



# Madre de Dios Amazon REDD Project

## Distinctive features

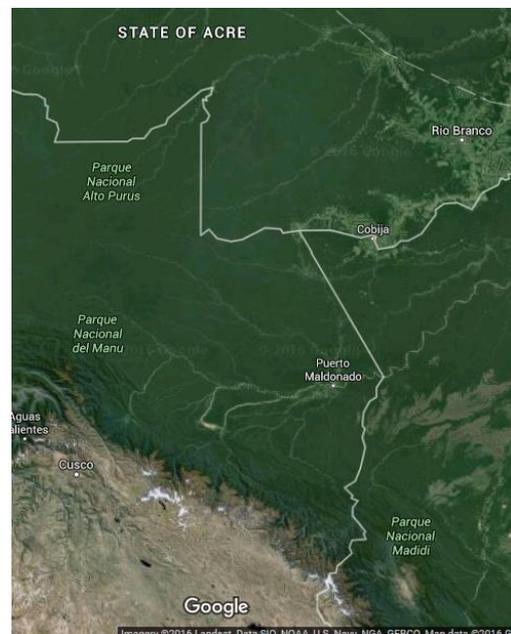
Madre de Dios Amazon REDD Project is located less than 30 km to the side of the new inter-oceanic road that will unite Brazil with the Peruvian ports in the region that belongs to the Vilcabamba-Amboró Conservation Corridor in the Peruvian Amazon, one of the world biodiversity hotspots.

The area of influence of the Interoceanic road is characterized for still having areas of forests of great importance for their biodiversity and the environmental services they offer. However, the presence of the inter-oceanic road represents a great risk due to a major pressure of population from the rural Andes regions that will migrate looking for lands, and the economic



activities that will consequently be established. Another risk for the future could come from illegal logging, which could be attracted by the abundance of forestry species of high commercial value, such as mahogany.

The project has been conducting sustainable management in 98,932 ha of tropical rainforest that have been granted as concessions to Maderera Rio Acre SAC (Maderacre) and Maderera Rio Yaverija SAC (Maderya), which are the project proponents, together with GREENOXX NGO. The funding from the sale of carbon offsets is expected to provide revenue for the continuation of FSC certification of the concessions. The Madre de Dios Amazon REDD Project aims to improve the capacity and livelihoods of the local people, reduce deforestation and degradation in the project area and thus conserve its biodiversity.



	Heading	Explanation
<b>Locational factors</b>		
	<b>Location</b>	The Madre de Dios REDD Project is located in the hydrographic basin of the Acre River, Iñapari district, Tahuamanu province in the Madre de Dios department in the Peruvian Amazon. The area is located 28 km to the side of the new inter-oceanic road that will join Brazil with the Peruvian ports, in the region that belongs to the Vilcabamba-Amboró Conservation Corridor in the Peruvian Amazon.
	<b>Spatial boundaries</b>	<ul style="list-style-type: none"> <li>▪ Project area: 97,817.41 ha; formed by the forest concessions Maderacre and Maderyja</li> <li>▪ Reference region for projecting rate of deforestation (RRD): 300,333.77 ha – immediate vicinity of the leakage belt</li> <li>▪ Reference region for projecting location of deforestation (RRL): 307,692.66 ha; RRL overlaps a sector of the RRD (11% of the area of RDD, 33,036.71 ha) – RRL includes the project area and the leakage belt</li> <li>▪ Leakage belt (Leakage monitoring area): 159,018.02 ha (consists primarily of forest concessions and agricultural plots) – is the surrounding area of the project area</li> </ul>
	<b>Land cover</b>	The project area is completely covered by different rainforest types, mainly low hill highly dissected forests (81.06 %), followed by terrace forest (10.07 %) and bamboos (8.74 %)
	<b>Agents and drivers of forest cover change</b>	<ul style="list-style-type: none"> <li>▪ Agents: farmers, illegal loggers, migrants</li> <li>▪ Underlying drivers: road networks (Interoceanic Highway and secondary roads) and economic opportunities (abundance of forestry species of high commercial value), and subsequent migration</li> <li>▪ Proximate causes: crop lands and agricultural land uses, illegal logging</li> </ul>
<b>Basic project features</b>		
	<b>Objectives</b>	<ul style="list-style-type: none"> <li>▪ To reduce the pressure on lands for agriculture and cattle ranching from the local population in the project area and its buffer zone by at least 80%</li> <li>▪ To guarantee sustainable forest management by both timber concessions through the implementation of an avoided deforestation project that helps to generate higher economic resources for the management of the area</li> </ul>
	<b>Proponent/s</b>	<ul style="list-style-type: none"> <li>▪ GREENOXX NGO</li> <li>▪ Maderera Río Acre S.A.C. (Maderacre)</li> <li>▪ Maderera Río Yaverija S.A.C. (Maderyja)</li> </ul>

<b>Actors involved in project design and implementation and their roles</b>	<ul style="list-style-type: none"> <li>▪ GREENOXX NGO: a member of the Chicago Climate Exchange; developed the Project Design Document, financed part of the project development and is exclusively commercializing it</li> <li>▪ Maderera Río Acre S.A.C. (Maderacre) and Maderera Río Yaverija S.A.C. (Maderyja) : two forestry companies that manage the two concessions in the project area</li> <li>▪ BOSQUES AMAZONICOS SAC (BAM): a private company, which has engaged in technical development of the deforestation modelling of the project</li> <li>▪ AIDER (Association for Integral Research and Development): a Peruvian NGO, which has carried out a study for the estimation of carbon stocks in the living biomass of the forests belonging to the Maderacre and Maderyja forestry concessions</li> <li>▪ CESVI (an independent humanitarian association) and WWF: technical assistance for environmental impact studies</li> </ul>
<b>Tenure and Carbon rights holder/s</b>	<p>Tenure rights: The land is owned by the Peruvian State. However, the Government gave the forests in concession to Maderacre and Maderyja, signing long-term contracts for 40 years, which are renewable (49,376.0 hectares for Maderacre and 49,556.0 hectares for Maderyja).</p> <p>Carbon rights: Both Maderacre and Maderyja timber concessions have legal rights to the whole concession area to manage the native flora and fauna resources, as well as tourism and environmental services including forest carbon. Greenoxx also owns, as per the agreement with Maderacre and Maderyja, 30% of the certificates of the project.</p>
<b>Upfront financing</b>	<p>The project has been funded by Greenoxx NGO, Maderacre SAC and Maderyja SAC (was awarded as “Innovative Eco-Initiative” by Eco-Index, a service of Rainforest Alliance)</p>
<b>Start date</b>	<p>1<sup>st</sup> January 2009</p>
<b>Crediting period</b>	<p>38 years (From January 1, 2009 To December 31, 2046)</p>

### Baseline emissions



<b>Methodology</b>	<p>VM0007 REDD Methodology Modules (REDD-MF) V1.2</p>
<b>Reference data (unplanned deforestation/degradation)</b>	<p>Reference period: 2000 to 2008</p> <p>Types of data used:</p> <ul style="list-style-type: none"> <li>▪ Satellite images (Landsat 5 and Landsat 7 and includes 3 points in time: 2000, 2005 and 2008)</li> <li>▪ Ground truthing data for accuracy of the 2008 year map</li> </ul> <p>Other data: Forestry Concessions (2010), Land use capacity (2009), Protected Natural Areas (2009), Native Communities (2009), Quaternary Holocene (2009),</p>

	Agricultural Parcels (2009), Geology (2009), Productive Aptitude(2009), Vegetation (2009), Interoceanic Highway (2009), Secondary Roads until 1999, Hydrographic System (2009), Settlements (2009), Soil Classes (2009), Forest Classes (2009), Physiography (2009) and Geomorphology (2009)
<b>Reference data (planned deforestation/degradation)</b>	Not relevant
<b>Stratification of project area</b>	Carbon stock estimates were differentiated according to vegetation and physiographical types: 4 types of vegetation (forests of vigor 2, forests of vigor 3, forest with paca, forests completed covered by paca); two physiographical formations (low hill forests and low terrace forests)
<b>Deforestation rate and location</b>	<p><b>Historical:</b> Reference region – 1.3% (2000 – 2008)</p> <p><b>Projected:</b> Project area – 0.0144% (55% of project area deforested by end of crediting period)</p> <p><b>Likely baseline scenario:</b></p> <p>Sustainable forest management under FSC initially, however improvements of the Interoceanic Highway and subsequent migration of people into the area would lead to deforestation agents entering the area. The concessions being subject to deforestation by illegal loggers and settlers for agriculture. Without an effective surveillance and monitoring system in the project area due to lack of financial resources under the baseline scenario, the concessions would be invaded by migrant farmers for planting subsistence crops or livestock grazing.</p> <p><b>Modelling procedure</b></p> <ul style="list-style-type: none"> <li>▪ Five sets of Landsat images - 1990, 1995, 2000, 2005, 2008 - were used to study deforestation rates. The processing of the satellite images was carried out using the ENVI 4.5 and ArcGis 9.3 programs.</li> <li>▪ To project deforestation rates, the spatial model of deforestation DINAMICA, which employs drivers to predict deforestation over time, was used. These drivers include population density (non-spatial) and distance to rivers and roads.</li> <li>▪ Deforestation rates were projected over the life of the project using a linear relationship that was established between population density and deforestation rates</li> <li>▪ An ex-ante stratification of the region into 4 strata was made: Agricultural with Inter-oceanic road; Urban; Mining; Agricultural without Inter-oceanic road.</li> <li>▪ Five variables that better determine the future deforestation processes were also selected: Inter</li> </ul>

	<p>oceanic road; Secondary roads of first order; Secondary roads of second order; Roads of third order; Navigable rivers.</p> <ul style="list-style-type: none"> <li>▪ The range of influence of these variables was mapped.</li> <li>▪ An analysis of the correlation of the variables with the Joint Information Uncertainty Index and Cramer Index was carried out to verify the correlation between drivers.</li> </ul>
<b>Carbon pools</b>	<p><b>Carbon pools included</b> ✓ ✗</p> <ul style="list-style-type: none"> <li>▪ Aboveground tree biomass ✓</li> <li>▪ Belowground tree biomass ✓</li> <li>▪ Non-tree woody biomass ✓</li> <li>▪ Litter ✗</li> <li>▪ Dead wood ✗</li> <li>▪ Soil ✗</li> <li>▪ Wood products ✗</li> </ul> <p><b>Estimation method</b></p> <ul style="list-style-type: none"> <li>▪ Forestry inventory data was used to estimate carbon stock per hectare for each stratum. An unrestricted systematic sample design was used. A total of 142 sample plots were calculated as necessary for an error of 10% over the mean and 95% confidence interval. The total forest area to be evaluated was divided into grids of 2 x 2.5 km, so as to locate a sample unit in the center of each square.</li> <li>▪ A sample plot size of 0.5 ha was used. The sample plots are rectangular strips 10 meters wide and 500 meters long, and are divided in 20 registry units of 25 x 10 meters</li> <li>▪ For trees with a DBH of 30 cm or above, the parameters evaluated include DBH, species name, tree trunk height, total height, and quality of the trunk. All the trees of 10 cm or more DBH were evaluated in the central four registry units of the sample plots.</li> <li>▪ Forest biomass was estimated employing the following formulas <ul style="list-style-type: none"> <li>- Aboveground biomass palms (Winrock)</li> <li>- Belowground biomass palms (Fragi 1985)</li> <li>- Aboveground biomass Cecopias (Winrock)</li> <li>- Aboveground biomass Huasai (palm) (Pearson et al. 2005)</li> <li>- Aboveground biomass Deciduous trees (Brown 1997)</li> <li>- Belowground biomass Deciduous trees (Cairns et al. 1997)</li> </ul> </li> <li>▪ The amount of carbon was estimated using a carbon fraction index of 0.5</li> </ul>
<b>Carbon stock changes</b>	<ul style="list-style-type: none"> <li>▪ Changes in the land use from initial classes (or stratum) of forest to final classes (non-forest); estimated the total change in carbon stocks for the reference period of the</li> </ul>

	project (until 2046) equal to 26.911.652 tCO <sub>2</sub> .
<b>GHG emissions</b>	<ul style="list-style-type: none"> <li>▪CH<sub>4</sub> and N<sub>2</sub>O due to biomass burning (above ground forest biomass) and from the nitrogen incorporation in grasslands and agricultural and livestock areas.</li> </ul>
<b>Net emissions without project</b>	11,124,632 tCO <sub>2</sub> e

### Project GHG emissions reduction strategy



<b>Scope</b>	Avoided unplanned deforestation
<b>Activities</b>	<ul style="list-style-type: none"> <li>▪Contribute to the sustainable development of rural producers living in the buffer zone of the project</li> <li>- Socialization and dissemination of the project goals.</li> <li>-Identification and selection of proposals for the environmentally friendly productive projects</li> <li>-Development of skills and capacities of members for the selected projects, design of the projects, seeking financing and/or co-financing for the approved profiles, support for project implementation, and monitoring</li> <li>▪Reduce the vulnerability of the project area from external factors of deforestation and degradation</li> <li>-Review and update of the custody plan</li> <li>-Installation of control posts for Maderacre.</li> <li>-Delimitation of 100% of the concessions boundaries</li> <li>-Installation of “Hitos” in the concessions vertexes</li> <li>-Improve the signalling within the concessions</li> <li>-Periodic and annual patrolling within vulnerable sectors</li> <li>-Annual monitoring of possible invasions using satellite images</li> <li>-In-field verification of sectors identified as potential points of invasion (due to deforestation).</li> <li>-Development and implementation of mechanisms for the dissemination of environmental education among children, adolescents and communities involved in the project</li> </ul>
<b>Leakage mitigation strategy</b>	<ul style="list-style-type: none"> <li>▪Training in Agroforestry and Silvopasture to Iñapari District residents and the Belgium Native Community</li> <li>▪Training in sustainable alternative activities such as Ecotourism, Shiringa Management, Fish Farms, etc. that encourages the rational use of resources other than wood in the project zone</li> <li>▪Tracking and monitoring of risks and deforestation agents, as well as leakage risks</li> </ul>
<b>Non-permanence risk mitigation strategy</b>	<ul style="list-style-type: none"> <li>▪The project applies Adaptive Management System, which includes different management tools for continuous improvement of the procedures by updating the instructions and the system itself</li> </ul>

	<ul style="list-style-type: none"> <li>▪The project prepared financial resources at least 50% of total cash out before project reaches breakeven- the project used international financial aid to assure the investment needed in FSC and CCB Certification of the forest concessions</li> <li>▪The management system of the both concessions are based on selective logging of a group of commercial species for only those trees that have reached the optimum age for harvesting</li> <li>▪Project activities is expected to be at least 66% more profitable than the most profitable alternative land use activity (cattle ranching)</li> <li>▪Strategic alliances with local stakeholders (the Iñapari Municipality and the Native Community Belgium) will favour the social sustainability of the project, since the population will be identified and will indirectly benefit from the sale of the carbon credits and thus will contribute to the protection of the concession</li> <li>▪Despite having a very low risk of forest fires, the Project will seek to mitigate this risk in several ways, including the monitoring of fires and burns, the strengthening of the communities capacities in the management of controlled burning, and the implementation of awareness and environmental education programs in schools of the towns within the scope of the project</li> </ul>
<b>Additionality</b>	<ul style="list-style-type: none"> <li>▪Alternative land use scenarios: Most likely without project scenario is continuation of the pre-project land use leasing to loss of forest cover from unplanned frontier deforestation caused by the inability to protect the concession borders from increased population pressure as a result of the Interoceanic Highway</li> <li>▪Investment analysis: Net present value in the without project scenario is negative. Sensitivity Analysis - In the case of the scenario without the financial benefits from the sale of VCUs, the selling prices of the concessions timber would have to increase by over 50% in order to equal the profitability of livestock activity.</li> <li>▪Common practice analysis: It is not a common practice for forest concessions to carry out forest management under international standards.</li> </ul>

**With-project emissions**



<b>Effectiveness of measures</b>	100% (In the project scenario, there would be no deforestation within the project area, neither non-CO2 emissions due to deforestation activities)
<b>Carbon stock changes</b>	<ul style="list-style-type: none"> <li>▪There would be no changes in carbon stock in the project scenario</li> <li>▪Forest growth and sequestration in the project scenario is conservatively considered as zero</li> </ul>

<b>GHG emissions</b>	In the project scenario, the emission of other Greenhouse Gases (CH <sub>4</sub> and N <sub>2</sub> O) has not been considered due to the fact that no agricultural, grassland or livestock activities will be carried out within the area
<b>Leakage</b>	<p><b>Types</b></p> <p>Activity shifting: Activity shifting includes agriculture and cattle ranching through migrants and residents both inside and outside the Leakage Belt. The quantification of leakage is based on the modular methodology “Estimation of emissions from activity shifting for avoided unplanned deforestation – LK ASU.” It is estimated that the population that will cause deforestation and will migrate to the Leakage Belt will be 4.37%. It is estimated that the proportion of migrant residents that presumably will go outside the Leakage Belt to carry out activities is 18% and the deforestation would be equal to the subtraction of the carbon stock changes in the baseline</p> <p>Market leakage: None expected</p> <p><b>Deduction:</b> 816.784 tCO<sub>2</sub>e (2009-2018)</p>
<b>Non-permanence risk</b>	<p><b>Buffer:</b> 1,141, 994 tCO<sub>2</sub>e (2009-2018)</p> <p>total percentage of 10% buffer (following the AFOLU non-permanence risk tool)</p>
<b>Ex-ante estimated net greenhouse gas emissions reductions</b>	<p><b>Total over crediting period:</b> 9.461.160 tCO<sub>2</sub>e (2009-2018)</p> <p><b>Annual average:</b> 946,116 tCO<sub>2</sub>e</p> <p><b>Annual average per ha:</b> 9.67 tCO<sub>2</sub>e</p>
<b>Monitoring of carbon stock changes and emissions</b>	<p><b>Parameters</b></p> <ul style="list-style-type: none"> <li>▪ i. Regional Forest / Non-forest Cover</li> <li>▪ ii. Stratification and location of forest and deforested areas in the project area</li> <li>▪ iii. Stratification and location of forest and deforested areas in the Leakage belt</li> <li>▪ iv. Area under potential degradation (extraction of firewood and Illegal logging) and buffer area resulting from PRA</li> <li>▪ v. Area burnt</li> <li>▪ vi Area of logging decks</li> <li>▪ vii. Area impacted by natural disturbance</li> <li>▪ viii. Area of roads</li> <li>▪ ix. Remaining area of forest in RRL.</li> </ul> <p><b>Methods</b></p> <ul style="list-style-type: none"> <li>▪ i., ix Analysis of Landsat satellite images</li> <li>▪ ii., iii. Satellite images and field verification</li> <li>▪ iv. Surveys and/or interviews (PRA), field measurements, GIS delineation and ground truthing.</li> <li>▪ v., viii Field measurements</li> </ul>

	<ul style="list-style-type: none"> <li>▪ vi Field measurements, systematic sampling</li> <li>▪ vii. Satellite images and GPS coordinates</li> </ul> <p><b>Frequency</b></p> <ul style="list-style-type: none"> <li>▪ i. At minimum 3 times over the 10 years</li> <li>▪ ii., iii. Every 5 years</li> <li>▪ iv. Every 2 years</li> <li>▪ v. Every time there is an occurrence</li> <li>▪ vi., vii., viii., ix. At least at every 5 years</li> </ul>
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## Stakeholder identification and engagement

	<p><b>Stakeholders identified</b></p> <ul style="list-style-type: none"> <li>▪ Indigenous community</li> <li>▪ Small farmers &amp; agriculturists</li> <li>▪ Local organizations (productive, social, etc.)</li> <li>▪ Other concessions</li> <li>▪ Local authorities (of Iñapari Distric) and State offices</li> </ul>
	<p><b>Identification process</b></p> <p>▪ Local stakeholders had been already identified as part of the process of getting Forest Stewardship Council (FSC) certification for Maderacre and Maderyja forest concessions; Based on the list of consultation for FSC certification process, a stakeholders mapping was conducted</p>

## Full and effective participation

	<p><b>Access to information and consultation</b></p> <ul style="list-style-type: none"> <li>▪ A public summary of the forest management plan and other relevant documents have been distributed between stakeholders</li> <li>▪ Information dissemination at four levels: through the promotion of the project as an example; participation of students and researchers; community meetings; and publicity in newspapers and on television</li> <li>▪ Workshops were carried out to explain the main characteristics and the results of the forest project</li> <li>▪ The original PDD for the CCB standards was published online for public comments on the CCB website and this was announced globally through email and also to the two main foresters' groups in Peru (“Forestales Molineros” and “Forestales del Centro”)</li> </ul>
	<p><b>Participation in design, implementation and monitoring</b></p> <ul style="list-style-type: none"> <li>▪ Maderacre concession has created a Consultative Committee on the relationship with the community activities, whose objectives include to give advice in the design and implementation of its social policies and to provide the necessary transparency to the whole timber concessions activities and project activity. The President of this Committee is a woman and also 3 out of its 4 members are women.</li> <li>▪ Capacity building for communities is aimed to increase community participation in project implementation, such as: organizational strengthening, leadership,</li> </ul>

	<p>environmentally friendly productive activities (agroforestry, ecotourism, non- timber forest products such as Brazil nuts and rubber, fish farming, etc.), and enterprise management (marketing, economic analysis, financial issues, legal formalization, etc.)</p> <ul style="list-style-type: none"> <li>Community feedback is provided through community meetings, as a part of the community plan, which is incorporated into the project annual work plan</li> </ul>
<b>Feedback and grievance redress procedures</b>	<ul style="list-style-type: none"> <li>Both Maderacre and Maderyja established procedures for handling conflicts and grievances, and thus handle matters related to the REDD project</li> <li>In the case of Maderacre, two meetings are set between the company and the person or group get to an agreement. If agreement not possible, a moderator is called, and if there is still no agreement in place, an arbitrator intervenes in order to get to an agreement and get to closure</li> <li>For Maderyja, the conflict communication is received in person, by document or by email, described and sent to the appropriate area of the company related to it. A negotiation process follows and then a solution is reached, and finally an “answering report” designed.</li> </ul>
<b>Worker relations and safety</b>	<ul style="list-style-type: none"> <li>Both timber concessions (Maderacre &amp; Maderyja) have acquired FSC certification for 100% of their forests, fulfilling all the laws and regulations related with human resources rights and duties.</li> <li>The salaries paid by them are the average range of the regional and national forestry sector</li> <li>All Peruvian regulations related with the concession personnel’s safety are taken into account and security equipment is available for all the people who work in any risky operation.</li> </ul>

**Communities**



<b>Without-project scenario</b>	<ul style="list-style-type: none"> <li>Fewer social programs and plans to be implemented due to the lack of financing and the revenue of carbon credits</li> <li>Less opportunities to access to information and mechanisms of social education related to models of sustainable use of the forest</li> <li>Fewer opportunities to enrich dialogue between public institutions and local populations</li> </ul>
<b>With-project scenario</b>	<p><b>Expected net benefits</b></p> <ul style="list-style-type: none"> <li>Expanded opportunities to access to information and communication for building a culture of sustainable management and conservation of the forests</li> <li>Strengthen social capital of diverse organizations of the Iñapari District, particularly those who include the local economic development and the protection of the natural</li> </ul>

resources in their agendas

- Strengthen governmental sectors, particularly those corresponding to decentralized offices
- Extension and investment on basic services that the companies have planned helped by the REDD project
- Increase in the generation of work posts, with competitive salaries with the province and the region
- Dynamism of the regional and local economy, from a supplier system that favours small and medium-size entrepreneurs and direct them to productive chains linked to timber and other environmentally friendly economic activities
- Strengthen alternative economic activities for families living in the areas closest to the concessions and for immigrant families
- Creating greater opportunities of technical and working training, and therefore better performances of the families in their economic activities

**Possible negative impacts on other stakeholders and mitigation strategy**

- Oversized demands for support and social assistance from the population

-Mitigation strategy: information and communication programs; identifying, prioritizing and seeking funding local development projects; programs to attract local labour, both skilled and unskilled; development of the skills and capacities of the members of the associations

- Immigration flow increase as a consequence of knowing the existence of a project that can use workforce or take actions for social investment

-Mitigation strategy: programs to attract local labour, skilled and unskilled; support to business initiatives to absorb the immigrant families both as work labour and socially

- Increase of the car flow through the inter-oceanic road, as well as through paths, due to the project operations.

-Mitigation strategy: training courses for the project personnel to ensure the strict compliance with all the road and environmental safety measures for the use of the roads; road signaling and citizenship education programs

- Entrance of foreign people with practices and cultural expressions that differ from the local ones

-Mitigation strategy: induction programs on principles of interculturalism and respect to local population; permanent review and training for workers, contractors and general population about the relationship with the community protocols

## Impact monitoring

### Indicators

- i. No of educational institutions that incorporate to their curricular contents those referring to the forestry exploitation model
- ii. No of guided visits organized in the framework of the program, to the sawmill as well as to the concession
- iii. No of students participating in the guided visits, according to their level of studies
- iv. % of economic income increase of the members of those associations as a result of the development of the project
- v. Financial costs employed in the acquisition of the necessary productive machinery

### Methodologies

- i. Copy of the approved curricular contents
- ii. Reports of activities
- iii. Reports of activities and photographic records of them
- iv. Results of the poll applied to the members of the associations
- v. Financial reports and photographic records of the developed activities

### Frequency

- i., iv. Annually
- ii., iii., v. Bimonthly

## Biodiversity and ecosystem services



### Without-project scenario

- Loss and degradation of the genetic variability of the forest species caused by the lack of training of the staff and the lack of monitoring of the quality of forestry operations
- Extinction of local populations of timber species such as Mahogany (*Swietenia macrophylla*) and Cedar (*Cedrela odorata*) and alterations in the forest natural regeneration processes after its exploitation due to the invasion of the area by illegal loggers
- Total loss of the vegetation coverage in certain sectors caused by deforestation caused by invaders for shifting agriculture and pastures for livestock
- Increase in herbaceous and/or weed species invasions due to the deforestation for the installation of crops or pastures, as well as the excessive forest clearing by illegal loggers
- Increase in the occurrence of pests due to changes in microclimates caused by deforestation and the reduction of fauna controller populations due to illegal hunting and the loss of habitats
- Loss and degradation of the genetic variability and local

	<p>extinction of wildlife by the impacts of illegal hunting (dead animals, displacement of wildlife populations)</p> <ul style="list-style-type: none"> <li>▪ Loss and degradation of habitats and critical sites for wildlife, as “collpas”, wallows, fruit trees and caves or tree hollows</li> <li>▪ Loss and degradation of habitats for fish, caused by increase of sediments and filling of water courses due to soil erosion</li> <li>▪ Increase in the loss of forest connectivity due to the construction of forestry roads without applying reduced impact logging criteria</li> </ul>
<p><b>With-project scenario</b></p>	<p><b>Expected net benefits</b></p> <ul style="list-style-type: none"> <li>▪ Decrease in the loss and degradation of the genetic variability of the forest species</li> <li>▪ Minimize the risk of extinction of local populations of timber species</li> <li>▪ Minimize the total loss of the vegetation coverage due to the deforestation</li> <li>▪ Minimize the risk of alterations in the forest natural regeneration processes</li> <li>▪ Reduction of the loss and degradation of the genetic variability of wildlife species</li> <li>▪ Minimize the loss and degradation of habitats and critical sites for wildlife, as “collpas”, wallows, fruit trees and caves or tree hollows</li> <li>▪ Reduction of the loss and degradation of habitats for fish fauna</li> <li>▪ Minimize the risk of loss of forest connectivity</li> </ul> <p><b>Possible negative offsite impacts and mitigation strategy</b></p> <ul style="list-style-type: none"> <li>▪ Loss and degradation of the genetic variability of timber species caused by deforestation by private landowners for the purpose of installation of new land use systems outside the REDD project area</li> <li>-Mitigation strategy: provide environmental education</li> <li>▪ Loss and degradation of habitats and critical sites for wildlife, as a consequence of deforestation within private properties for the installation of new land use systems in the framework of the implementation of the REDD project</li> <li>-Mitigation strategy: orient the project to the implementation of low-impact systems and to reduce deforestation and forest degradation in the communities or sectors located outside the project area</li> <li>▪ Emission of smoke and dust into the air by the installation of processing industries</li> <li>-Mitigation strategy: the installation of those showing a lower impact on air emissions will be prioritized</li> </ul>

	<ul style="list-style-type: none"> <li>▪Landscape degradation by the installation of plants or processing industries</li> <li>-Mitigation strategy: areas already deforested prior to the start of the REDD project and preferably classified as of industrial use will be prioritized</li> <li>▪Land degradation due to erosion, compaction and pollution caused by the implementation of land use systems which imply changes on forest coverage</li> <li>-Mitigation strategy: the installation of agroforestry systems and the recovering of degraded areas will be prioritized</li> </ul>
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<b>Impact monitoring</b>	<p><b>Indicators</b></p> <p>45 indicators were established covering issues related to timber harvesting, timber species, illegal hunting, wild animal species, habitats and critical sites for wildlife. Examples are shown below</p> <ul style="list-style-type: none"> <li>▪ i. No of harvestable trees by species in a determined area</li> <li>▪ ii. Total abundance/specie/ha</li> <li>▪ iii. Frequency/ha (existence or absence of a species within a determined sub-plot)</li> <li>▪ iv. No of native fauna sights/species</li> <li>▪ v. Total No of individuals/harvested tree (DBH &gt;30cm)</li> <li>▪ vi. No of illegal hunting events detected</li> <li>▪ vii. No of places with nest and collpas presence that have been disturbed by the exploitation activities</li> </ul> <p><b>Methodologies</b></p> <ul style="list-style-type: none"> <li>▪ i., ii., iii., vi. Not given</li> <li>▪ iv. Sightings</li> <li>▪ v. Harvesting record</li> <li>▪ vi. Exploitation impacts report</li> </ul> <p><b>Frequency</b></p> <ul style="list-style-type: none"> <li>▪All annually, except vi. monthly</li> </ul>
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**Progress**

	<b>Validation</b>	VCS validation report issue date: 20 September 2012 CCBA validation report issue date: 02 December 2009
	<b>Verification</b>	VCS verification period and report issue date: <ul style="list-style-type: none"> <li>▪From 01 January 2009 to 31 December 2012 – 21 May 2013</li> <li>▪From 01 January-2013 to 31 December 2013 – 11 September 2014</li> </ul> CCBA verification period and report issue date: <ul style="list-style-type: none"> <li>▪From 2009 to 2013 – 08 October 2014</li> </ul>
	<b>Credits issued</b>	Number: 2,090,252 As of: 12 February 2016

## Further information



- VCS Project Database:  
[http://www.vcsprojectdatabase.org/#/project\\_details/844](http://www.vcsprojectdatabase.org/#/project_details/844)
- CCBA Projects  
<http://www.climate-standards.org/2009/06/08/madre-de-dios-amazon-redd-project/>

## Documents reviewed

VCS documents:

- Project Description Version 03
- Validation Report Version 03: VO12064.00val
- 1st Verification Reports (21-May-2013)
- 2<sup>nd</sup> Verification Reports (RA-VER-VCS-019913)
- 1<sup>st</sup> Non-Permanence Risk Report
- 2<sup>nd</sup> Non-Permanence Risk Report

\*The above referenced VCS documents are available at  
[http://www.vcsprojectdatabase.org/#/project\\_details/844](http://www.vcsprojectdatabase.org/#/project_details/844)

CCBA documents:

- Project Design Document (December 2009)
- Validation Report - 12/2/2009
- Verification Report - 10/8/2014
- Project Implementation Report - 8/2/2014

\*The above referenced VCS documents are available at  
<http://www.climate-standards.org/2009/06/08/madre-de-dios-amazon-redd-project/>