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**Reducing Poverty and Land Degradation via Integrated Agro-forestry and
Ecotourism in the Maya Golden Landscape of Southern Belize Project**

Progress Report

4th November 2009



A. Introduction

This report summarizes the activities undertaken since the official launch of the project on September 25th in the village of Indian Creek, although some farmers had already started preparing their agro-forestry plots since the middle of September. The number of participants in this project totals 23 community members. In the Agro-forestry component there are 11 farmers, 2 of whom are also involved in the apiary establishment. An additional 4 farmers including 1 woman will be in the apiary component whilst 8 of which 2 are women will do the Tourism training course as part of the eco-tourism component.

B. Outputs and Activities

Output 1 - Capacity Building

- Design and production of training manuals - The development of the training manuals for both the agro-forestry and apiary components are in their draft forms waiting for final edits before going to the printer. These manuals are expected to be completed by mid November after which the training sessions will commence.
- Design and implementation of training sessions - It is envisioned that once the manuals are completed, training sessions will be conducted both indoors and outdoors. Therefore there will be formal training sessions and informal on the job training during regular field visits. Farmers are already benefiting from the establishment of their plots, selecting the best sites, ensuring proper spacing between seedlings to be planted and species are placed in appropriate areas. The Tour Guide training course has been put on hold due to the fact that the institutions (University of Belize & Belize Tourism Board) that conduct this course do not yet have the required amount of trainees needed to successfully run the course. They are expecting the minimum number of 25 trainees to enroll in November 2009.



Output 2 - Agro-forestry Plots Establishment

- Site preparation for plots - Some of the interested farmers started preparing their agro-forestry plots as soon as they were assisted in selecting the best sites. The 5 farmers who are establishing their plots for the first time were advised to do 1 acre with cacao forming the base, while the other 6 who already planted have cacao trees will continue to enhance their plots.
- Transplanting of seedlings - In total 2,200 cacao seedlings were transplanted onto the farms of the participating farmers. Each farmer received between 250-300 seedlings. Those that received 250 seedlings are the ones who already have cacao planted and were replanting and enhancing their plots.

Those who established their plots for the first time were given 300 seedlings to be planted on 1 acre plots. To become a registered member of the Toledo Cacao Growers Association, a farmer needs a minimum plot of 1 acre plot of organic cacao. In addition these 11 farmers were provided with seedlings of fruit trees and valuable timber species that will



serve as permanent shade trees for cacao seedlings. Adequate shade is necessary for the healthy growth of the cacao plant. A variety of fruit and timber trees were planted including Mahogany, Cedar, Soursop, Jackfruit, Mango, Bri Bri, Nutmeg, Cortez, Coffee, Craboo, Salmwood, and Mamey Apple. In all a total of 590 seedlings of different varieties were distributed.

- Maintenance of plots - It is understood by the participating farmers that care and maintenance of the plots are their responsibility. Regular field visits by Ya'axche's Agro-forestry Officers will be done to provide advice and inspection of plots.





Overall the agro-forestry component of the project as it relates to establishing new plots and enhancing existing ones with new seedlings is completed, however the care and maintenance of these plots is now dependent on the owners, although they will be assisted by the Agro-forestry Extension Officers. As mentioned

above, the completion of the training manual is pending and when this is done it will no doubt help in the maintenance of the plots. With some assistance from other villagers who were provided a small stipend, all supported farmers have planted their fruit, timber and cacao seedlings that were provided to them. In total, approximately 10 acres of degraded and deforested lands have been established as agro-forestry demonstration plots including riparian areas along the Joshua Creek, one of the Golden Stream River's main tributaries. Once managed effectively this initiative will minimize soil erosion into streams and provide healthy riparian zones for good quality water.

Outputs 3 - Apiary Establishment

- Preparation of apiary site - On Tuesday November 3rd 2009 Ya'axche organized a field trip with Tumulkin Center of Learning to apiary sites that took us to the community of San Benito Poite in the Toledo District. The objectives of the field trip are;
 1. To provide the 6 farmers from Indian Creek with hands on experience in apiary site selection
 2. To inspect hives at the apiary site in San Benito Poite
 3. To allow bee keepers in San Benito Poite to share their experiences with the visiting 6 farmers

Ya'axché transported 6 farmers from Indian Creek to Tumulkin, where Mr. Isidoro Sho, Extension Officer in Bee-keeping was picked up. Mr. Isidoro's schedule for the day was to inspect bee hives at 6 different sites with six different bee keepers in San Benito Poite village.

Points highlighted during this field visit:

- Make sure you have all the tools and equipment you need to inspect the bees, tools needed are; smoker, hive tool, lighter to light smoker, dry materials to start a small fire in the smoker, good rubber boots, bee suit that includes the hard hat, veil, and gloves and make sure that there are no holes on the bee suit.

- Bees are very sensitive, they easily detect a nervous or an upset person and a person should remain calm and not making a lot of noise when entering the apiary site.
- If a person is allergic to bee sting they should never go to an apiary site to inspect bees.
- Bees are very sensitive, at times they can be very calm or could be very aggressive and if you find out that the bees are very aggressive it is better to leave and choose another day to inspect them.
- A strong colony of Africanized bees is very aggressive.

Points to remember in selecting an Apiary site:

- Apiary site must be far away from the community with no disturbance of people and domestic animals.
- Apiary must be close to good water source
- Apiary sites must be at an areas where bees can easily locate flowering trees to harvest pollen
- should not be too close to other apiary site to reduce competition for flowering plants

Points to remember inspecting bee hives:

- Always try to do your bee inspection early mornings or when the weather is nice and cool
- During hot days, the suit becomes very hot and there will be a lot of sweating
- Always remain calm and quiet when entering the apiary site
- Apply three blows of smoke from your smokers to the entrance of each hive in the Apiary, this sends a signal to the bees to start feeding and there will be less movement of the bees.
- Never stand directly at the entrance of the hive this blocks the entering worker bees with pollen grains
- Always check the weak colony first, then move on to the stronger colony, strong colony tend to steal honey from the weaker colony if they are disturb first.



An Apiary site in San Benito Poite and Isidoro explaining the guidelines in selecting a good site



Inspecting the bees in a hive

Participants of the field trip to Tumulkin

Names	Address	Role
Julian Mas	Indian Creek	Farmer
Domingo Ical	Indian Creek	Farmer
Marcos Shol	Indian Creek	Farmer
Enriquez Choc	Indian Creek	Farmer
Mauricio Ical	Indian Creek	Farmer
Molly Klarman	Ya'axche	Volunteer
Bridget Barry	Ya'axche	Volunteer
Kenny Cal	Ya'axche	Community Outreach Officer
Auxebio Sho	Ya'axche	Community Outreach Officer
Isidoro Sho	Bee-Keeper Extension Officer	Tumulkin Center of Learning

Each farmer from Indian Creek will now have a better knowledge in selecting a good apiary site to start bee keeping for Honey Production.

- Procurement of tools for honey production - This is not scheduled to occur until the second week of November.
- Maintenance of apiary - This activity will follow the establishment of apiary hives in sites selected after all the materials and tools have been purchased.

Output 4 - Awareness and Appreciation by Children

- Schools reopened in the early part of September and children came back very excited to start another year. At the end of that month, Ya'axché outreach officer visited 3 primary schools; Indian Creek, Golden Stream and Medina Bank. The purposes of the visits were to set up dates for presentation on climate change. This presentation included a focus on agro-forestry farming, eco-tourism and other environmentally friendly activities for livelihoods. During each visit, upper division classes were asked to participate in a poster competition on climate change and were required to present it to other students and teachers on the 24th of October 2009 at Indian Creek School. Each school agreed to participate and created their posters.



School Children receiving Climate Change Presentations

- On Saturday 24th of October 2009, Ya'axché Conservation Trust, with funding from OAS and CNIRD organized a Climate Change Poster competition with three primary schools. Each school designed a poster on Climate Change which was presented to the students, teachers and a few parents. The posters were judged on the following criteria based on a scale of 1 to 5 being; 1 as Poor, and 5 as Excellent on each of the following sections: Poster Design, Presentation, Content and Creativity. Approximately 65 students were present at the contest along with teachers from Indian Creek School and a few parents. At the start of the poster competition, Ya'axché outreach officer made a presentation on International Day of Climate Action. Each school was given 5 minutes to present their posters and while they explained their posters everyone listened and was given opportunity to ask questions afterwards. At the end first place winner of \$100.00 worth of school supplies went to Indian Creek Primary School. Second place of \$75.00 worth of



school supplies was awarded to Golden Stream Primary School and third place Winner of \$50.00 worth of School Supplies was Medina Bank Primary School.



Golden Stream(left) and Medina Bank (Right) Schools with the 350 banner on 24th October 2009

C. Conclusion

Despite the time constraints, the enthusiasm of the farmers made it possible to do most of what was planned during this reporting period. Extra efforts of both staff and farmers to work on weekends also need to be recognized. The most gratifying aspect of this project is the knowledge that farmers are participating because they realize that even though their agro-forestry plots may not be much, establishing it now will not only benefit them and their children but the waterways, the forest and their efforts in adapting and mitigating climate change in reducing carbon dioxide from the atmosphere to heal our earth.