.82	8663210.02
189	Bladimira Cevallos Cachique	17-TAM/C-OPB-A-165-04	461635.96	8681605.61
190	David Palomino Turpo	17-TAM/C-OPB-A-169-04	494943.44	8670607.55
191	Rene Gualberto Mejia David	17-TAM/C-OPB-A-172-04	483601.32	8665404.19
192	Celso Flores Sanipico	17-TAM/C-OPB-A-177-04	466398.81	8650533.71
193	Ana Gonzales De Rodriguez	17-TAM/C-OPB-A-179-04	431565.07	8679466.75
194	Reynaldo Kuno Cumpa	17-TAM/C-OPB-A-182-04	472586.27	8650293.38
195	Lucas Gallegos Mejia	17-TAM/C-OPB-A-183-04	475018.32	8651197.50
196	Humberto Ovalle Arana	17-TAM/C-OPB-A-185-04	399545.91	8657858.44
197	Julian Mamani Chino	17-TAM/C-OPB-A-189-04	491545.35	8664915.35
198	Leopoldo Flores Rodriguez	17-TAM/C-OPB-A-190-04	462883.31	8636440.33
199	Ysela Aida Bolivar Barriga	17-TAM/C-OPB-A-194-04	470410.08	8666166.33
200	Gerardo Cesar Guzman Quispe	17-TAM/C-OPB-A-198-04	490171.77	8644598.22
201	Agustin Huamani Anco	17-TAM/C-OPB-A-199-04	515826.24	8658409.59

202	Alfonso Vicente Quispe Quiñones	17-TAM/C-OPB-A-204-04	494317.91	8674733.72
203	Alfonsa Moreno Aguirre	17-TAM/C-OPB-A-207-04	457915.95	8628418.26
204	Eleuterio Jurado Frisancho	17-TAM/C-OPB-A-209-04	435296.36	8690666.40
205	Alvino Lima Cconchoy	17-TAM/C-OPB-A-215-04	434431.75	8685863.53
206	Aide H. Mejia Ramirez Viuda De Valera	17-TAM/C-OPB-A-230-04	491012.40	8679209.13
207	Victoria Ortega Flores	17-TAM/C-OPB-J-001-04	425808.73	8685591.77
208	Antonio Mamani Conto	17-TAM/C-OPB-J-002-04	437881.32	8685150.65
209	Estanislao Lopez Vera	17-TAM/C-OPB-J-004-03	445596.36	8624927.99
210	Hortensia Canelos Macochoa	17-TAM/C-OPB-J-007-02	430939.90	8624088.59
211	Sofia Del Carpio Chair	17-TAM/C-OPB-J-007-04	522695.68	8633362.10
212	Nelson Lopez Aguirre	17-TAM/C-OPB-J-008-03	443253.44	8626649.63
213	Cesar Agusto Reyna Durand	17-TAM/C-OPB-J-008-04	515098.27	8659678.85
214	Luz Angelica Roca Guerra	17-TAM/C-OPB-J-010-02	501950.02	8663742.40
215	Delio Mendiguri Mendoza	17-TAM/C-OPB-J-011-04	475982.73	8658043.51
216	Segundino Torres Huaman	17-TAM/C-OPB-J-012-04	430958.85	8684178.24
217	Domingo Carpio Claros	17-TAM/C-OPB-J-013-02	464244.61	8676140.81
218	Juan Manuel Huamani Anco	17-TAM/C-OPB-J-013-04	515159.64	8655235.39
219	Pedro Liberato Amau Gallegos	17-TAM/C-OPB-J-014-03	501956.04	8669962.93
220	Elena Mamani Huallpa	17-TAM/C-OPB-J-015-04	446839.32	8679260.63
221	Fransisco Diaz Vargas	17-TAM/C-OPB-J-016-04	468130.64	8679168.81
222	Martin Ascue Sallo	17-TAM/C-OPB-J-017-04	421007.02	8687336.60
223	Pedro Surco Achahuanca	17-TAM/C-OPB-J-019-03	494338.34	8666846.02
224	Armando Taricuarima Mozombite	17-TAM/C-OPB-J-019-04	497171.49	8668465.64
225	Faustino Chalco Paucar	17-TAM/C-OPB-J-020-03	435956.61	8680435.70
226	Sergio Cusi Huaman	17-TAM/C-OPB-J-022-04	482963.43	8676759.36
227	Miguel Torres Cuevas	17-TAM/C-OPB-J-025-02	506906.58	8659998.53
228	Manuel Quispe Gutiérrez	17-TAM/C-OPB-J-025-03	485720.72	8641049.85
229	Martha Huaman Quispe	17-TAM/C-OPB-J-026-04	496888.38	8659631.42
230	Wilbert Mesco Zevallos	17-TAM/C-OPB-J-027-03	478060.03	8656977.45
231	Alfredo Ubaldo Moreno Fuller	17-TAM/C-OPB-J-027-04	466646.04	8665734.70
232	Soledad Ruiz Torres	17-TAM/C-OPB-J-029-04	428184.26	8645152.37
233	Cornelio Bolívar Vizarreta	17-TAM/C-OPB-J-030-04	485677.82	8643416.87
234	Constantino Huaman Casas	17-TAM/C-OPB-J-031-03	497739.95	8673499.16
235	Ruben Uartiaga Murrieta	17-TAM/C-OPB-J-032-03	451374.36	8665711.69
236	Jacinto Moscoso Ramirez	17-TAM/C-OPB-J-033-04	476659.30	8634293.38
237	Juan Flores Machaca Clara Flores Panduro	17-TAM/C-OPB-J-035-02	481736.73	8672338.00
238	Alcides Ccuno Chahuara	17-TAM/C-OPB-J-035-03	523182.19	8641823.94
239	Leonidas Cuno Solis	17-TAM/C-OPB-J-038-02	464795.35	8638479.98
240	Nicolas Argandoña Piña	17-TAM/C-OPB-J-038-04	480948.11	8676288.70
241	Felipe Mauricio Limachi Paucar	17-TAM/C-OPB-J-040-02	520041.81	8632727.27
242	Elvira Jaqueline Vizcarra Yatto	17-TAM/C-OPB-J-043-03	407620.23	8621318.08

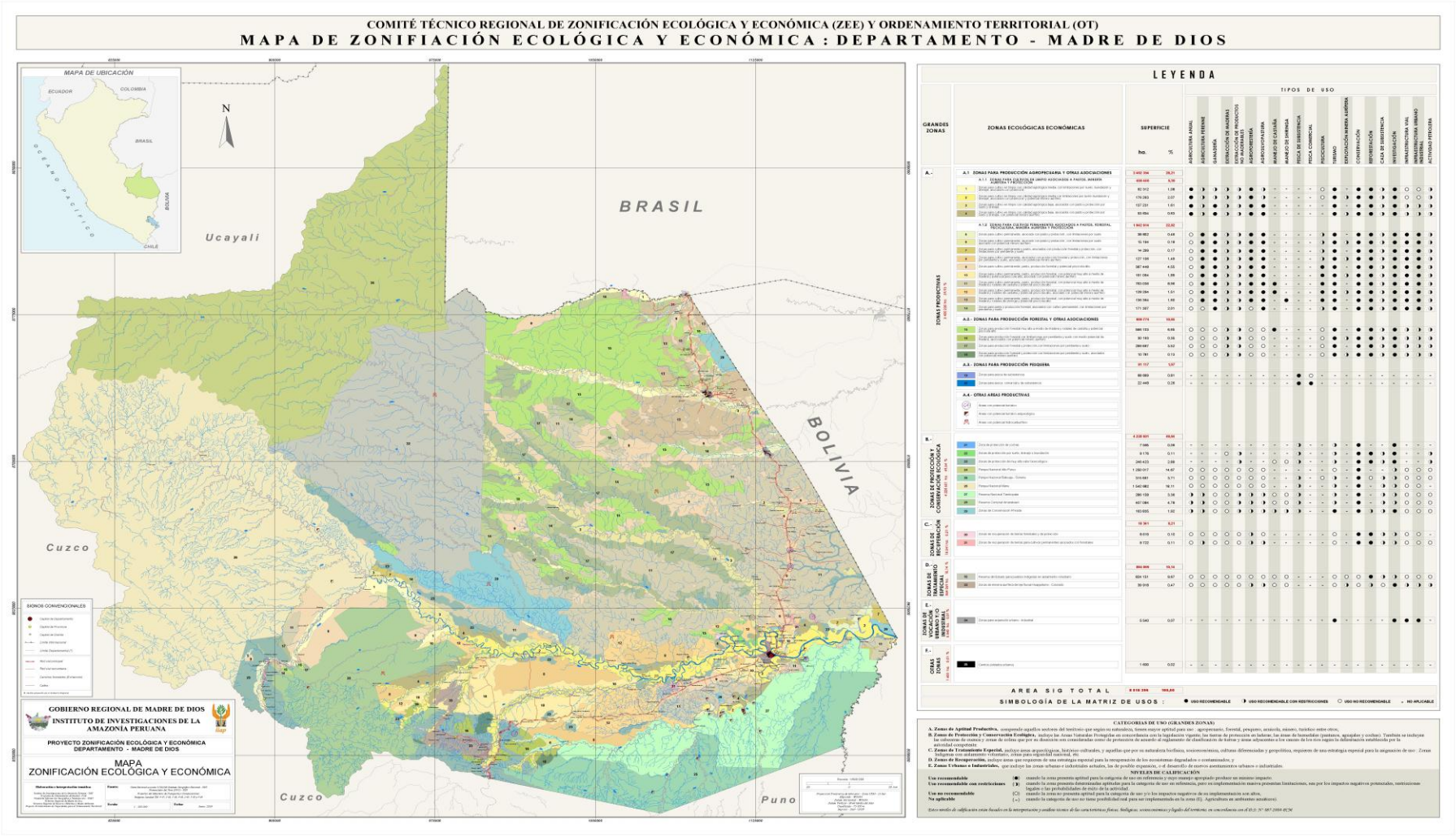
243	Joyse Magdalena Moreno Inuma	17-TAM/C-OPB-J-045-04	460967.58	8671996.03
244	Pedro Crisologo Moreno Huanuyre	17-TAM/C-OPB-J-047-03	467679.65	8660439.47
245	Cristobal Sullca Huaman	17-TAM/C-OPB-J-049-04	442165.45	8689546.42
246	Eulogio Quispe Chani	17-TAM/C-OPB-J-051-02	493502.12	8656521.33
247	Julian Mora Huaman	17-TAM/C-OPB-J-052-03	434831.64	8678497.97
248	Rufino Condori Cahuata	17-TAM/C-OPB-J-052-04	472401.55	8665198.68
249	Guillermo Miguel Racua Caya / Rolando Racua Reaño	17-TAM/C-OPB-J-053-04	484360.22	8640397.25
250	Mateo Tejeira Huillca	17-TAM/C-OPB-J-056-03	500551.06	8676106.44
251	Juan Tito Condori Suyo	17-TAM/C-OPB-J-058-04	474156.08	8666270.57
252	Jorge Vargas Quiróz	17-TAM/C-OPB-J-059-03	491584.89	8653610.52
253	Marcos Olgado Quispe	17-TAM/C-OPB-J-060-03	490151.17	8642471.02
254	German Revilla Gonzales	17-TAM/C-OPB-J-060-04	484770.33	8654999.68
255	María B Sangama De Benites/ Aldo Herrera G	17-TAM/C-OPB-J-061-02	498762.75	8654116.14
256	María Salome Mendivil Medina	17-TAM/C-OPB-J-061-03	468033.10	8681865.43
257	Catherine Melendez Vargas	17-TAM/C-OPB-J-062-04	483549.64	8656576.40
258	Jaime Llamas Martinez	17-TAM/C-OPB-J-063-04	463206.72	8625674.40
259	Washinton Maceda Irarica	17-TAM/C-OPB-J-064-03	411170.80	8626556.83
260	Avelino Ricardo Tuesta Guevara	17-TAM/C-OPB-J-064-04	464182.38	8621403.70
261	Juana Julia Gongora Cabana	17-TAM/C-OPB-J-067-03	428977.85	8633533.12
262	Rodolfo Mamani Yari	17-TAM/C-OPB-J-067-04	476957.52	8644210.06
263	Delfin Rodriguez Flores	17-TAM/C-OPB-J-070-03	444923.28	8682837.18
264	Mauricio Cassa Champi	17-TAM/C-OPB-J-070-04	480366.31	8652519.78
265	Erasmo Condori Flores	17-TAM/C-OPB-J-071-03	516671.43	8636701.44
266	Andres Guerra Irarica	17-TAM/C-OPB-J-072-03	504764.31	8659034.59
267	Siles Flores Rengifo	17-TAM/C-OPB-J-072-04	440399.28	8624150.19
268	Florencia Ascue Sallo	17-TAM/C-OPB-J-073-03	439699.87	8679003.47
269	Luz Mila Cachique Perdiz	17-TAM/C-OPB-J-073-04	457269.19	8682362.32
270	Hermelinda Pacco Molina	17-TAM/C-OPB-J-074-04	468533.10	8637665.28
271	Paula A. Guerra Flores	17-TAM/C-OPB-J-076-03	503524.23	8659209.43
272	Fidelia Mamani Pari	17-TAM/C-OPB-J-077-02	451664.19	8668311.73
273	Sofia Rosa Paredes Dueñas	17-TAM/C-OPB-J-078-03	511342.50	8660963.11
274	Luis Racua Salazar	17-TAM/C-OPB-J-078-04	491253.99	8641567.01
275	Marcos Maximiliano Gonzales Gamarra	17-TAM/C-OPB-J-079-02	449699.21	8677660.52
276	Elvis Ivan Barriga Guevara	17-TAM/C-OPB-J-079-03	509167.08	8632370.30
277	Serapio Velasquez Limpi	17-TAM/C-OPB-J-080-04	473947.11	8645454.19
278	Rafael Lorenzo Jara Quispe	17-TAM/C-OPB-J-081-04	494156.84	8645865.85
279	Consuelo Vela Areque/ David Bohorquez Cairo	17-TAM/C-OPB-J-083-04	411038.71	8640679.60
280	Esteban Halanocca Quispe	17-TAM/C-OPB-J-086-04	491317.05	8639629.13
281	Saturnina Maileva Chavez	17-TAM/C-OPB-J-088-02	423510.38	8630174.48
282	Froilan Quispe Ttupa	17-TAM/C-OPB-J-091-03	473122.96	8660473.51
283	Leonardo Aladino Racua Cacuna	17-TAM/C-OPB-J-091-04	492954.83	8641586.32

284	Gregoria Roca Guerra	17-TAM/C-OPB-J-092-03	500397.54	8663532.09
285	Juan Carlos Flores Del Castillo	17-TAM/C-OPB-J-092-04	447819.81	8627540.36
286	María Rosa Vargas Racua	17-TAM/C-OPB-J-093-04	492598.03	8662006.60
287	Eulogio Puma Checcori	17-TAM/C-OPB-J-095-04	475653.38	8681983.27
288	Leoncio Pacheco Ayala	17-TAM/C-OPB-J-096-03	457397.48	8674709.65
289	Oscar Angel Alvarez Belson	17-TAM/C-OPB-J-096-04	436047.63	8656125.89
290	Nicomedes Ayte Vargas	17-TAM/C-OPB-J-097-03	480204.49	8665003.05
291	Juan Vicente Sanchez Pinedo	17-TAM/C-OPB-J-097-04	442599.83	8659316.37
292	Victor Econema Pacaya	17-TAM/C-OPB-J-098-04	400000.08	8623504.76
293	Jesús Torres Vasquez	17-TAM/C-OPB-J-100-02	418569.80	8639527.99
294	Bonifacio Rocca Ttito	17-TAM/C-OPB-J-101-04	502607.33	8667779.41
295	Florentino Cañari Turpo	17-TAM/C-OPB-J-102-02	440981.15	8650743.24
296	Ladio Bolivar Huamani	17-TAM/C-OPB-J-102-04	438226.14	8621238.82
297	Cosme Dueñas Merma	17-TAM/C-OPB-J-103-03	495276.76	8655655.31
298	Bernardino Villafuerte Mamani	17-TAM/C-OPB-J-104-04	463200.12	8653121.21
299	Asunta Amasifuen De Llamas	17-TAM/C-OPB-J-106-04	440087.62	8655480.47
300	Carlos Gutierrez Villamar	17-TAM/C-OPB-J-108-03	467985.39	8652606.86
301	Edith Glady Herboso Reategui	17-TAM/C-OPB-J-112-03	444880.39	8652235.29
302	Carlos Miguel Caviña Balarezo	17-TAM/C-OPB-J-114-03	450081.06	8685235.08
303	Juan Enrique Pereyra Guerra	17-TAM/C-OPB-J-116-03	454202.76	8664797.17
304	Wilfredo Mendiguri Mendoza	17-TAM/C-OPB-J-117-03	474553.86	8659111.04
305	Luis Reynaldo Canelos Grifa	17-TAM/C-OPB-J-119-03	432705.53	8626427.28
306	Ulises Moreno Huanuire	17-TAM/C-OPB-J-123-03	461660.97	8667354.65
307	Victor Alfredo Zeballos Mozombite	17-TAM/C-OPB-J-124-03	455478.75	8679873.09
308	Luis Hernan Lopez Torres	17-TAM/C-OPB-J-126-03	467034.57	8624139.60
309	María Estela Perdiz Valera	17-TAM/C-OPB-J-128-03	460952.03	8677241.45
310	Paulino Roca Guerra	17-TAM/C-OPB-J-130-03	501845.84	8665949.27
311	Juan Bautista Uscamayta Huillca	17-TAM/C-OPB-J-138-03	469874.15	8670575.33
312	Edelmira Flores De Vela	17-TAM/C-OPB-J-143-03	500319.34	8661008.37
313	Alfredo Gonzales Romero	17-TAM/C-OPB-J-144-03	479965.58	8680331.79
314	Cecilio Reategui Aguirre	17-TAM/C-OPB-J-151-03	476480.55	8664888.75
315	Cecilia Cacuna Racua	17-TAM/C-OPB-J-152-03	472789.32	8683323.17
316	Alipio Acha Calla	17-TAM/C-OPB-J-153-03	471802.95	8680586.66
317	Carlos Aguilar Huaman	17-TAM/C-OPB-J-158-03	499855.34	8672037.29
318	Margarita Azucena Morales Zegarra	17-TAM/C-OPB-J-162-02	444323.80	8630814.36
319	Pablo Alegre Usca	17-TAM/C-OPB-J-162-03	498536.29	8677274.63
320	Margarita Venilda Rodriguez Benites	17-TAM/C-OPB-J-165-02	495546.00	8649555.04
321	Samuel Huamani Aranguri	17-TAM/C-OPB-J-167-02	489078.04	8639490.18
322	Pacifico Ferro Capa	17-TAM/C-OPB-J-168-02	503139.26	8650449.56
323	Zoila Norma Racua Guerra	17-TAM/C-OPB-J-169-03	461896.00	8657227.33
324	Rene Florencio Vargas Pineda	17-TAM/C-OPB-J-170-02	496009.94	8652253.80

325	Aureliano Francisco Donaires Orosco	17-TAM/C-OPB-J-172-02	420014.73	8609283.60
326	Silverio Quispe Ttupa	17-TAM/C-OPB-J-176-03	474158.08	8656687.41
327	Carlos Narciso Moreno Fuller	17-TAM/C-OPB-J-179-02	467332.49	8662841.16
328	Benito Escalante Quispe	17-TAM/C-OPB-J-179-03	476625.06	8648952.62
329	Agapito Delgado Cruz	17-TAM/C-OPB-J-180-03	460435.49	8635025.05
330	Benilde Pacherres Salazar	17-TAM/C-OPB-J-184-02	422686.78	8652332.47
331	María Carmen Abarca Choque	17-TAM/C-OPB-J-189-03	452986.59	8624693.18
332	Maximo Loayza Benites	17-TAM/C-OPB-J-190-03	472587.06	8667592.19
333	Anselmo Racua Mariche	17-TAM/C-OPB-J-196-03	485444.11	8642344.96
334	Federico Barrientos Martinez	17-TAM/C-OPB-J-197-03	460134.46	8638435.61
335	Bernardo Flores Pereira	17-TAM/C-OPB-J-204-03	435803.58	8660519.73
336	Justo Montaño Avila	17-TAM/C-OPB-J-205-03	512348.26	8654978.42
337	José Oswaldo Saavedra Alvarado	17-TAM/C-OPB-J-209-03	437628.41	8659307.11
338	Juan De La Cruz Cusihuaman Condori	17-TAM/C-OPB-J-210-03	490512.44	8670453.93
339	Julian Condori Atamari	17-TAM/C-OPB-J-215-03	436263.21	8635819.26
340	Wilfredo Ahuanari Patiño	17-TAM/C-OPB-J-219-03	495662.99	8672879.10
341	Luciano Mamani Perez	17-TAM/C-OPB-J-220-03	492358.68	8669627.38
342	Moises Gutierrez Galicia	17-TAM/C-OPB-J-221-03	454326.65	8667887.80
343	Pilar Mandujano Baca	17-TAM/C-OPB-J-224-03	405296.85	8652268.81
344	José Flores Pereyra	17-TAM/C-OPB-J-233-03	504365.98	8674014.38
345	Héctor Pautre Miashiro	17-TAM/C-OPB-J-240-03	442893.06	8640411.11
346	Leonardo Sanchez Pinedo	17-TAM/C-OPB-J-248-03	451643.39	8671116.56
347	Gueisa Gonzales De Rodriguez	17-TAM/C-OPB-J-250-03	483662.61	8667047.05
348	Saturnino Solis Muñoz	17-TAM/C-OPB-J-251-03	448076.96	8667241.24
349	Teofilo Pedraza Ariza	17-TAM/C-OPB-J-254-03	482894.82	8661488.84
350	Cirilo Torres Ttito	17-TAM/C-OPB-J-256-03	488154.30	8643469.78
351	Francisco Mamani Condori	17-TAM/C-OPB-J-258-03	513791.95	8661428.03
352	Igidio Mamani Ccorimanya	17-TAM/C-OPB-J-263-03	494932.10	8675550.91
353	Juan Huanuire Econema	17-TAM/C-OPB-J-265-03	491412.97	8677466.09
354	Elvira Yatto Tibubay	17-TAM/C-OPB-J-271-03	421930.65	8636905.28
355	Daniel Suclli Laura	17-TAM/C-OPB-J-272-03	450054.25	8681010.30
356	Serapio Condori Flores	17-TAM/C-OPB-J-276-03	525193.08	8631154.54
357	Silvia Apaza Hidalgo	17-TAM/C-OPB-J-285-03	464972.80	8668996.56
358	Teodocio Ancalle Llamoca	17-TAM/C-OPB-J-288-03	519638.81	8649826.90
359	Blanca Luz Vargas Pashanaste	17-TAM/C-OPB-J-293-03	465958.22	8658104.90
360	Inely Mestanza Villaroel	17-TAM/C-OPB-J-297-03	428555.46	8642027.72
361	Abel Galindo Izquierdo	17-TAM/C-OPB-J-299-03	453456.05	8643770.19
362	Felicitas Ramirez Surco	17-TAM/C-OPB-J-302-03	485043.07	8657110.03
363	Nora Esperanza Belluma Huanuire	17-TAM/C-OPB-J-306-03	412323.49	8661655.68
364	Jesús Chavez Vargas	17-TAM/C-OPB-J-309-03	486231.31	8644479.99
365	Juan Onesimo Ayerbes Ohuichi	17-TAM/C-OPB-J-310-03	495457.66	8679084.84

366	Dionisia Ccorahua De Zapana	17-TAM/C-OPB-J-311-03	480857.46	8644108.57
367	Hermelinda Argandoña Piña	17-TAM/C-OPB-J-317-03	482008.60	8676564.06
368	Julio Hurtado Garay	17-TAM/C-OPB-J-319-03	489519.64	8656472.87
369	Hernancia Rodriguez Flores - Transferencia	17-TAM/C-OPB-J-321-03	487780.69	8676295.89
370	Miguel Jorge Zevallos Narvaes	17-TAM/C-OPB-J-325-03	464539.21	8681535.86
371	Vicencio Yaricahua Nieto/ María Eduvilda	17-TAM/C-OPB-J-331-03	522778.44	8636245.35
372	Dionisio Lima Armuto	17-TAM/C-OPB-J-338-03	455867.16	8671571.66
373	Ynocencio Bacilio Huaman	17-TAM/C-OPB-J-346-03	486617.37	8642167.94
374	Agueda Pacherres Salazar	17-TAM/C-OPB-J-348-03	488445.54	8640714.19
375	Daniel Idme Guetierrez	17-TAM/C-OPB-J-349-03	490315.00	8671215.49
376	Pablo Callo Condori	17-TAM/C-OPB-J-353-03	478511.81	8651669.21
377	Angel Fuentes Yupanqui	17-TAM/C-OPB-J-382-03	502439.13	8654279.94

ANNEX 7: ECOLOGICAL AND ECONOMIC ZONING MAP FOR MADRE DE DIOS



Economic Ecological Zones Legend	Code
Zones for annual crops with a medium agricultural quality and soil, flooding and drainage limitations, associated with protection	1
Zones for annual crops with a medium agricultural quality, soil, flooding and drainage limitations, associated with protection and gold mining potential	2
Zones for annual crops with a low agricultural quality, associated with pastures and protection because of soil and drainage	3
Zones for annual crops with a low agricultural quality, associated with pastures and protection because of soil and drainage, with gold mining potential	4
Zones for permanent crops, associated with pastures and protection, with soil limitations	5
Zones for permanent crops, associated with pastures and protection, with soil limitations, associated with gold mining potential	6
Zones for permanent crops, pastures associated with forest production and protection, with slope and soil limitations	7
Zones for permanent crops, pastures associated with forest production and protection, with slope and soil limitations, associated with a gold mining potential	8
Zones for permanent crops, pastures, forest production and a high ichthyology potential	9
Zones for permanent crops, pastures, forest production with a very high to medium wood potential and a high ichthyology potential, associated with a gold mining potential	10
Zones for permanent crops, pastures, forest production with a very high to medium wood and Brazil Nut potential and a high ichthyology potential	11
Zones for permanent crops, pastures, forest production with a very high to medium wood and Brazil Nut potential and a high ichthyology potential, associated with a gold mining potential	12
Zones for permanent crops, pastures, forest production with a very high to medium wood and shiringa potential and a high ichthyology potential	13
Zones for forest production and pastures, associated with permanent crops with slope and soil limitations	14
Zones for forest production with a very high to medium wood and Brazil Nut potential and a high ichthyology potential	15
Zones for forest production and protection with slope and soil limitations and medium wood potential, associated with potential gold mining	16
Zones for forest production and protection with slope and soil limitations	17
Zones for forest production and protection with slope and soil limitations, associated with potential gold mining	18
Zones for subsistence fishing	19
Zones for commercial and subsistence fishing	20
Zones for small lagoon protection	21
Zones for protection because of soil, drainage or flooding	22
Zones for protection with a high biological value	23
National Park Alto Purus	24
Bahuaja - Sonene National Park	25
Manu National Park	26
Tambopata National Reserve	27
Amarakaeri Communal Reserve	28
Private Conservation Zones	29
Zone for recovery and protection of forest lands	30
Zones of land recovery for agroforestry	31
State reserve for native communities in voluntary isolation	32
Zones of high environmental impact mining	33
Zone of regional interest for the conservation of Lake Valencia	34
Zone for urban-industrial expansion	35
Urban population centers	36

ANNEX 8: CONSULTATION PROCESS

CONSULTATION PROCESS WITH BRAZIL NUT STAKEHOLDERS OF MADRE DE DIOS – REDD BRAZIL NUT FARMERS PROJECT				
N	**WORKSHOP / MEETING**	**PARTICIPANTS**	**DATE**	**PLACE**
1	Meeting with FEDECAM leaders. Coordination and planning of the consultation.	14 Brazil nut farmers (3 women), leaders of Brazil nut farmers associations	Monday, July 13th, 2009	Puerto Maldonado
2	Meeting with FEDECAM. Presentation of the REDD Brazil nut Farmers Project.	Board of Directors of the Departmental Federation of Brazil nut Farmers of Madre de Dios.	Tuesday, July 14th, 2009	Puerto Maldonado
3	Meeting with Brazil nut farmers of Alto Malecon San Carlos and Varsovia	28 Brazil nut farmers (5 women)	Sunday, July 26th, 2009	Community center of San Carlos town
4	Meeting with Brazil nut farmers of Planchon	10 Brazil nut farmers (2 women)	Sunday, August 2nd, 2009	Amphitheatre of Las Piedras municipality, Planchon town
5	Meeting with Brazil nut farmers of Alto Malecon San Carlos and Varsovia	18 Brazil nut farmers (3 women)	Sunday, August 2nd, 2009	Community center of San Carlos town
6	Meeting with Brazil nut farmers of Pariamanu.	14 Brazil nut farmers (3 women)	Monday, August 3rd, 2009	Pump house of Madre de Dios. Puerto Maldonado
7	Meeting with Brazil nut farmers of Sabaluyoc	11 Brazil nut farmers (2 women)	Sunday, August 30th, 2009	House of a settler of Sabaluyoc town
8	Participation in Assembly with Brazil nut farmers. Election of FEPROCAMD Board of Directors.	42 Brazil nut farmers (6 women) representatives of different Brazil nut farmers associations	Saturday, September 12th, 2009	Puerto Maldonado
9	Assembly between Brazil nut farmers of Alerta and FEPROCAMD. Presentation of the REDD Brazil nut Farmers Project.	36 Brazil nut farmers (12 women) and Board of Directors of the Brazil nut Farmers Federation of Madre de Dios - FEPROCAMD	Saturday, September 26th, 2009	Premises of ECOMUSA, Alerta town
10	Presentation of the REDD Brazil nut Farmers Project to leaders of the Brazil nut sectors.	56 Brazil nut farmers leaders from different sectors and associations.	Wednesday, October 07th, 2009	Amaru Mayu Hotel, Puerto Maldonado.
11	Presentation of the REDD Brazil nut Farmers Project to Brazil nut farmers of Monterrey. Revision of the agreement of carbon rights transfer.	14 Brazil nut farmers (7 women)	Saturday, November 21st, 2009	Community center of Monterey
12	Meeting with Brazil nut farmers of Boca Pariamarca and Ashipal. Presentation of the REDD Brazil nut Farmers Project.	7 Brazil nut farmers (3 women)	Saturday, 21st, 2009	House of a Brazil nut farmer in Boca Ashipal
13	Presentation of the REDD Brazil nut Farmers Project and absolution of consultations to Brazil nut farmers of Alegria	12 Brazil nut farmers (4 women)	Sunday, November 22nd, 2009	Community center, Alegria town

14	Meeting with Brazil nut farmers of Sabaluyoc	9 Brazil nut farmers (2 women)	Saturday, November 28th, 2009	Office of Bosques Amazonicos. Puerto Maldonado
15	Exposition of the REDD Brazil nut Farmers Project to Brazil nut farmers of La Novia	9 Brazil nut farmers (5 women)	Friday, December 4th, 2009	Community center of La Novia
16	Presentation of the REDD Brazil nut Farmers Project to the Brazil nut farmers Association of Alerta	26 Brazil nut farmers (5 women)	Saturday, December 12th, 2009	Premises of ECOMUSA, Alegria
17	Participation in the event organized by OSINFOR and CAMDE PERU. The REDD Brazil nut Farmers Project was disseminated.	38 Brazil nut farmers (9 women), representatives of the Forest Management of Madre de Dios and OSINFOR	Friday, June 4th, 2010	Premises of CASAL SAC. Alegria town
18	Meeting with Brazil nut farmers of Shiringayoc	7 Brazil nut farmers (1woman)	Sunday, June 6th, 2010	Shiringayoc town
19	INFORMATIVE WORKSHOP ON PROGRESS AND RESOLUTION OF CONSULTATIONS REGARDING THE REDD PROJECT – Alerta town	32 Brazil nut farmers	Sunday, June 13th, 2010	Premises of ECOMUSA, Alerta town
20	INFORMATIVE WORKSHOP ON PROGRESS AND RESOLUTION OF CONSULTATIONS REGARDING THE REDD PROJECT – Alegria town	53 Brazil nut farmers	Sunday, June 20th, 2010	Premises of ECOMUSA, Alegria town
21	INFORMATIVE WORKSHOP ON PROGRESS AND RESOLUTION OF CONSULTATIONS REGARDING THE REDD PROJECT – Brazil nut farmers of Pariamanu.	11 Brazil nut farmers	Saturday, July 3rd, 2010	Premises of BAM in Puerto Maldonado
22	INFORMATIVE WORKSHOP ON PROGRESS AND RESOLUTION OF CONSULTATIONS REGARDING THE REDD PROJECT – Planchon Sector	21 Brazil nut farmers (2 women)	Friday, July 09th, 2010	Amphitheatre of Las Piedras municipality, Planchon town
23	FIRST MEETING OF REDD BRAZIL NUT FARMERS PROJECT PARTNERS, taken place in Puerto Maldonado city to show the progress of the project and the business plan of the Brazil nut company of the Project, property of all partners.	400 Brazil nut farmers, representatives of Bosques Amazonicos, representatives of the Brazil nut Farmers Federation, local authorities and Environmental Minister of Peru.	Sunday, July 18th, 2010	Premises of Cabaña Tropical in Puerto Maldonado
24	TRAINING WORKSHOP "Agreement of Brazil nut Concessions, Liabilities and Responsibilities", Technical assistance for the elaboration of AOP and presentation of OSINFOR to Brazil nut farmers – Alerta town	39 Brazil nut farmers	Saturday, August 14th, 2010	Premises of ECOMUSA – Alerta town
25	TRAINING WORKSHOP "Agreement of Brazil nut Concessions, Liabilities and Responsibilities", Technical assistance for the elaboration of AOP and presentation of OSINFOR to Brazil nut farmers – Mavila town	27 Brazil nut farmers	Friday, August 20th, 2010	Community center, Mavila town
26	TRAINING WORKSHOP "Agreement of Brazil nut Concessions, Liabilities and Responsibilities", Technical assistance for the elaboration of AOP and presentation of OSINFOR to Brazil nut farmers – Planchon town	33 Brazil nut farmers	Thursday, August 26th, 2010	Amphitheatre of Las Piedras municipality, Planchon town
27	TRAINING WORKSHOP "Agreement of Brazil nut Concessions, Liabilities and Responsibilities", Technical assistance for the elaboration of AOP and presentation of OSINFOR to Brazil nut farmers – Alto Malecon San Carlos and Varsovia	33 Brazil nut farmers	Saturday, August 28th, 2010	Amphitheatre of Las Piedras municipality, San Carlos town

PROJECT CONSULTATION MEETING – Castañeros REDD Project

Coordination with FEDECAMD, July 13th 2009

Participation of Brazil nut leaders of the FEPROCAMD (ex FEDECAM)

Exposition about the project, in charge of the representative of CAMDE PERU

MEETING BETWEEN BRAZIL NUT CONCESSIONAIRES LEADERS (FROM DIFFERENT ORGANIZATIONS) AND BAM REPRESENTATIVES

Start of negotiations for the implementation of Castañeros REDD Project, July 14th 2009

Presentation and explanation of the REDD project to develop with the Brazil nut concessionaires of MDD

Signing of the Act of Intent between FEDECAMD representatives and BAM

FEDECAM and BAM representatives after the signing of the Act of Intent

CONSULT MEETING IN SAN CARLOS SECTOR

Presentation of the REDD Project, July 26th 2009

Participants interested in the project

Exposition about the project, in charge of the representative of CAMDE PERU

CONSULT MEETING IN VARSOVIA SECTOR

Presentation of the REDD Project, August 2nd 2009

Exposition about the project, in charge of the President of FEPROCAMD

Brazil nut concessionaires of Varsovia interested in the Project

CONSULT MEETING IN PLANCHON SECTOR

Presentation of the REDD Project, August 2nd 2009

Participation of the Brazil nut concessionaire leader of Planchon interested in the project

Exposition about the project, in charge of the representative of CAMDE PERU

CONSULT MEETING IN PARIAMANU SECTOR

Presentation of the REDD Project, August 3th 2009

Brazil nut concessionaires interested in the Project

Explanation of the benefits and requirements for participating in the project

INTERNSHIP OF BRAZIL NUT LEADERS, VISIT TO CAMPO VERDE PROJECT

Pucallpa, August from the 16th – 20th 2009

Brazil nut leaders visiting BAMs Plantation at Campo Verde Project

Visit to the Campo Verde Forest Nursery

Panoramic view of the Campo Verde Forest Nursery

Guided visit through the nursery

Exposition of the Action Plan of the Castañeros REDD Project during the internship to Pucallpa

Exposition of the Action Plan of the Castañeros REDD Project

Meeting between the Brazil nut representatives and BAM General Manager

Discussion about the REDD Project between the concessionaires and BAM

ONSULT MEETING IN SABALUYOC SECTOR

Exposition of the proposed Castañeros REDD Project, August 30th 2009

Brazil nut concessionaires interested in the project

FEPROCAMD President explaining the project

ASSEMBLY OF THE DEPARTMENTAL FEDERATION OF BRAZIL NUT PRODUCERS OF MADRE DE DIOS - FEPROCAMD

Puerto Maldonado – Amarumayo Hotel, September 12th 2009

Meeting for the election of the new Board of Directors of FEPROCAMD

Leading concessionaires from different sectors of MDD

CONSULT MEETING IN ALERTA SECTOR

Exposition of the proposed Castañeros REDD Project, December 26th 2009

Alerta's Brazil nut concessionaires interested in the project

Explanation of the roll of FEPROCAMD in the REDD Project

CONSULT MEETING IN LA NOVIA SECTOR

Exposition of the proposed Castañeros REDD Project, October 3th 2009

Exposition about the project, in charge of the representative of CAMDE PERU

Concessionaires of La Novia signing the transfer agreements

CONSULTATION EXTENDED ASSEMBLY WITH LEADING CONCESSIONAIRES FROM DIFFERENT ASSOCIATIONS

Exposition of the proposed Castañeros REDD Project, October 7th 2009

Exposition for concessionaires' leaders about the project, in charge of BAM general manager

Leading concessionaires from different sectors of MDD

CONSULT MEETING IN ALEGRIA SECTOR

Alegria Sector, October 8th 2009

Brazil nut concessionaires of Alegria interested in the project

Presentation of those involved in the project: BAM, FEPROCAMD and CAMDE

CONSULT MEETING IN ALERTA SECTOR

Alerta Sector, October 8th 2009

BAM representatives explaining the project to the concessionaires of Alerta

Concessionaires of Alerta participating in the consult process

CONSULT MEETING IN MAVILA SECTOR

Mavila Sector, October 8th 2009

BAM, CAMDE and FEPROCAMD representatives explaining the project to the concessionaires of Mavila

Presentation of those involved in the project: BAM, FEPROCAMD and CAMDE PERU

CONSULT MEETING IN MONTERREY SECTOR

Exposition of the proposed Castañeros REDD Project, November 21th 2009

Castañeros from Monterrey Sector

Review of transfer agreements of the Castañeros REDD Project

CONSULT MEETING IN PARIAMANU SECTOR

Boca Pariamarca and Ashipal Sectors, November 21th and 22th 2009

Participant Concessionaires of Boca Pariamarca and Ashipal

Exposition about the project, in charge of the representative of FEPROCAMD

CONSULT MEETING IN ALEGRIA SECTOR

Exposition of the proposed Castañeros REDD Project, November 22th 2009

BAM representatives explaining the project to the concessionaires of Alegria

Castañeros of Alegria interested in the project

CONSULT MEETING IN SABALUYOC SECTOR

Exposition of the proposed Castañeros REDD Project, November 28th 2009

Castañeros from Sabaluyoc participating

FEPROCAMD representatives explaining the project to the concessionaires

CONSULT MEETING IN LA NOVIA SECTOR

Exposition of the proposed Castañeros REDD Project, December 4th 2009

Exposition about the project, in charge of the representative of BAM

Castañeros from La Novia participating in the meeting

CONSULT MEETING IN ALERTA SECTOR

Exposition of the proposed Castañeros REDD Project, December 12th 2009

PARTICIPATION IN FOREST BREIFING IN ALEGRIA SECTOR

Exposition of the proposed Castañeros REDD Project, June 4th 2010

CONSULT MEETING IN PLANCHON SECTOR

Exposition of the proposed Castañeros REDD Project, June 9th 2010

ANNEX 9: PUBLIC DISSEMINATION OF THE REDD PROJECT

PROCESS OF COMMUNICATION AND DISSEMINATION OF THE BRAZIL NUT FARMERS PROJECT OF MADRE DE DIOS					
N	**COMMUNICATION ACTIVITY**	**QUANTITY**	**PUBLIC**	**DATE**	**PLACE**
1	MADRE DE DIOS RADIO, 1 p.m. newscast: Explanatory interview regarding the Project to the General Manager and Technical Manager of Bosques Amazonicos.	10 minutes	Brazil nut farmers of Madre de Dios and institutions	Monday, January 11th, 2010	Puerto Maldonado
2	"El JAQUE" NEWSPAPER: Explanatory interview regarding the Project to the General Manager of Bosques Amazonicos.	2 pages	Brazil nut farmers of Madre de Dios and institutions	Monday, January 11th, 2010	Puerto Maldonado
3	PROMOTIONAL SPOTS of the REDD BRAZIL NUT FARMERS PROJECT in Radio Madre de Dios, La Exitosa and Radio Sinfonia.	172 spots during one month	Brazil nut farmers of Madre de Dios and institutions	Monday, January 11th, 2010	Puerto Maldonado
4	H VISION TV, newscast "Ver para creer" (*seeing then believing*): Explanatory interview regarding the Project to the General Manager of Bosques Amazonicos.	10 minutes	Brazil nut farmers of Madre de Dios and institutions	Tuesday, January 12th, 2010	Puerto Maldonado
5	H VISION TV, newscast "Ver para creer" (*seeing then believing*): Interview to the President of FEPROCAMD regarding the position of the Brazil nut farmers towards the project.	10 minutes	Brazil nut farmers of Madre de Dios and institutions	Tuesday, January 12th, 2010	Puerto Maldonado
6	H VISION TV, newscast "Realities": Explanatory interview regarding the Project to the General Manager of Bosques Amazonicos.	15 minutes	Brazil nut farmers of Madre de Dios and institutions	Tuesday, January 12th, 2010	Puerto Maldonado
7	LA EXITOSA RADIO, newscast "La Voz de Madre de Dios" (*the voice of Madre de Dios*): Explanatory interview regarding the Project to the General Manager of Bosques Amazonicos.	30 minutes	Brazil nut farmers of Madre de Dios and institutions	Tuesday, January 12th, 2010	Puerto Maldonado
8	H VISION TV, Magazine Program "LA PALABRA" (*the word*): Explanatory interview regarding the Project to the general manager of Bosques Amazonicos.	15 minutes	Brazil nut farmers of Madre de Dios and institutions	Tuesday, January 12th, 2010	Puerto Maldonado
9	H VISION TV, regional newscast "INTERCAMBIO" (*exchange*): Explanatory interview regarding the Project to the general manager of Bosques Amazonicos.	10 minutes	Brazil nut farmers of Madre de Dios and institutions	Tuesday, January 12th, 2010	Puerto Maldonado
10	SINFONÍA RADIO, newscast "La Voz Dirigencial" (*the managerial voice*): Explanatory interview regarding the Project to the General Manager of Bosques Amazonicos.	15 minutes	Brazil nut farmers of Madre de Dios and institutions	Wednesday, January 13th, 2010	Puerto Maldonado
11	H VISION TV, prime-time newscast "Tiempo de Cambio" (*time for a change*): Explanatory interview regarding the Project to the General Manager of Bosques Amazonicos.	10 minutes	Brazil nut farmers of Madre de Dios and institutions	Wednesday, January 13th, 2010	Puerto Maldonado
12	H VISION TV, prime-time newscast "Tiempo de Cambio" (*time for a change*): Explanatory interview regarding the Project to the General Manager of Bosques Amazonicos.	10 minutes	Brazil nut farmers of Madre de Dios and institutions	Wednesday, January 13th, 2010	Puerto Maldonado
13	Publishing in GESTIÓN Newspaper: The Ecologic gold. Article that suggests the projects of BOSQUES AMAZÓNICOS as sustainable	30 thousand	At national level	Monday, May 10th,2010	At national level

	alternatives to the development of the Amazon, with regard to gold extraction.				
14	Participation in the event organized by the Forestry Engineering Faculty of the UNAMAD	20 minutes	Professors and students	Friday, June 25th, 2010	University population
15	Printing of the informative and explanatory graphic material (Triptych) regarding the REDD Brazil nut Farmers Project: what are carbon bonds, the agreements of rights transfer, the benefits of the project.	1 thousand	Brazil nut farmers of Madre de Dios and institutions	Thursday, July 1st, 2010	Madre de Dios
16	GRAPHIC MATERIAL: Poster of the First Meeting of REDD Brazil nut Farmers Project Partners	200 units	Brazil nut farmers of Madre de Dios and institutions	Thursday, July 1st, 2010	Puerto Maldonado
17	GRAPHIC MATERIAL: Banner of the First Meeting of REDD Brazil nut Farmers Project Partners	10 units	Brazil nut farmers of Madre de Dios and institutions	Thursday, July 1st, 2010	Puerto Maldonado
18	GRAPHIC MATERIAL: Flyer of the First Meeting of REDD Brazil nut Farmers Project Partners	2 thousand	Brazil nut farmers of Madre de Dios and institutions	Thursday, July 1st, 2010	Puerto Maldonado
19	INFORMATIVE BULLETIN: of FEPROCAMD with information for all members of such institution.	2 thousand	Brazil nut farmers of Madre de Dios and institutions	Thursday, July 1st, 2010	Puerto Maldonado
20	PRENSA REAL TV PROGRAM: Interview to Biologist Juan Carlos Flores, Regional Manager of Bosques Amazonicos to explain about the Brazil nut in Madre de Dios and the REDD Brazil nut Farmers Project.	15 minutes	Brazil nut farmers of Madre de Dios and institutions	Monday, July 12th, 2010	Community center of San Carlos town.
20	PRENSA REAL TV PROGRAM: Interview to Ant. Marco Villegas, Social Specialist of Bosques Amazonicos, to explain the process of consultation and the social problematic of the Brazil nut farmers within the framework of the REDD Brazil nut Farmers Project.	10 minutes	Brazil nut farmers of Madre de Dios and institutions	Monday, July 12th, 2010	Community center of San Carlos town.
21	PRENSA REAL TV PROGRAM: Interview to Biologist Juan Carlos Flores, Regional Manager of Bosques Amazonicos to explain about the Project and invite to the First Meeting of REDD Brazil nut Farmers Project Partners.	10 minutes	Brazil nut farmers of Madre de Dios and institutions	Tuesday, July 13th, 2010	Community center of San Carlos town.
22	PRENSA REAL TV PROGRAM: Interview to the President of FEPROCAMD, to comment about the favorable position of the Brazil nut farmers towards the REDD Brazil nut Farmers Project and invite all its affiliates to the FIRST MEETING OF REDD BRAZIL NUT FARMERS PROJECT PARTNERS.	15 minutes	Brazil nut farmers of Madre de Dios and institutions	Tuesday, July 13th, 2010	Community center of San Carlos town.
23	PRENSA REAL TV PROGRAM: Interview to the Technical Manager of Bosques Amazonicos, to absolve doubts concerning the REDD Brazil nut Farmers Project and to explain about all the information which will be given in the FIRST MEETING OF REDD BRAZIL NUT FARMERS PROJECT PARTNERS.	20 minutes	Brazil nut farmers of Madre de Dios and institutions	Friday, July 16th, 2010	Community center of San Carlos town.
24	LA EXITOSA RADIO: Interview to the President of FEPROCAMD concerning the Project and its perspectives and to invite to the First Meeting of REDD Brazil nut Farmers Project Partners.	15 minutes	Brazil nut farmers of Madre de Dios and institutions	Friday, July 16th, 2010	Puerto Maldonado

25	IDENTITY ARTICLES: T-shirts of the project given to all the Brazil nut farmers partners to promote the identity with it.	500 units	Brazil nut farmers of Madre de Dios	Sunday, July 18th, 2010	Madre de Dios
26	DISSEMINATION FAIR: Dissemination stand of the REDD Brazil nut Farmers Project and identity of the Brazil nut in the region of Madre de Dios, within the framework of the Fair organized by the Ombudsman's Office	1 stand with 8 explanatory billboards	General population of Puerto Maldonado	Friday, July 23th, 2010	Plaza Mayor (Main Square) of Puerto Maldonado
27	Reprinting of the informative and explanatory graphic material (Triptych) concerning the REDD Brazil nut Farmers Project: what are carbon bonds, the agreements of rights transfer, the benefits of the project.	2 thousand	Brazil nut farmers of Madre de Dios and institutions	Sunday, August 15th, 2010	Madre de Dios
28	Publishing in GESTION Newspaper: Map for carbon quantification, its relation with the REDD projects. Article which comments the development experience in REDD of BOSQUES AMAZONICOS in Madre de Dios.	30 thousand	At national level	Tuesday, September 07th, 2010	At national level
29	Publishing in CARETAS Magazine: Article in the supplement concerning the conservation of Forests, edited by the Environmental Ministry.	30 thousand	At national level	Thursday, September 09th, 2010	At national level
30	LA EXITOSA RADIO: Interview to the president of FEPROCAMD concerning the Project and all paperwork that must be done by the Brazil nut farmers to accomplish with their commitment with the State.	15 minutes	Brazil nut farmers of Madre de Dios and institutions	Wednesday, September 15th, 2010	Puerto Maldonado
31	LA EXITOSA RADIO: Interview to William Moreno, Regional Coordinator of CAMDE PERU, NGO in charge to give support in the technical work to all the Brazil nut farmers partners of the REDD project , explaining about all the requirements and dates of attention to the Brazil nut farmers partners.	10 minutes	Brazil nut farmers of Madre de Dios and institutions	Wednesday, October 6th, 2010	Puerto Maldonado

BRIEFING OF THE CASTAÑEROS REDD PROJECT IN THE ALERTA SECTOR

June 13, 2010


EVENT: FIRST ANNUAL MEETING OF THE CASTAÑEROS REDD PROJECT PARTNERS

Puerto Maldonado, July 18, 2010


BRIEFING OF THE CASTAÑEROS REDD PROJECT IN THE MAVILA SECTOR

August 20, 2010


BRIEFING OF THE CASTAÑEROS REDD PROJECT IN THE ALEGRIA SECTOR

July 20, 2010


BRIEFING OF THE CASTAÑEROS REDD PROJECT IN THE ALERTA SECTOR

August 14, 2010


BRIEFING OF THE CASTAÑEROS REDD PROJECT IN THE PLANCHON SECTOR

August 26, 2010

BRIEFING OF THE CASTAÑEROS REDD PROJECT IN THE SAN CARLOS SECTOR

August 28, 2010

ATTENDANCE LIST TO HEARINGS AND CONSULTATIONS PERFORMED FOR THE REDD BRAZIL NUT CONCESSIONERS PROJECT

Participación en Reunión para Difusión y Programación de Trabajos de Campo

LISTA DE ASISTENCIA

Beneficiarios: Castañeros de Alerta y anexos
Lugar: Salón de ECOMUSA - Alerta

Fecha: 13 de Junio del 2010
Hora: 10:00 a.m.

Nº	Nombres y Apellidos	Sector	DNI	Firma
1	Cirominio Quispe Quispe	Alerta	04809183	
2	Santiago Tapia Chuima	Alerta	10440120	
3	Martin Laura Herrera	Alerta	05063346	
4	Maximo Cahuana	Alerta	04653214	
5	Alberto Garcia Rojas	Alerta	05063556	
6	Adolfo Herrera Mamani	Shiringayoc	04811327	
7	Angel Fr. Cespedes Tapia	Shiringayoc	04819989	
8	Clemente Callapiña Chanpi	Alerta	24869486	
9	Eliodoro Huamanqui Cuevas	ALERTA	05063278	
10	ANA Jacinto Quispe	Alerta	94700494	
11	Pascual Flores Castillejos	ALERTA	04308266	
12	Hamario Noa Grita	Alerta	05063291	
13	Hilario Grita Palla	Alerta	05063321	
14	DAVID Grita Rodrigues	Alerta	05063331	

Nº	Nombres y Apellidos	Sector	DNI	Firma
15	Eustaquio Naro Cayo	Shiringayoc	04809112	
16	Eduardo Palomino Vda.	Sta. Madre.	04817330	
17	Nacey Mauchoa Tapia	Alerta	04828101	
18	Limber Mauchoa Huaman	Alerta	46775996	
19	Emilio Mauchoa Noa	Alerta	05063604	
20	Eduardo Mauchoa Noa	Alerta	05063608	
21	Manuel Hernandez Tejada	Shiringa	04809911	
22	David Rodriguez Tomay	Alerta	05069285	
23	Valentin Davila Ferbo	alerta	04826775	
24	Regina Palla Dea	Alerta	05063347	
25	Juan B Prado B	Santa Rosa	04804453	
26	Cesar Delgado Rubis	Alerta		
27	Elvis Shipo Rodriges	Alerta	05065255	
28	Carlos Alberto Mamani Cahuana	ALERTA	02554329	
29	Enrique Tafur Arasaire	Alerta	05063273	
30	Hilario Grita Palla	Alerta	05063321	
31	Hamario Noa Grita	Alerta	05063291	
32	DAVID Rodrigues Grita	Alerta	05063331	
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CAMDE PERU

LISTA DE ASISTENCIA A REUNIÓN

Proyecto: "REDD CASTAÑERO"
Lugar: Centro Poblado de Novia
Fecha: 04 de Setiembre de 2010

N°	Nombres y Apellidos	Asociación	Cargo	Telefono	Firma
1	Hector Pizango M.	La Novia			
2	Osorio Rodrigo Sahuanca	La Novia			
3	Alfredo Zambrano Tapia	La novia			
4	Lucio Pizango Novi	La Novia			
5	Rosalina Sutil Lazaro	La Novia			
6	Alejandrina Mendoza Cuyuna	La Novia			
7	Miriam Herbozo Reategui	La novia			
8	Magda Herbozo De Vargas	La novia			
9	Hermancia Rodriguez Flores	La novia			
10	Miguel Horfan Gomez	La Novia			
11	Braulio Valencia M.	La novia			
12	Teresa pizango M.	La novia			
13	Ulises Asiayr Saida	La novia			
14	Marcelino Cruz Apaza	Nuevo Porvenir			
15					

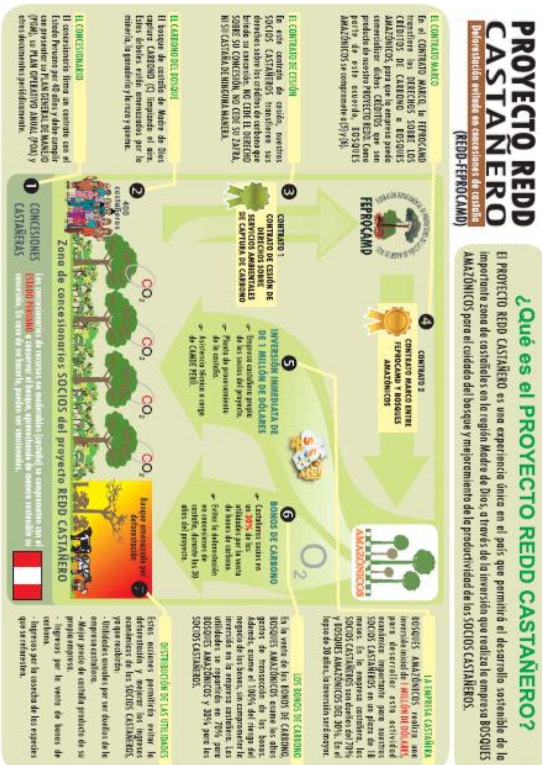
CAMDE PERU

LISTA DE ASISTENCIA A REUNIÓN

ecto: "SIFM-BAM"
r: Centro Poblado alerta
a: 14 de agosto de 2010

	Nombres y Apellidos	Asociación	FIRMA
1	Geronimo Quispe		
2	Alberto Garcia Rojas		
3	Juan Saavedra Megan		
4	David Rodriguez Grifa.		
5	Encarnacion Mawani Lanco		
6	Maximo Cahuana Rivera		
7	David Rodriguez Tenay		
8	Tere Cahuana Saravia		
9	Cesar Delgado Andia		
10	Santiago Taype Chuima		
11	Mahas Vasquez Rolin		
12	Concordo Cahuana Saravia		
13	Olivia Diaz Moreno		
14	Faclor Caletayud Curo		
15	Edel Yupanqui Duenas		
16	Melchor Huaracha Yauri.		
17	Pascual Flores Castillejos		
18	Enrique Tuje Arazaira		
19	Heloria Grifa. Palla.		
20	Valentin Jaruta Mague.		
21	Ana Jacinto Quispe		
22	Valentin Panlla Yenra.		
23	Ignacio Noa Grifa.		
24	Emilio Macochoa Noa.		
25	Magdalena Simplicio Arias		
26	Ramiro Rosas Huisa		
27	Luis Caloni Quispe.		
28	Yana Palla Pandura		
29	Cirilo Sanchez Oray		
30	Felipe Noa Grifa.		
31	Victor Macochoa Machoa.		
32	Nancy Rosmen Macochoa Tapia.		
33	Maria Zaida Rodriguez Tapuy		
34	Clemente Colague Champi		
35	Marcelina Sayago Ortiga.		
36	Juliana Panlla Quispe.		
37	Juan Yuera Quispe		
38	Cesar G. Macochoa Noa.		
39	Carlos A. Manani Cahuana		
40			

OFFICIAL BULLETIN OF FEPROCAMD. NUMBER 01 JULY AUGUST 2010



Boletín oficial de la Federación departamental de Productores de Castaña de Madre de Dios (FEPROCAMD)

El castañero

Año 1, Nº 1 - Julio/Agosto 2010

UNA PROMESA HECHA REALIDAD: NUESTRA PROPIA EMPRESA CASTAÑERA

Hoy, 18 de julio del 2010, somos testigos de la creación de la empresa castañera propia. Este largo anhelo de la Federación de Castañeros ha dado un paso importante y gracias al apoyo de la empresa BOSQUES AMAZÓNICOS, estamos constituyéndola a partir de la firma de la minuta y su inscripción en registros públicos.

Sin embargo, esto recién empieza. La empresa castañera deberá consolidarse con los trabajos que realicemos todos y cada uno de los castañeros socios del proyecto. Recordemos que somos los propietarios del 70% de esta empresa y nuestro accionar determinará también el éxito de todos nosotros. Si a la empresa le va bien, nos irá mejor a los castañeros.

Esto implica una labor de colaboración y de vigilancia también. Recordemos que tendremos mejores precios para nuestra castaña que la competencia y recibiremos las utilidades que la empresa genere. Todo esfuerzo hacia la empresa nos dará dividendos.

A partir de hoy somos accionistas de nuestra propia empresa. Que no nace de la improvisación, sino que es creada de una manera responsable, con la elaboración de un plan de Negocios que implica no solo su tratamiento y exportación de nuestra castaña, sino también un esfuerzo por buscar nuevos mercados y generar o consolidar productos derivados como el jabón, el aceite y otros. Los castañeros sabemos de todas las bondades que tiene la castaña, fruto de nuestro esfuerzo en explotar nuestra concesión de manera sostenida y responsable. Sigamos siendo responsables con el Estado y con el futuro de nuestros hijos, conservando nuestra concesión y obteniendo mayores recursos con nuestra empresa.

La Federación de Castañeros los invita a ser parte de esta consolidación del sector castañero peruano. Amigo y socio castañero: Esta es nuestra oportunidad. Salgamos adelante.

Reunión informativa organizada por la FEPROCAMD, en el Centro Poblado de Alegría.

El castañero

Palabras del Presidente

Amigo castañero:

Estamos orgullosos de hacer llegar a tus manos el primer número de nuestro boletín oficial: El castañero, órgano de comunicación de la Federación departamental de Productores de Castaña de Madre de Dios - FEPROCAMD.

En el Consejo Directivo de nuestra Federación estamos convencidos en el desarrollo de nuestro sector y venimos trabajando a diario para consolidarlo. Que este boletin sirva para comunicarnos más e integrarnos de manera sólida.

Es nuestro deseo que estas noticias lleguen a ustedes de manera directa y sencilla, la transparencia en gestión es nuestro objetivo. Ya tenemos un local institucional donde puedan acercarse y conversar. los esperamos para conversar y seguir haciendo nuestro trabajo: Representar al sector castañero de manera integral. Éxitos a todos y sigamos avanzando.

Hector Cardicel Pérez

FEPROCAMD inaugura local institucional propio en la ciudad de Puerto Maldonado

Par atender de mejor manera a nuestros asociados, la FEPROCAMD ahora cuenta con un local institucional propio en la ciudad de Puerto Maldonado. Se encuentra en la Av. Sinchi Roca Mz. J16, lt. 1. A dos cuadras del grifo Caribe. Fue inaugurado el 7 de mayo de este año. Los esperamos.

Inauguración del local institucional de la FEPROCAMD

LOS MIEMBROS DE LA FEPROCAMD

A continuación mencionaremos a las asociaciones miembros de la FEPROCAMD:

1) Asociación de Productores y Extractores de Castaña de Planchón.
2) Asociación Castañera Agroforestal de Carmen Rosa.
3) Asociación Agroforestal Alegría Alto Malecon San Carlos
4) Asociación de Productores Castañeros y Agroforestales de Alerta.
5) Asociación de Castañeros de Alegría.
6) Asociación de Productores y Extractores de Castaña de Río Pariamanu y Afluentes.
7) Asociación Castañera Agroforestal de Varsovia.
8) Asociación de Productores y Extractores de Castaña de Loreto.
9) Asociación de Extractores Productores Forestales y Agropecuario de La Novia.
10) Asociación de Productores y Extractores de Castaña de Shiringayoc.
11) Asociación de Productores y Extractores de Castaña de Mavila.

De esta manera, la FEPROCAMD se consolida como organismo representativo del sector. Si eres castañero y no estás afiliado a alguna de estas organizaciones o tu organización no está afiliada, te invitamos a agremiarte. solo juntos los castañeros, podremos defender nuestros intereses y nos haremos más sólidos.

Boletín oficial de la Federación departamental de Productores de Castaña de Madre de Dios (FEPROCAMD)

FEPROCAMD participa en el debate de la nueva ley Forestal, defendiendo los intereses de los castañeros

El debate por la nueva ley Forestal se está dando a nivel nacional y especialmente en el Congreso de la República. La FEPROCAMD viene participando del debate, donde hemos solicitado la inclusión de algunos artículos referente a beneficios por servicios ambientales para los concesionarios, especialmente los castañeros. Esto se ha logrado mediante la presentación de nuestro presidente en la comisión de elaboración de la nueva ley, en Abril y Mayo. La última versión de esta ley incluye nuestros aportes en beneficio del castañero.

Actualmente se encuentra en la última fase de debate para su posterior aprobación. Además, la FEPROCAMD ha participado en el debate sobre el cambio de pago por derecho de aprovechamiento, donde nos oponemos a la determinación de pagos de derecho por área, y no por volumen, como ha sido hasta ahora. Solicitamos mayor información técnica para sustentar dicho cambio para saber cuál nos conviene.

Otro punto importante fue nuestra enérgica oposición a la restricción que quieren poner para el aprovechamiento de madera en concesiones de castaña. No demuestran la razón para aplicar esta restricción, sabiendo que nosotros pos castañeros, si podemos hacer un aprovechamiento responsable de madera sin dañar nuestra concesión castañera.

El debate continúa. Mientras la FEPROCAMD está alerta para proteger los intereses de nuestro sector.

LA FEPROCAMD EXPLICA: ¿QUÉ ES UN PROYECTO REDD?

Es sabido que actualmente la FEPROCAMD viene liderando junto con la empresa BOSQUES AMAZÓNICOS el proyecto REDD CASTAÑERO. Pero ¿Qué significa esa palabra REDD? Veamos el siguiente texto:

El planeta tierra se está calentando lo que es un gran riesgo para la vida humana. Para combatir este fenómeno, es importante conservar los bosques ya que ellos capturan el componente que hace que la tierra se caliente. Es por eso que nace REDD, como una alternativa para la conservación de los bosques.

Al inicio se llamó solo RED, que significaba: **Reducción de Emisiones por Deforestación**. Esto quiere decir, que evitando la deforestación del bosque se disminuye la contaminación (emisión) del ambiente. Luego se agrega la alternativa de que también se pueda evitar la **degradación de los suelos** y es allí donde se adhiere la segunda letra D, quedando como REDD.

Para nosotros, REDD es una oportunidad de tener mayores recursos sin dañar nuestro bosque. En la página contigua tenemos una explicación sobre el funcionamiento de nuestro PROYECTO REDD CASTAÑERO. La FEPROCAMD considera que esta es la mejor alternativa para nuestro sector.

FEPROCAMD

FEDERACIÓN DEPARTAMENTAL DE PRODUCTORES DE CASTAÑA DE MADRE DE DIOS

Fundado el 12 de septiembre del 2009 - RR.PP. Nº 11016791 - OR-MDD

DIRECCIÓN: Av. Sinchi Roca Mz J 16, Lt 1, Puerto Maldonado (a dos cuadras del Grifo Caribe).
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EL CASTAÑERO es el boletín informativo de la Federación departamental de productores de castaña de Madre de Dios - FEPROCAMD. Busca transmitir las acciones y programas que viene realizando en su gestión como ente representativo de los castañeros de toda la región. Si desea publicar algo en este boletín, con gusto lo atenderemos.

INFORMATIONAL BROCHURE OF REDD BRAZIL NUT PROJECT

BRIEFING OF THE REDD PROJECT IN THE PLANCHON SECTOR

Radio announcement at local Municipality of Las Piedras, July 2010

Radio interview with the President of the FEPROCAMD and the Regional Manager of BAM

Facilities of the Municipal Radio of the Las Piedras district

ANNOUNCEMENT OF THE REDD PROJECT AMONG THE BRAZIL NUT CONCESSIONERS IN PUERTO MALDONADO

Announcement through La Karibeña radio station, July 16, 2010

Radio interview with representatives of FEPROCAMD and BAM

Explanation of REDD Project by the president of the FEPROCAMD

REDD BRAZIL NUT CONCESSIONERS PROJECT ANNOUNCEMENT IN TELEVISION MEDIA

Announcement on the program Channel 4 Madre de Dios, July 09, 2010

Television interview with the president of the FEPROCAMD

Television interview with the regional manager of Bosques Amazónicos

Television interview with the person in charge of Community Relations of BAM

Television interview with the REDD technical manager of Bosques Amazónicos

REDD BRAZIL NUT CONCESSIONERS PROJECT BRIEFING IN PUBLIC SPACES

Briefing panel convocation, July 2010

Briefing panel about REDD with Castañeros in Alegria sector

Briefing panel about REDD with Castañeros in Puerto Maldonado

REDD BRAZIL NUT CONCESSIONERS PROJECT ANNOUNCEMENT IN CIVIL SOCIETY

Informational event organized by the "Defensoría del Pueblo", July 09, 2010

Professionals of Bosques Amazónicos at the Castañeros REDD Project stand

Press and residents of Madre de Dios visiting the stand

BRIEFING OF THE REDD BRAZIL NUT CONCESSIONERS PROJECT IN THE UNAMAD UNIVERSITY

Announcement of REDD Project by the FEPROCAMD president, June 25, 2010

Students and general public participating in the REDD briefing

President of the FEPROCAMD lecturing on the Castañeros REDD project

PRESS EXPOSURE OF BOSQUES AMAZONICOS AND REDD PROJECTS IN NATIONAL NEWSPAPER "GESTION"

32 GESTIÓN LUNES 10 DE MAYO DEL 2010

LA ÚLTIMA PÁGINA

Ahora "oro ecológico" para evitar contaminar el ambiente

CRÓNICA
Tecnología no requiere mercurio para obtener oro, además evitaría contaminación de ríos y bosques. Sería de utilidad para mineros a pequeña escala.

(REUTERS) Para producir oro los mineros utilizan grandes cantidades de mercurio que en muchos casos –después de volver a la tierra, a los ríos y a los bosques– producen un certero golpe al hombre y al medio ambiente.

Pero un experto peruano parece haber encontrado la fórmula para evitar la grave contaminación que generan, sobre todo en la minería informal, algo que ha elevado la presión global de las organizaciones ecologistas y generado críticas contra países mineros.

La invención peruana es una procesadora que no utiliza mercurio ni cianuro para obtener un "oro ecológico".

En ella –una pequeña máquina cilíndrica– se vierte el material o arena extraída de las vetas con contenido de oro, además de agua y reactivos biodegradables antes de su operación.

Luego, la mezcla recibe una fuerte presión de aire acompañada de un movimiento centrífugo que produce millones de burbujas en las que se adhiere el oro, que termina flotando con un concentrado de hasta 85% de ley, "en el ingeniero Carlos Villachica, quien desarrolló esta tecnología.

La máquina de metal puede producir hasta 100 gramos de oro en cada ciclo de producción, afirmó el experto.

"El aporte global, pensamos, va a ser muy importante", dijo Villachica en su pequeño laboratorio en un distrito limeño.

Oro ético y social

La máquina ha sido desarrollada en los últimos años por un equipo que lidera Villachica, cuya firma se alista para operarla en práctica en Madre de Dios, la región peruana más contaminada por la explotación minero artesanal.

> "En el mundo hay 20 millones de mineros de pequeña escala (...) que descargan 1,000 toneladas de mercurio al año para producir oro".

El experto es presidente del directorio de la firma local Smallvill, que se dedica a desarrollar tecnología limpia.

Precisamente, Antonio Brack informó que en mayo una delegación vendrá para determinar la tecnología para extraer oro sin usar mercurio (**Gestión** 27.05.2010).

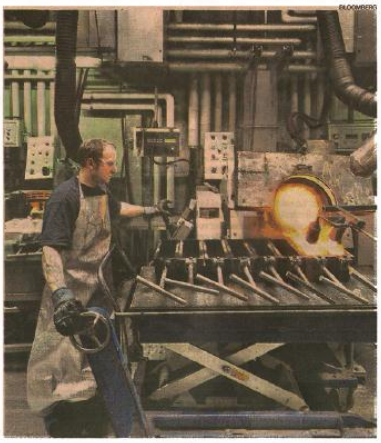
Evocando al pasado

Villachica indicó que la procesadora ha encontrado interés mundial y representantes de Australia, Brasil, Argentina, Tanzania y de Centroamérica se han comunicado con él para que les explique cómo obtener oro sin contaminar el ambiente. "El concepto de oro ecológico es debido a que no se usa mercurio ni cianuro en el ciclo de producción", refirió Villachica.

Entre los interesados figuran campesinos y antiguos mineros de una localidad altoandina del Perú, en la región del Cusco, [illegible] Incas y [illegible] proveed España[illegible]

Los[illegible] abrir un[illegible] dan las [illegible] lautiza[illegible]

"Es una propuesta ecológ[illegible]


BLOOMBERG

ojo de águila

Moisés Benites Barrón
Comunicador Social

Mercurio y deforestación

Si hablamos de minería informal o artesanal, nuestra referencia obligada es Madre de Dios. Lo que no llaves una zona de bosques muy ricos en oro, casi en cero obligatoriamente, el siguiente paso es ser invadido por mineros que degradan el suelo con todo tipo de herramientas, incluidas las vetas de dragas.

Una norma de prohibición no fue solución. La procesadora en mención sería un aliciente a la salud de las personas involucradas y a la contaminación de los suelos: mejoraría la técnica. Sin embargo, la disminución de bosques podría seguir aumentando bajo la premisa de "no contaminación" de la procesadora.

Para extraer oro se afectan otros muchos recursos y se es en tierra de fondo, no la actividad minera como tal, sino sus consecuencias en la "Capital de la Biodiversidad del Perú". Lo importante es plantear alternativas de desarrollo que enfrenten a la minería, incluyendo la conservación de los bosques y beneficios sostenidos a la población local.

La minería en Madre de Dios gana espacio debido a su importancia económica. Otros usos del suelo no pueden competir con los beneficios inmediatos que brinda la extracción de oro.

Sin embargo, el desarrollo de plantas transformadoras en los

GESTIÓN MARTES 7 DE SETIEMBRE DEL 2010

32 LA ÚLTIMA PÁGINA

en el estribo

Juegos sin estrés

Francisco González, Gerente de Planificación y Control de Gestión de Trabajando.com Holding.

¿Cómo aleja el estrés de su vida?
Una buena forma es jugar con mi hija.
¿Qué estudió en la universidad?
Acabo de cumplir dos años.
¿Practica algún deporte?
Tenis, e intento hacerlo todas las semanas. Juego desde muy pequeño y me encanta.
¿Ha participado en algún campeonato?
Cuando era chico. Incluso estuve ranqueado en Chile, pero por los estudios lo dejé para seguir en la universidad y ya no pude seguir.
¿De qué parte de Chile es usted?
Soy de Santiago.
¿Cuál es su lugar preferido de Chile?
San Pedro de Atacama, que está en el norte de Chile.
¿Cuál es el último libro que ha leído?
El Código da Vinci. Me pareció genial.
¿Cuál es el libro al que siempre regresa?
Soy más lanático de la lectura de diarios. Me encanta ver los noticieros.
¿Algún recuerdo de niñez?
Las Navidades. El 24 de diciembre mi abuelo me sacaba pasear para que mis padres pudieran poner los regalos. Cuando regresábamos, los obsequios ya estaban en el árbol y yo me enojaba con él por haberme perdido la visita de Papá Noel.
¿Un momento importante en su vida?
El nacimiento de mi hija.
¿Qué es lo último que ha entendido?
A mi hija le estoy enseñando a dar las gracias y que, al pedir algo, digo por favor.

Nuevo mapa detallado muestra emisión de carbono en Amazonas

CRÓNICA
Se muestra cuánto carbono se encuentra almacenado en la zona, así como los lugares donde la tala de vegetación envió esos gases de efecto invernadero a la atmósfera.

(REUTERS) El nuevo mapa en tres dimensiones de la Amazonia peruana podría allanar el camino para un incipiente mercado internacional destinado a reducir la deforestación y la degradación de los bosques, que representa hasta un quinto de los gases de efecto invernadero liberados por actividades humanas, de acuerdo a estimaciones de Naciones Unidas.

Negociadores sobre cambio climático han estado trabajando en un pacto internacional para controlar el calentamiento global, incluyendo en una propuesta de la ONU conocida como REDD, siglas en inglés para Reducción de Emisiones a partir de la Deforestación y la Degradación forestal.

La propuesta se ha visto afectada por la dificultad de calcular cuánto carbono es retenido por los bosques para que no vayan a la atmósfera –dado que las plantas toman el dióxido de carbono y lo usan en el proceso de fotosíntesis y cuánto contribuye la deforestación al liberar al aire estos gases ya atrapados.

Los detalles del nuevo mapa podrían ayudar a cambiar eso, dijo Greg Asner del Carnegie Institution for Science, principal autor del estudio que produjo el mapa. La investigación será publicada en Proceedings of the National Academy of Sciences.

"Lo que estamos mostrando aquí por primera vez en una casa decidido no solo de estimar el carbono (...) que está en la selva, sino también el uso de una técnica que nos permite

el dato

Otra ventaja del mapa, según indicó Asner, es que nuevas tales efectos de la degradación, que hasta el momento han sido difíciles de cuantificar.

calcular las emisiones", acotó. Asner en una entrevista telefónica desde Hawái, donde se realizaba trabajos en terreno.

Satélites

Para crear un mapa, Asner y sus colegas usaron imágenes satelitales sobre la vegetación y la forma en que ha sido intervenida.

Luego usaron la información recaudada por un laboratorio instalado en un avión con tecnología láser, para producir un mapa tridimensional de los árboles y de la clase de vegetación.

Dado que estas imágenes entregan dimensiones muestran la estructura especial sa de las plantas, los investigadores pudieron comparar esta información con datos de terreno para calcular el valor carbono contenían, explicó Asner.

Un hazmé o información histórica sobre la deforestación y la degradación de la selva, los científicos también fueron expuestos en estas tierras bajos. Se calcuan de 1999 al 2000 en el departamento de Madre de Dios, en el Amazonas peruana.

ojo de águila

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Comunicador Social

La importacia del cuánto