<table>
<thead>
<tr>
<th><strong>Project Title</strong></th>
<th>Reduced Emissions from Avoided Deforestation in the Multiple Use Zone of the Maya Biosphere Reserve in Guatemala (GuateCarbon)</th>
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<tr>
<td><strong>Project Location</strong></td>
<td>Guatemala, Maya Biosphere Reserve Multiple-Use Zone, (Petén Region)</td>
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<td><strong>Project Proponents</strong></td>
<td>Primary project proponent: CONAP (Consejo Nacional de Áreas Protegidas de Guatemala) and ACOFOP (Asociación de Comunidades Forestales del Petén)</td>
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</tbody>
</table>
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ACOFOP – Marcedonio Cortave, Director, marcecortave@gmail.com - +502 7926-3571 |
| **Auditor** | AENOR – Jose Luis Fuentes, jfuentes@aenor.es +34 902 102 201 |
| **Project Accounting period** | 30 January 2012 – 29 January 2042 |
| **Project life time** | 30 January 2012 – 29 January 2042, **30 years** |
| **Project Implementation Period** | 30 January 2012 – 29 January 2014 |
| **Audit Scope** | Verification |
| **CCB History** | Validation achieved on: 8 June 2015 |
| **CCB Edition** | Second Edition |
| **Summary** | The Guatecarbon REDD+ project is a voluntary forest carbon project that is jointly managed by the local community forestry association of the Petén (ACOFOP) and the national council for protected areas of Guatemala (CONAP) with technical assistance provided by the Rainforest Alliance and The Wildlife Conservation Society. The project estimates that the project generated net-positive climate benefits through a net reduction in greenhouse house gas emissions from deforestation (RED) by an estimated 1,230,583 tCO$_2$e during the 2012-2014 monitoring period. The net-positive climate benefits also serve to demonstrate net-positive biodiversity benefits through the conservation of natural forest habitat. Additional indicators suggest that the prevalence of uncontrolled forest fires within the ZUM has been decreasing in areas where project activities have been focused, while there is little evidence of new unsanctioned roads in the reserve. The project has also generated net-positive community impacts by strengthening the functioning of the community concession model in the project area. This has measurably maintained and improved the revenue of community forest enterprises, which practice sustainable forest management and harvest a variety of non-timber forest products such as xate palm, chicle sap, allspice, maya nut. Generating net-positive community benefits is central to the strategy for decreasing deforestation as it provides local communities in the ZUM an incentive for practicing sustainable forest management over activities, such as cattle ranching, that clear natural habitat altogether.  
A variety of activities have contributed to these results including direct financial and technical support for implementing and improving park guard monitoring and forest fire control and prevention measures by CONAP and the communities. The project has also supported community-level land planning and zoning |
initiatives that have reduced the number of cattle present in the project area. In addition, a range of business strategy assessments and improvements have been implemented to improve the community concessions’ operations and marketing for both timber and non-timber forest products value chains. The implementation partners have provided substantial technical assistance to maintain FSC certification as well as adherence all applicable laws and standards. The project has been able to support and improve local infrastructure associated with health care and rural schools, while providing financial support for teachers and healthcare workers.

| Gold Level | Yes. The proponent has maintained Biodiversity Gold Level status. The MUZ is storehouse of globally significant and endemic biodiversity harboring populations of Yucatan Brown Brocke (Mazama pandora) which is a vulnerable species according to IUCN red list, as well as species of Orange-breasted Falcon, (Falco deiroleucus) which possesses an irreplaceable character according to IUCN. During the monitoring period the project has supported the Peregrine Fund to conduct population assessments of the orange-breasted falcon and to a variety of measures to strengthen local populations. |
| PIR Info | 15 July 2016, Version 1.0 |

Reduced Emissions from Avoided Deforestation in the Multiple Use Zone of the Maya Biosphere Reserve in Guatemala (Guatecarbon)

SUMMARY

Project Location

Maya Biosphere Reserve (MBR), Guatemala. The MBR represents 20% of the land area of Guatemala and 60% of the surface within the Guatemalan System of Protected Areas-SIGAP. Besides being the country’s largest reserve, its more than 2 million hectares is the unbroken group of areas of conservation and management of natural resources most important of Guatemala.
Project Crediting Period
The total project crediting period is for 30 years.

Project start: 30 January 2012
Project end: 29 January 2042

Proponents
- A. Primary project proponent: Consejo Nacional de Áreas Protegidas (CONAP)
- B. Asociacion de Concesionarios Forestales de la RBM represented by ACOFOP as a “co-proponente” ¹: ACOFOP represents the following forest concessions:
  - Sociedad Civil Laborantes del Bosque
  - Sociedad Civil Impulsores Suchitecos
  - Sociedad Civil Custodios de la Selva
  - Sociedad Civil El Esfuerzo
  - Sociedad Civil Árbol Verde
  - Asociación AFISAP
  - Asociación AFICC
  - Sociedad Civil OMYC
  - Cooperativa Carmelita
  - Industrial Baren Industrial
  - Industrial GIBOR

Implementation Status
The Guatecarbon Project was successfully validated under the CCB standards in June 2015 (Gold Level Status), and VCS in November 2015. Asociación Española de Normalización y Certificación AENOR have validated the Project in conformance with the Climate, Community and Biodiversity Standard, Second Edition, and Verified Carbon Standard Version 3.5

Positive net effects - Climate
Results
The Guatecarbon project generated net positive impacts concerning the emission of greenhouse gases (GHGs) during the monitoring period between 2012 to 2014 from avoiding unplanned deforestation within the project boundary. Deforestation remained below the base line of GHG emissions and therefore a positive net effect is demonstrated. The result is a net positive benefit of 1.23 million tCO2e. No leakage was recorded given that the amount of leakage Ex Post was below the base line deforestation in the leakage belt. The net positive benefit was the result of several activities that have jointly contributed directly to the emission reductions presented here.

¹La palabra co-proponente en español se describe como un implementation partner vocabulario de VCS
Activities
There were several activities carried out in five categories of activities (1 Land-use planning 2. State-level monitoring and enforcement 3. Community-level monitoring and enforcement 4. Community-level forest fire control and 5. Governance and legal issues) some of these activities are mentioned below:

1. Voluntary relocation of over unsanctioned agricultural plots that were located outside the established agricultural zones. There was also a 54% decrease in the amount of cattle residing within the Carmelita community, as well as the delineation of agreed upon areas for agriculture and agroforestry.

2. During the monitoring period nearly 700 monitoring and enforcement patrols were carried out in an effort to increase the presence of CONAP in the area, this resulted in arrests and seizures of illegally harvested wood and firearms. The project also supported increasing the number of checkpoints as well as the number of park guard staff, and assisted in the development and adoption of improved information systems that reliably record and make use of recorded information, which have helped to identify and reclaim illegally deforested lots as well as reduce wildlife trafficking through more targeted patrols.

3. During the monitoring period 111 community patrols were supported during 2012-2013, along with 22 inspections and maintenance of existing firebreaks, all of which were conducted by community monitoring brigades. These supports result in an increase in the amount of monitoring and enforcement patrols regarding 2010-2011.

4. The project has implemented a variety of trainings and tools to help prevent forest fires. The project supported technical assistance to formulate and review their fire prevention and management plans. Moreover, a new early warning system (SATIF) was implemented to identify and communicate fire risk, and to establish a yearly agricultural calendar and fire permitting system used for providing assistance and supervision to local farmers’ fire clearing practices in order to limit the spread of fire.

5. There were several initiatives to modify and improve the legal processes available for adjudicating environmental crimes. The implementation partners helped restructure the internal review process conducted within the district attorney’s office of the Petén region in order to improve its efficiency and a new judicial process for recognizing and prosecuting environmental crimes was established with the opening of a court of crimes against the environment.

Positive net effects – Community Results
The Guatecarbon project conducted a series of measures with the help of supporting organizations such as WCS, ACOFOP, Rainforest Alliance, among others to organize activities that have resulted in the positive net benefit to the communities.
Activities

One of the features Guatecarbon’s strategy to reduce deforestation is focused on strengthening sustainable forestry and community concession model in the Multiple Use Zone. The project aims achieve this goal by strengthening the competitiveness of the forest enterprises via an adherence to the Forest Stewardship Council standard, by implementing principles of sustainable forest management, and solidifying their overall operational efficiency and business strategy in order to promote a rational and sustainable use of forest resources. This strategy creates an incentive for communities to promote long-term, sustainable forest management instead of competing land uses that depend on clearing forests.

Since this strategy began, over USD $8.6 million in sales, as well as 605 jobs have been secured between 2013-2014 between the concessions and FORESCOM. These net-positive results depended on a range of activities that have assured that certified sustainable forestry is a legal, economically viable, as well an ecologically sustainable endeavour. In order to achieve these impacts, the project implementation partners have provided a range of technical assistance to help community concessions meet the rigors of the FSC standard and forest legality requirements. The majority of these activities were made possible with international foreign assistance, and would unlikely have occurred in its absence, and are summarized here:

Supply and production²

- The value-chain appraisal led to a re-evaluation of the business strategy of the value-chain and generated an assessment to evaluate the current business plans and the existing business practices, identifying both strengths and weaknesses. This in turn led to the development of individualized action-plans specific to both the anchor company and community forest enterprises. The approach was replicated in the non-timber forest product value chains related to maya nut, chicle, allspice, xate palm, and tourism as well, and considered all aspects of the value-chain ranging from the supply of raw materials, processing, marketing, and business operations.

- Regarding the supply of raw materials, the action plans led numerous field-based trainings and assessments to improve the selection of only merchantable timber, which included activities on directional felling and reduced impact logging, refining merchantable tree selection criteria, and methods for selecting and segregating cut wood based on wood quality. These topics have created more awareness in reducing wasted resources, limiting damage to standing trees, and improving the quality of harvested timber.

Certification/legality³

- Attaining and maintaining FSC certification is a legal requirement for harvesting legal timber from the project area. The project partners implemented numerous trainings to help government officials, forestry technicians, and concession managers to interpret, analyze, and meet the requirements of the standard. Topics included an analysis of all applicable legal requirements and ensuring they have been met, as well as mitigating risks to worker health and safety.

- In addition, the project analyzed and ensured compliance with international legal standards and agreements for exported wood including permits and certification for CITES, as well as

² Ibid. – Mejorar competitividad de PYMES forestales - Indicador General “Capacitaciones – producción”

³ Ibid.- Mejorar competitividad de PYMES forestales - Indicador General “Capacitaciones – normas/legal”
international shipping regulations and traceability requirements. Members from the concessions, FORESCOM, CONAP, and the implementing partners participated in these trainings.

Sales strategies

- The project helped commission an analyses of future potential revenue streams from timber sales under different scenarios, adding to the available data and contributing to more informed business plan development.

- FORESCOM’s product offerings are on track to further diversify their product offerings and increase revenue from more value-added processing. This resulted from a comprehensive analysis and pilot exercise to assess and demonstrate the feasibility of developing wood components from lower grades of mahogany and other lesser known species.

Financial management

- The accounting systems and processes for several forestry concessions were assessed and improved through training and adoption of financial modeling tools, accounting software, and clarifying and codifying standard operating procedures. Where possible, the project helped to fund additional accounting staff.

Access to credit

- An important limiting factor in local forestry operations is the lack of access to capital in order to alleviate time-dependent cash flows, and the long-time horizons associated with the industry. This perennial challenge has historically led concessions to sell standing timber to third parties to ease cash flow concerns, but forgoing the ability to profit from creating value-added products. The project implementation partners, particularly Rainforest Alliance, organized a series of capacity and awareness events with leaders from local financial institutions in order to familiarize them the particular financial needs and timelines of the local forestry concessions. Despite the presence of the concessions for approximately 15 years, local lending institutions and their financial products were ill-suited and under-informed regarding the specifications and concerns particular to commercial forestry. These trainings resulted in new and more appropriate financial products offered by a range of local institutions and have begun to alleviate the lack of access to traditional lending institutions. In addition, a common fund (Fondo de Fomento Forestal Comunitario) was established as a financial mechanism between the concessions and FORESCOM to alleviate cash flow concerns.

Income diversification

The non-timber forest product (NTFP) value chains figure as an important complementary and ecologically sustainable revenue source for local communities, especially for women. The maya nut, xate palm, allspice, and chicle sap value chains were strengthened using a methodology way similar to that of

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4 Ibid. – Mejorar competitividad de PYMES forestales - Indicador General “Condición financiera”, “Herramientas o sistemas”, “Recursos Humanos”, “Estrategia de Venta”

5 Ibid.– Mejorar competitividad de PYMES forestales - Indicador General “Recursos humanos” y “Condición Financiera”

6 Ibid. – Mejorar competitividad de PYMES forestales - Indicador General “Acceso a financiamiento”
the forest products value chain. These activities resulted in attaining various certifications as and secured sales\(^7\) of USD $ 514,000 as well as 257 local jobs\(^8\) between 2013-2014. Local sales related to community tourism generated USD$ 417,000 in revenue and sustained 117 local jobs. Chicle production obtained USDA organic certification in order to sell to international markets.

**Supply and production\(^9\)**

- A diagnostic exercise was carried out on each NTFP value chain including maya nut, xate palm, chicle sap, and tourism in order to identify current business operations and challenges in an effort to update their business strategy.
- Various workshops were held with local women’s groups regarding maya nut harvesting and commercialization to further strengthen maya nut business operations.
- Xate production was augmented through enrichment plantings of 41,500 xate palm plants, and through infrastructural improvements in local xate nurseries. This included enlarging the nursery as well as improving its irrigation system. The enrichment plantings directly benefited 39 people in the form of local employment, ranging from hiring local planting technicians, supervisors, site preparation helpers, and data recorders.
- Implementation partners have played a strong role in advocating that payments for wild xate collection be tied to the quality of the leaf and not to the volume harvested and delivered to the processing facility. This policy had been instituted and maintained, resulting in a reduction of in the harvest of non-commercial xate leaves and increasing the sustainability of xate harvesting. This scheme has resulted in added incentives and financial rewards for harvesting xate at sustainable levels.
- In Carmelita, the xate nursery was renovated through enlargement, fencing, and adding an irrigation system to enable the production of 150,000 xate plants destined for enrichment plantings. This has increased the nursery capacity by 50%.
- In Paso Caballos, a total of 966 mango seedlings were distributed between 2013-2014, as well as 700 orange trees, 240 lemon trees, and an artisanal oven and solar dryer for the purposes of maya nut processing.

**Certification/Legality\(^10\)**

- Numerous training sessions were held regarding the interpretation and application of the FSC and USDA organic standards. This included training components around best practices in harvesting, internal quality control systems and processing for xate palm, chicle sap, maya nut, and allspice.

**Sales strategies\(^11\)**

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\(^7\) Ibid. –Diversificación y mantenimiento de ingresos - Tipo de impacto “impacto”

\(^8\) Employment is expressed in terms of full-time equivalent jobs. The majority of jobs in these processes are seasonal and the same individuals are often involved in different aspects of processing.

\(^9\) Ibid. –Diversificación y mantenimiento de ingresos - Indicador general “Diagnósticos”

\(^10\) Ibid. –Diversificación y mantenimiento de ingresos - Indicador general “Capacitaciones - Normas/legal”

\(^11\) Ibid. –Diversificación y mantenimiento de ingresos - Indicador general “Diagnósticos”
• The community tourism commissions of Melchor and ASODESTY (Yaxhá) received targeted technical assistance to appraise their existing business model and tourism packages, leading to a range of recommendations to further improve how community tourism is marketed and implemented.

Positive net effects – Biodiversity

Results
The results of the climate benefits analysis, which suggest a significant amount of reduced emissions from the project area, simultaneously serve to demonstrate habitat conservation as a net-positive benefit for biodiversity. In addition, the various activities mentioned in the climate and community sections have contributed to increased monitoring against wildlife trafficking and help to prevent forest fires. Moreover, a variety of additional biological indicators such as an index of new roads being built, maintaining FSC certification, seed tree health and abundance, and xate leaf harvest quality analysis, all suggest that the activities that the livelihood activities that are supported by the project, respect and maintain important ecological attributes of the natural environment. Considering the resources available to CONAP by the federal government, the majority of the activities supported by the project would not have occurred without international support.

Activities

Aside from the GHG analysis, the project has implemented a variety of indicators regarding the project zone’s ecological integrity. The project has supported five activity categories to support this claim including 1. Monitoring fire hot spots, 2. Monitoring new road development, 3. Monitoring xate quality at harvest, seed tree monitoring (forest management), and forest reclamation/restoration.

1. The hot spot analysis suggests a significant decline in hotspots in 2014 with respect to previous years.

2. No new illegal roads were identified via remote sensing, which suggests that the degree of fragmentation in the project area has remained steady.

3. The monitoring that occurs at the xate collection centers suggests that 90% of the harvested xate leaves are of high quality. This is the result of a previous policy change that was instituted with the help of various project partners in order to avoid over-harvesting xate. This occurs by providing a monetary incentive that pays xate collectors according to the number of quality xate leaves, and not by volume.

4. Seed trees within the harvest blocks are monitored regularly, and the resulting simple suggests that these seed trees have remained intact as indicated in the Carmelita and AFISAP

12 Ver ANEXO IV – Meta “indicadores biológicos (flora y fauna)”
concessions. These trees provide essential seed source for natural regeneration of harvested species.

5. Lastly, a natural regeneration study was conducted with the assistance of CATIE and Rainforest Alliance that suggests that mahogany, Spanish cedar and other species have a healthy amount of natural regeneration within previously harvested areas. This suggests that the impact of forestry operations is not reducing the amount of natural regeneration below unacceptable levels.

Gold level status

Results

The Guatecarbon project promotes activities to support species populations that have been identified as vulnerable. The orange breasted falcon is one of the species that the project has identified and helps support its populations through collaborative arrangements with other partners such as the Peregrine Fund. The project has helped develop new research concerning the nesting populations of the orange breasted falcon. The MBR, in conjunction with Calakmul in Mexico, and Rio Bravo in Belize is considered to be the second largest continuous expanse of forest next to the Amazon rainforest.

Regarding the Orange Breasted Falcon:

- The nesting study suggests that of the 21 of the 32 known nesting sites, 14 had hatchlings, eight in Belize, and 6 in Guatemala. Six fledged in Belize while two did so in Guatemala. The project also supported a genetic study to better assess the population and its characteristics in Guatemala.

- The project has supported environmental education classes with support from the Tikal National Park, in conjunction with the Universidad de San Carlos of Guatemala, and CONAP. These classes have occurred both in the park and in the city of Guatemala.

Activities

The 2014 report from the Peregrine Fund furnished results from its nesting study from 21 of the 32 known territories of the orange-breasted falcon. 14 of them were occupied, eight in Belize and six in Guatemala, with six previous nesting sites re-occupied in Guatemala. Six hatchlings fledged in Belize and two in Guatemala. These falcons have probably always been rare and sparsely distributed given their habitat requirements, which require cliffs and large extensions of mature forest. The latest report from 2014 suggests that the species now occupies an estimated 4% of its historical range.