SUMMARY

Develop a best-in-class cocoa supply chain

MAIN THEMES

- Support the development of a new cocoa supply chain to replace unsustainable breeding activities
- Restore degraded area and reduce the agricultural pressure on Patuca National Park, hotspot of biodiversity.
- Reinforce alternative economic activities in an area threatened by drug traffic.

SPECIFIC CONTEXT

Cocoa played an important role in Honduras until the end of the 20th century. Unfortunately, Hurricane Mitch destroyed almost all the country’s plantations in 1998.

With the aim of reviving the country’s cocoa farming tradition, a few farmers in the Olancho region began planting cocoa and hardwood trees in 2008 and created the APROSACAO cooperative the same year.

Planting precious timber trees along with cocoa will generate long-term income for the farmers and at the same time it benefits the environment.

INFOS CLES

- **Type**: Agroforestry / Silviopastorai
- **Partner**: APROSACAO cooperative
- **Participants**: More than 400 Fair Trade and Organic cocoa farmers
- **Status by the end of 2014**: 200 trees planted
- **Potential**: 2 million trees by 2020
- **Certification**: Gold Standard VERs in 2015
PROGRESS REPORT
APROSACAO

1. KEY INFORMATION

2. PROJECT ACTIVITIES
   Nov 2013 – Nov 2014

3. BENEFITS

4. INTERVIEW

5. PICTURES
The project area is located in Olancho Region, in the region around Catacamas, in the buffer zone of Patuca National Park, home of a great biodiversity.

Region was forested 30 to 60 years before and suffered heavy deforestation as migrants from the western regions settled in the project area to breed cattle.

The landscape is now largely deforested, with large areas of pasture planted with grazing herbs, and the agricultural frontier keeps moving east, gaining land into the Patuca National Park itself, with observed deforestation rate of 5% per year.
The Ulúa Valley in Honduras is the world's earliest known site of cocoa cultivation and consumption.

The Olmec, Maya and Aztecs were the first peoples to grow cocoa systematically. Criollo (known as the "pure", "original" varietal) is the name of the cocoa bean used back then.

Criollo cocoa is very scarce nowadays because new cross-bred varietals are more productive and disease-resistant. Nevertheless, Criollo is regarded as the finest of cocoa beans with its own unique taste.

Cocoa played an important role in Honduras until the end of the 20th century. Unfortunately, Hurricane Mitch destroyed almost all the country's plantations in 1998.

Deprived of their livelihoods, cocoa farmers subsequently looked to other means of earning a living and started largely to breed cattle.
PROJECT OBJECTIVES / STAKES

Creation of a new best-practice cocoa value chain

- Ensure the sustainable development of the APROSACAO cooperative (5 year-old) by developing best-practice farming systems from the start

- Increase and diversify farmers’ revenues
  => higher yields from trees’ ecosystemic benefits, additional
  revenues from timber sales and seedlings production

- Decrease the agricultural pression on National Park Patuca

- Restore optimal climatic conditions for cocoa farming
  => regeneration of original ecosystems: water regulation, biodiversity, shade, humidity, etc.

- Avoid erosion of land in this hilly region
  => soil fixation, aeration, nutrients fixation, and recovery of soil fertility
• **5 year-old cooperative** gathering more than 400 **cocoa farmers**, previously cattle breeders. This is a **young organization**, with few employees.

• They started to plant cocoa with timber trees in 2008. First cocoa trees **recently started producing** (small volumes). Cocoa is meant to be exported to Switzerland under Fair Trade and Organic conditions.

• A **reforestation project team** has been implemented at APROSACAO. The cooperative deliver the seedlings free of charge, assist the farmers with trainings, monitoring, maintenance, timber value chain development, market access, and plantation registration and access to land ownership.

• The project structure incorporates **local facilitators** in each village (3 field technicians and 1 agricultural engineer). They are trained and are in charge of promoting agroforestry techniques and transmitting information to other farmers. They are supported by the **Aprosacao Forestal Comitee**, composed by 4 of the **most active farmers** in reforestation.

• **Fundacion Helvetas Honduras** (NGO), **Chocolats Halba** (chocolate manufacturer of Coop Switzerland), and **Coop Sustainability Fund** have been involved in the last 5 years in the development of the cocoa cooperative APROSACAO, with sustainability goals.
PARTICIPANTS

400 Fairtrade and Organic cocoa farmers

- Over 400 farmers located in various small remote communities of Cuyamel, Rio Tinto, Rio Blanco areas.

- They are breeders traditionnally, and have only started in the last years to plant cocoa with the help of FHH, Chocolats Halba, and Coop.

- Farmers are very poor, and earn in average 700 euros/year/family mainly from livestock (milk and meat) and money sent from families abroad.

- With initial cocoa plantations they can earn in average up to 1200 euros/year.

- With agroforestry systems increasing yields and resilience, and with timber sales, the project will help the farmers increase, diversify, and secure their revenues over the long-term, reaching up to 3000 euros/year in the long-term.

- Additionally, most of the farmers have large land areas (pastures) with few cattle heads so reforestation area will neither trigger leakage nor be limited by a lack of space.
EXPECTED RESULTS

Socio-economic benefits over time

![Graph showing socio-economic benefits over time.](image-url)
Gold Standard

- Certification of the project according to the Voluntary Gold Standard (GS VER) expected mid-June 2015.
- Recent carbon standard (still in pilot version), resulting from Gold Standard’s scope expansion to land-use and forests sectors (acquisition of Carbon Fix).
- Objective of the standard is to create high-quality emission reduction projects that promote sustainable development and benefit local communities.
- The sales of ex-ante credits will enable to cover the project costs: major costs occur during the plantation years at the beginning of the project (seedlings, plantation costs, team wages, transport, farmers incentives, etc.).
APROSACAO farmers plant the trees on their own land (pasture, degraded lands and cocoa farms).

They are located in 3 main areas: **Cuyamel, Rio Tinto and Rio Blanco**.

Farmers have large pieces of land, unused or inefficiently used (very extensive livestock farming, with around 7 hectares of land per head of cattle).

As the farmers base of APROSACAO cooperative is growing, the extension of planting area could also increase over time.
### PLANTATIONS ACHIEVED

**200,000 planted trees**

<table>
<thead>
<tr>
<th></th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of farmers involved</td>
<td>25</td>
<td>50</td>
<td>+ 400</td>
<td>+ 400</td>
</tr>
<tr>
<td>Number of parcels</td>
<td>64</td>
<td><em>In progress</em></td>
<td>211</td>
<td><em>In progress</em></td>
</tr>
<tr>
<td>Number of trees planted</td>
<td>22,000</td>
<td>78,000</td>
<td>100,000</td>
<td>200,000</td>
</tr>
<tr>
<td>% mortality (per wave)</td>
<td>16%</td>
<td>30%</td>
<td><em>In progress</em></td>
<td><em>In progress</em></td>
</tr>
<tr>
<td>Surface area</td>
<td>25 ha</td>
<td>50 ha</td>
<td>211 ha</td>
<td>286 ha</td>
</tr>
</tbody>
</table>
PLANTATIONS ACHIEVED

4 plantation models

MODEL 1
Plantations alongside the cocoa / banana fields' boundaries
Plantation in rows every 3 meters around the perimeter of the parcel
*Density of plantation: 133 trees/ha*

MODEL 2
Plantations intercropped with cocoa / banana trees
Plantation in rows every 3 meters around the perimeter of the parcel + plantations every 14x14 meters inside the parcel
*Density of plantation: 182 trees/ha*

MODEL 3
Plantations on damaged and unused lands
Plantations every 3x3 meters
*Density of plantation: 1111 trees/ha*

MODEL 4
Plantations in pasture lands (silvipastoral)
Plantations every 5x5 meters
*Density of plantation: 400 trees/ha*
Tree species and mix

<table>
<thead>
<tr>
<th>Local Name</th>
<th>Scientific name</th>
<th>Family</th>
<th>Origin</th>
<th>Growth speed</th>
<th>Tree height (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caoba</td>
<td><em>Swietenia Macrophylla</em></td>
<td>Meliaceae</td>
<td>Native</td>
<td>low</td>
<td>20 to 35</td>
</tr>
<tr>
<td>Cedro</td>
<td><em>Cedrela odorata</em></td>
<td>Meliaceae</td>
<td>Native</td>
<td>low</td>
<td>20 to 30</td>
</tr>
<tr>
<td>Laurel Negro</td>
<td><em>Laurus nobilis</em></td>
<td>Lauraceae</td>
<td>Mediterranean</td>
<td>high</td>
<td>15</td>
</tr>
<tr>
<td>Granadillo</td>
<td><em>Platymiscium yucatanum</em></td>
<td>Fabaceae</td>
<td>Native</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carreto</td>
<td><em>Aspisosperma dugandii</em></td>
<td>Apocynaceae</td>
<td>Native</td>
<td>high</td>
<td>40</td>
</tr>
<tr>
<td>Teca</td>
<td><em>Tectona Grandis</em></td>
<td>Lamiaceae</td>
<td>India, Asia</td>
<td>high</td>
<td>25 to 30</td>
</tr>
<tr>
<td>Mango</td>
<td><em>Mangifera indica L.</em></td>
<td>Anacardiaceae</td>
<td>India</td>
<td>slow</td>
<td>10 to 25</td>
</tr>
<tr>
<td>Naranjo</td>
<td><em>Citrus sinensis L.</em></td>
<td>Rutaceae</td>
<td>Asia</td>
<td>slow</td>
<td>10</td>
</tr>
<tr>
<td>Guyaba</td>
<td><em>Psidium guajava</em></td>
<td>Myrtaceae</td>
<td>Native</td>
<td>slow</td>
<td>8</td>
</tr>
<tr>
<td>Macuelizo</td>
<td><em>Tabebuia rosea</em></td>
<td>Bignoniacae</td>
<td>Native</td>
<td>high</td>
<td>30</td>
</tr>
</tbody>
</table>

- The local climate is **semi-humid to humid**.
- The choice of the planted species depends on the specific conditions of the site of plantation and the expected impact in the various agro-forestry or forestry systems developed: timber production, shade, pasture, soils improvement, etc.
- **Use of native species mainly**, some of them are very local and rare. Teak is not native but non invasive and limited below 10% of total plantations.
- In 2015: 8,000 to 10,000 fruit trees will be planted (mango trees and avocados)
Main tree nursery in Las Cabas

- The main tree nursery is located in Las Cabas, managed by APROSACAO cooperative.
- In 2014, its structure was reinforced and a greenhouse was built.
- Production of **40,000 seedlings in 2014** (mainly Caoba, Granadillo, Cedro & Laurel).
COMMUNITY DEVELOPMENT

3 local nurseries

- Development of 3 additional local community tree nurseries managed by locally hired technicians.

- **Objective is to reduce the cost of transport** and diversify farmers’ revenues (new activity).

- In 2014, the production achieved was 22 000 seedlings in Rio Blanco, 11 000 seedlings Rio Tinto, and 21 000 seedlings in Poncaya.
Communities involved in the project design

- **Regular workshops** in communities to present and explain the project, identify local needs and threats, adjust plantation models.

- **Decisions are taken by farmers** in the general assembly of APROSACAO cooperative.

- **Creation of a forestry Committee:** composed of the 4 most active participants in the project to support the word of the technician in the field (coordination, etc…)

- **Cattle breeders** related to APROSACAO families are involved in the project.
Training in seedling production and agroforestry

- Technical support from APROSACAO to develop a local knowledge on climate change, carbon sequestration, agroforestry techniques and tree nursery management.

- Training classes gather one representative of each village, who is in charge of transmitting the information to the villagers.

Meeting in June 2014, in Poncaya,
Participation in APROSACAO general assembly

- Support of the democratic process during the board election.
- Meetings give the opportunity to share questions, doubts and achievements.
- The emulation is great between cocoa farmers and project team with the presence of farmers from all part of the project area.
AWARENESS & CAPACITY BUILDING

Collaboration with the University of Catacamas

- Signature of a MOU in 2013 between Pur Projet, APROSACAO and UNA to start a research project on soil quality and biomass assessment in the project area.

- Investigations on soil chemical quality and macro-biodiversity started in 2014.

- Assessments of carbon stocked in trees (project trees and local forest) are also on-going.
COORDINATION WITH LOCAL AUTHORITIES

Meeting and field visit with ICF

- Work with ICF (National Institute of Forest Management) to obtain the rights over timber in the project’s parcels.
- 3 first parcels obtained their rights in 2014.
- A meeting was held in Rio Tinto where the ICF representative talked about the importance of ICF certification for future harvests.
- Further participation from ICF is expected in 2015.
**PLANNING**

**2012 - 2018**

**2012 - 2013**

- Plantation of 100,000 trees
  - Project feasibility assessment
  - Project design
  - Build-up of project team
  - Training on project procedures (plantation, monitoring, trainings, etc)
  - First plantations

**2014**

- Plantation of 100,000 trees
  - Monitoring of 2012 and 2013 planting waves
  - Preparation for Gold Standard Validation
  - First plantations' registration at ICF
  - Launch of investigation with the UNA
  - Training on project procedures

**2014 - 2018**

- New plantations with APROSACAO farmers: total planting area will be around 4000 hectares
  - Gold standard certification
  - Monitoring of plantations, social and environmental benefits
  - Development of timber management plan: FSC certification, timber value chain, access to market
PROGRESS REPORT
APROSACAO

1. KEY INFORMATION

2. PROJECT ACTIVITIES
NOV 2013 – NOV 2014

3. BENEFITS

4. INTERVIEW

5. PICTURES
FIRST OBSERVED BENEFITS

Reduction of soil erosion

- Farmers suffer from soil erosion, which drastically reduces agricultural production (especially in upland areas).
- Participating farmers noted a decrease in soil erosion losses in some planted areas.
- The monitoring of soil erosion will be further investigated in 2015 in each of the 3 project areas.
Soil enrichment

- Conventional agricultural practices have lead to a loss of soil macro-biodiversity and chemical quality.
- Cocoa-based agroforestry systems regenerate the macro-biodiversity and stimulate the accumulation of nutrients in soils.
Biomass inventory

- Assessment of the biomass stocked in planted trees

- The methodologies of biomass inventories (and allometric equations) are collectively developed by Pur Projet and UNA (Universidad Nacional Agraria) to be adapted to the local context.
PROGRESS REPORT
APROSACAO

1. KEY INFORMATION

2. PROJECT ACTIVITIES
NOV 2013 – NOV 2014

3. BENEFITS

4. INTERVIEW

5. PICTURES
“I recently had the opportunity to fly over this region [Olancho]. I live in this department but I had never truly seen how big the deforestation scale is here and its huge impact, I was shocked... ”

“I want to give my best to this project. Through it, I have learned about organic methods and more. Before, I didn’t know what carbon was, I didn’t know about organic fertilizers and now, I might not be an expert but I’m able to make a 100% organic fertilizers, just the way they’ve shown us. This is why I feel so optimistic, plus, my family is very interested too. ”

Name: Ariel Isabel Arias
City: Campamiento viejo
Activity: Aprosacao new vice-president (2014) and farmer
Number of planted trees: 6000
Family situation: Ariel Isabel has a son (Edgar) who is employed by Aprosacao as project leader.
PROGRESS REPORT
APROSACAO

1. KEY INFORMATION

2. PROJECT ACTIVITIES
NOV 2013 – NOV 2014

3. BENEFITS

4. INTERVIEW

5. PICTURES
Production of 100,000 seedlings in 4 tree nurseries
More than 500 trees planted by Ronald Barhaona and his family
Project coordinator in Campamiento Viejo
Project leader (left) and technician in the tree nursery (right) of Campamiento Viejo
Meeting with APROSACAO board and UNA (Universidad Nacional Agraria) representatives and students in charge of field investigations
Monitoring of all planted parcels
More than 400 farmers participating in the planting project
Representatives of UNA (Universidad Nacional Agraria) in the tree nursery of Las Cabas
Trainings include all APROSACAO members, even if not participating directly in the planting projet
UNA representatives visiting the parcel of Ronald Barahona in Campamiento Viejo