



# Protection of the Bolivian Amazon Forest

## Distinctive features



The Protection of the Bolivian Amazon Forest Project is a VCS validated group project located in the Amazon forest in the Department of Beni in Bolivia. The Project lies in the canton of Exaltacion, province of Yacuma, about 150 kilometers south of Riberalta and forms part of the Bolivian Amazon Forest. The project area is home to species listed in the Red Book as vulnerable and endangered such as *Cedrela odorata*, *Bertholletia excels*, and *Amburana cearencis*.

The project area has suffered in the past from selective logging, deforestation for agricultural purposes and deforestation resulting from human induced fires. There exists legal permissibility to deforest under Forest Law 1700. This confirmed the deforestation agent's legal ownership. A company owned by the project proponent purchased a property of 500 ha in which the project area is located from the deforestation agent, which had applied to deforest the land and convert it to pastures for cattle related activities. Fermin Aldabe is the project proponent and the sole entity responsible for all aspects of project management and development.



The project proponent purchased the property on 13 October 2011, developed the project and conducted the technical analysis for protection of areas of tropical rain forest totalling 235 hectares from planned conversion to agricultural land. There are no people living and illegal activities in the project area.

The project aims to pay special attention to endangered and vulnerable tree species native to the region and in addition to protecting the forest aims to enrich the project areas with endangered and vulnerable tree species. The prevention of deforestation will lead to the loss of employment opportunities. The plan is to partly mitigate this with enrichment of endangered and vulnerable tree species that will generate employment throughout the duration of the project.

	Heading	Explanation
<b>Locational factors</b>		
	<b>Location</b>	Department of Beni, Bolivia
	<b>Spatial boundaries</b>	Project area: 235 ha Reference area: none Leakage monitoring area: none; leakage management program consists on monitoring the properties owned by the deforestation agent (currently these are none). Leakage management area: none
	<b>Land cover</b>	Secondary forest, burnt forest, and pasture
	<b>Agents and drivers of forest cover change</b>	Agents: Owner of the property Underlying drivers: <ul style="list-style-type: none"> <li>▪ National government has classified the location of the area to be deforested as suitable for the grazing of cattle (the area is predominantly secondary forest with small patches that were recently cleared)</li> <li>▪ Soil and inclination of terrain allow for deforestation when followed by sowing of pastures</li> </ul> Proximate causes: Forestland converted to agricultural land and livestock farming
<b>Basic project features</b>		
	<b>Objectives</b>	<ul style="list-style-type: none"> <li>▪ Improve climate conditions by eliminating the carbon emissions arising from deforestation.</li> <li>▪ Improve biodiversity by increasing the number of endangered and vulnerable species</li> <li>▪ Increase the income of nearby communities by providing them with labour that is required to plant trees and improve biodiversity</li> </ul>
	<b>Proponent/s</b>	Fermin Aldabe is the project proponent and the sole entity responsible for all aspects of project management and development
	<b>Tenure and carbon rights holder/s</b>	Tenure: Private ownership – the property in which the project is located is owned by Fermin Aldabe Carbon rights: The project proponent has the right of use arising under the laws of Bolivia.
	<b>Actors involved in project design and implementation and their roles</b>	Only Fermin Aldabe
	<b>Upfront financing</b>	No details given
	<b>Start date</b>	20 October 2011
	<b>Crediting period</b>	30 years

## Baseline emissions



<b>Methodology</b>	VCS Methodology VM0007 (Version 1.1) and module VMD0006 (BL-PL)
<b>Reference data (unplanned deforestation/degradation)</b>	Not applicable
<b>Reference data (planned deforestation/degradation)</b>	Projected baseline emissions based on deforestation plans 5 proxy areas (size not stated in Project Design) used to assess risk of abandonment.
<b>Stratification of project area</b>	1 stratum: Secondary forest
<b>Deforestation/degradation rate and location</b>	<p><b>Historical (unplanned deforestation/degradation):</b> Not applicable</p> <p><b>Projected</b> The rate of deforestation is assumed to be 100% in 2011 (Year 1 of the project).</p> <p><b>Likely baseline scenario</b> The entire project area would be deforested. The deforestation agent harvests the wood from the project areas and then converts it to pastures.</p> <p><b>Modelling procedure</b> Planned deforestation determined from forest conversion plan and schedule for 2011.</p>
<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>▪ Belowground 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>▪ Square 3-nest 35 meter sample plots randomly placed. In each sample plot DBH (1.3 meters from ground) is measured for trees with circumference greater than 20 cm. [No. of plots established is 28 or more; exact number not provided]</li> <li>▪ <math>Biomass (kg) = \exp(-2.289 + 2.649 \times \ln DBH - 0.021 \times \ln DBH^2)</math> from Winrock International and the World Bank Biocarbon Fund used to determine biomass of all species present in each sample plot. Root-shoot ratio of 0.24 used.</li> </ul>

	<ul style="list-style-type: none"> <li>▪1 metre square frames used in each sample plot to sample woody vegetation. The vegetation removed dried and weighed. Root-shoot ratio of 0.24 used.</li> <li>▪Carbon stocks in dead wood, litter and soil organic carbon conservatively assumed to be <i>de minimis</i></li> <li>▪Long-term wood products all assumed to be sawnwood. Carbon stock in long-term wood products pool (stock remaining in wood products after 100 years) pool assessed followed step 3 of VMD0005 (CP-W) and used equation 4.</li> </ul>
<b>Carbon stock changes</b>	100% of forest land converted to pastures for livestock farming in year 1 of the project. The post deforestation use is pastures; therefore the non-tree biomass post deforestation is always less than that of pre deforestation and is omitted from the calculation.
<b>GHG emissions</b>	Emission from fossil fuel combustion and direct N <sub>2</sub> O emission as a result of nitrogen application on the alternative land use within the project boundary is conservatively assumed to be <i>de minimis</i> .
<b>Net emissions without project</b>	71,102 tCO <sub>2</sub> e

### Project GHG emissions reduction strategy



<b>Scope</b>	Avoided planned deforestation
<b>Activities</b>	<ul style="list-style-type: none"> <li>▪Buying of the property from deforestation agent to protect the forest from logging, burning, etc.</li> <li>▪Enrichment with native tree species</li> <li>▪Generation of employment for the local community by employing individuals in patrolling and monitoring the project area as well as for transplant of tree seedling</li> </ul>
<b>Leakage mitigation strategy</b>	▪The leakage management program consists on monitoring the properties owned by the deforestation agent (currently these are none).
<b>Non-permanence risk mitigation strategy</b>	▪Risk of failure is considered low; there has been consultation with the surrounding community members who have been invited to make suggestions as well as outlining the procedure to complain about problems arising from the project.
<b>Additionality</b>	<p>VCS T-ADD: VT0001 “Tool for the Demonstration and Assessment of Additionality in VCS Agriculture, Forestry and Other Land Use (AFOLU) Project Activities” used</p> <ul style="list-style-type: none"> <li>▪Investment analysis: Protecting and enrichment would not take place without carbon finance</li> <li>▪Barrier analysis: Deemed unnecessary</li> <li>▪Common practice analysis: Preserving forest not common practice as it is not viable. Only one similar project in the area.</li> </ul>


## With-project emissions




<b>Effectiveness of measures</b>	The project is expected to be 100% effective in stopping deforestation
<b>Carbon stock changes</b>	Carbon stock in long-term wood products pool included. Degradation in with-project scenario to be monitored.
<b>GHG emissions</b>	Not included
<b>Leakage</b>	<p><b>Types</b></p> <p>Activity shifting: Assumed unlikely. Deforestation agent owns no other property</p> <p>Market leakage: Assumed unlikely. Amount of timber that could be extracted is too low to justify a logging operation</p> <p><b>Deduction</b></p> <p>None</p>
<b>Non-permanence risk</b>	<b>Buffer:</b> 20%
<b>Ex-ante estimated net greenhouse gas emissions reductions</b>	<p><b>Total over crediting period:</b> 1,76,560 tCO<sub>2</sub>e</p> <p><b>Annual average:</b> 5,885 tCO<sub>2</sub>e</p> <p><b>Annual average per ha:</b> 25 tCO<sub>2</sub>e</p>
<b>Monitoring of carbon stock changes and emissions</b>	<p><b>Parameters</b></p> <p>i. Area of sample plots, no. of sample points</p> <p>ii. DBH</p> <p>iii. Total area of each stratum</p> <p>iv. Volume of timber in m<sup>3</sup> extracted</p> <p>v. Merchantable biomass</p> <p>vi. Forest cover and area of deforestation</p> <p>vii. Degradation</p> <p>etc.</p> <p><b>Methods</b></p> <p>i. GPS and compass data</p> <p>ii. Field measurements in sample plots</p> <p>iii. Official Deforestation Plan and satellite imagery</p> <p>iv. Field measurements</p> <p>v. Census</p> <p>vi. Landsat-5 image in combination with GPS data collected during ground trothing</p> <p>vii. PRA and degradation survey using transects</p> <p>etc.</p> <p><b>Frequency</b></p> <ul style="list-style-type: none"> <li>▪Carbon stocks will be monitored every 5 years or less</li> <li>▪Ex-post degradation through illegal logging and wood collection will be monitored every 2 years, and</li> </ul>

	<p>degradation through deforestation and fire will be monitored every year</p> <ul style="list-style-type: none"> <li>▪ Activity shifting leakage will be monitored every 5 years, and market effects leakage will be monitored every 10 years</li> </ul>
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### Stakeholder identification and engagement

	<p><b>Stakeholders identified</b></p> <ul style="list-style-type: none"> <li>▪ Fermin Aldabe (project proponent)</li> <li>▪ Members of the Takana-Cavineno Community (to be engaged within the project activities)</li> <li>▪ Community leaders</li> </ul>
	<p><b>Identification process</b></p> <p>No information</p>

### Full and effective participation

	<p><b>Access to information and consultation</b></p> <ul style="list-style-type: none"> <li>▪ Project proponent regularly uses personal communications to gather information from individual community members</li> <li>▪ The project proponent has issued written letters to the stakeholders describing the project and the benefits it expects to achieve with the community</li> </ul>
	<p><b>Participation in design, implementation and monitoring</b></p> <ul style="list-style-type: none"> <li>▪ Members of the Takana-Cavineno Community that live within a 10 km radius from the project area will be employed in project activities to protect and enrich the forest</li> <li>▪ Local community leaders will be invited for suggestion on how to effectively work with the very remote communities</li> </ul>
	<p><b>Feedback and grievance redress procedures</b></p> <ul style="list-style-type: none"> <li>▪ All community representatives will be given direct access to the project proponent; The community representatives can choose any means to communicate their grievances including directly to the project proponent's admin team in the city of Riberalta; The community representatives have been given letters to this effect</li> <li>▪ The project proponent will then address the matter and reply in writing to the community representative within 14 days with a paragraph in bold letters and in clear language stating the name of the mediator that can be contacted to start the mediation process; The mediation of conflicts will not include land disputes or property rights that will be address only by the Rural tribunal, the only competent authority to deal with this matter</li> </ul>
	<p><b>Worker relations and safety</b></p> <ul style="list-style-type: none"> <li>▪ The relevant law covering the worker's rights in Bolivia is the Ley General del Trabajo of 1939 that has suffered various modifications throughout the years; Prior to commencement, the employee will be given a verbal and written document showing all the relevant rights regarding work safety and national contributions</li> </ul>

- The employee will be given basic training on the activities s/he will have to carry out and will be given all the necessary equipment to carry it out and to ensure their safety; This will be documented; In addition, all employees will be registered with the government labour department and their national contributions will be duly paid as required by law

## Communities



### Without-project scenario

Without project, source of community's income will be the cattle activity that would employ a manager and the deforestation activity that would employ 15 people over 12 weeks.

### With-project scenario

#### Expected net benefits

The project will be available to employ people who will continue to safeguard the forest and increase the number of endangered and vulnerable species through their labour in the enrichment activity

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

Loss of some employment for surrounding local communities

### Impact monitoring

#### Indicators

Community's income; community's well-being

#### Methodologies

The project will use a household survey methodology to measure the impacts on communities, including all constituent socio-economic or cultural groups such as indigenous peoples, resulting from planned project activities

#### Frequency

Measurement of employment - every 5 years or less

## Biodiversity and ecosystem services



### Without-project scenario

- Deforestation agent converts all the forest land in the project area into pastures. Native animals and plants will be destroyed. Important animals and plants that currently exist on the project site and are listed in the IUCN Red List would be lost.

### With-project scenario

#### Expected net benefits

- Vulnerable and endangered species will increase
- High conservation values (HCV) will be protected

#### Possible negative offsite impacts and mitigation strategy

Assumed unlikely

### Impact monitoring

#### Indicators

- State (number and biomass of enriched tree species threatened, HCV on the project site)

### Methodologies

The changes in biodiversity as a result of the project in the project zone and in the project lifetime will be estimated using an inventory method

### Frequency

- Biodiversity within the project area will be monitored every 5 years or less
- Effectiveness of measures used to maintain or enhance HCV will be monitored every 5 years or less

## Progress



### Validation

VCS validation report issue date: 26 March 2012  
CCBA validation report issue date: 26 March 2012

### Verification

VCS verification period and report issue date: 20 October 2011 – 19 October 2012; 7 June 2013

### Number VCUs issued

Number: 22,000  
As of: 20 November 2015

## Further information



- VCS Project Database:  
[http://www.vcsprojectdatabase.org/#/project\\_details/818](http://www.vcsprojectdatabase.org/#/project_details/818)
- CCBA Project Database:  
<http://www.climate-standards.org/?s=Bolivian>

## Documents reviewed

- CCBA project design document:  
[https://s3.amazonaws.com/CCBA/Projects/Protection\\_of\\_the\\_Bolivian\\_Amazon\\_Forest\\_project/CCBPPD.5.pdf](https://s3.amazonaws.com/CCBA/Projects/Protection_of_the_Bolivian_Amazon_Forest_project/CCBPPD.5.pdf)
- CCBA validation report:  
[https://s3.amazonaws.com/CCBA/Projects/Protection\\_of\\_the\\_Bolivian\\_Amazon\\_Forest\\_project/090\\_Bolivia-CCBA\\_Validation\\_Report\\_Final.pdf](https://s3.amazonaws.com/CCBA/Projects/Protection_of_the_Bolivian_Amazon_Forest_project/090_Bolivia-CCBA_Validation_Report_Final.pdf)
- VCS project description:  
<http://www.vcsprojectdatabase.org/services/publicViewServices/downloadDocumentById/9701>
- VCS validation report:  
<http://www.vcsprojectdatabase.org/services/publicViewServices/downloadDocumentById/9694>