

Trees, Water & People

Empowerment of Leaders and Families for the Conservation of the Reserva Biologica de Montecillos, Honduras

Summary

Trees, Water & People (TWP), in partnership with Centro de Enseñanza Apredinzaje de Agricultura Sostenible (CEASO), will lead a long-term natural resource management program that trains Honduran farmers in Climate Smart Agriculture (CSA) in the buffer zone of the Reserva Biologica de Montecillos (RBM), a biodiverse, mountainous protected area.

Overview

For over 11 years, TWP and CEASO have been working together to improve livelihoods in rural areas of Honduras. Building on a diverse skill set in rural development that has taken our programs to 17 of the 18 departments of Honduras, we have begun to work with 12 communities located in the buffer zone of the Reserva Biologica de Montecillos, a biological reserve situated at the confluence of four watersheds in the Comayagua Department of Honduras. This area is tremendously biodiverse, and home to both a variety of fauna, as well as rural communities struggling with high rates of poverty, malnutrition, and ongoing threats from climate change.

The 12 communities adjacent to the RBM are primarily subsistence farmers from the Lenca ethnic group whom rely upon coffee, corn, and other vegetable farming for their livelihoods. Recently the RBM has been under severe ecological distress due to a destructive pine beetle infestation that is putting immense pressure on local forests. Similarly, the local economy, based on coffee production, is struggling to recover from the spread of the Roya Fungus, which devastated coffee plantations across Central America during 2013 and 2014, reducing harvests by up to 60% in many areas.

Environmental crises, like the chronic drought and diseases afflicting this region, lead to economic collapse in rural areas, and eventual migration to overcrowded urban areas, or to the United States. This phenomenon has a generational effect that begins with families being separated, educational opportunities for youth disappearing, and an increasing vulnerability to a detrimental blend of crime, under-employment, and poverty. As such, our principal objective is to create sustainable livelihoods and opportunities in rural areas so people can raise their families where they are.

Approach

By combining adult education with training in CSA, TWP and CEASO will begin a process of rebuilding the prosperity of the target communities via sustainable food systems. CSA is a climate change adaptation strategy for tropical farmers that are experiencing severe disruptions to their normal agricultural practices. While the tangible outputs of CSA such as crop and income diversification, food security, and improved health are the most visible results, we also expect a series of qualitative benefits such as increased family resilience, an improved relationship with the local ecosystem, reduced migration out of the region, and improved self-esteem.

TWP's in-country partner, CEASO, is a social development organization that promotes sustainable rural livelihoods via a process aptly named "Learning-by-Doing." This educational approach combines classroom education (30%) with practical application (70%) to create a learning experience suited to rural adult learners. Experts from TWP and CEASO's networks have built an extensive curriculum covering topics such as soil conservation, agroforestry, organic agriculture, animal husbandry, rainwater catchment

and storage, and clean cooking technologies, which will be imparted in the first year of the project to 36 leaders from the 12 selected communities.

CEASO is well placed as the principal training entity, for it too began as a small family farm with a desire to show the viability of small-scale sustainable agriculture as a livelihood. Visiting their demonstration farm in Central Honduras is a crucial part of helping the 36 trainees envision the changes that could take place on their own farms. Apart from the physical skills that these trainees will acquire during the first year of this education, they will also learn “Farmer-to-Farmer” teaching practices to train an additional three farmers each from their respective communities.

Goals and Objectives

The specific goals for the first year of this project are as follows:

Goal 1: Increase the capacity of the communities around RBM to withstand changing climate patterns

Activities	Outcomes
Deliver a 12-month curriculum in Climate Smart Agriculture to 36 farmers, complete with practical application on their properties.	Improved soil quality; Improved water management; Reduced dependence on a limited number of crops; Increased stability against market and climate fluctuations.
Build at least six community tree nurseries to begin production of fruit, fuel, timber, and shade trees.	80,000 seedlings of at least 12 species planted on private farms in Yr 1; Diverse canopy more resistant to disease and seasonal patterns; New production of fruit and timber for sale and consumption.

Goal 2: Improve women’s well-being and increase their participation in economic activities

Activities	Outcomes
Ensure at least 33% of participants in Y1 training activities are women.	Gender equity on the farm and in the community; More rapid dissemination of training concepts to other women in the area.
Construct 220 Improved Justa Cookstoves to reduce fuelwood consumption and exposure to Household Air Pollution from open fire cooking.	Improved respiratory and ocular health among family members (especially women and children); Improved self-esteem from a clean, soot-free kitchen; Increased empowerment by letting women lead a major household transition.
Emphasize the “Finca Humana” model of full family participation in producing and managing farm income.	Families take a team approach to creating prosperity on their farm, via new skills, activities and thought processes.
Increase access to “Cajas Rurales” or Community Savings and Loans groups by creating more groups for both men and women.	Empowered women saving money together and holding each other accountable for loans, personal investments and repayment; increased financial literacy.

Goal 3: Increase awareness of the ecological importance of RBM and its three major watersheds

Activities	Outcomes
Map the protected area and identify critical flora and fauna with the community.	Increased knowledge of local ecosystem and biological indicators of ecosystem health; Improved watershed health in medium term.
Engage the Honduras Forest Service and the Honduras Conservation Corps to support forest restoration projects and trail building.	Potential increase of “agri-tourism” value in the area, with improved trails and linkages between the communities around the reserve.

Reasons

The primary livelihood in the region is coffee (65%), though corn and bean production is also common (30%). Only a fraction of farmers from the preliminary survey indicated they grew fruits or vegetables, which is a concern to the region’s long-term food security. Concerns about the economy, water, and crop diseases were mentioned during preliminary surveys, with economic concerns being the most significant (over 50%). About one-third of farmers stated crop diseases as the cause of production problems, and the vast majority of farmers use agrochemicals to control disease with less than 10% using organic methods.

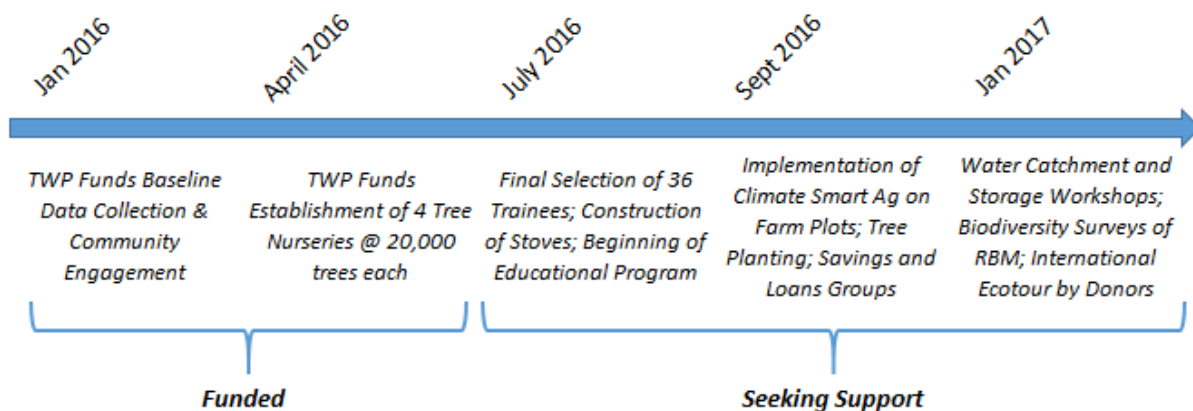
The communities bordering the Reserva Biologica de Montecillos harvest important food and fiber resources from forests including fuelwood, wild foods, medicine, and other products. From an ecological standpoint, the RBM and its surrounding areas are important to rare wildlife species as well as maintaining watershed health. The majority of farmers reported that their soil quality was poor to fair (81%), and they thought the primary reasons were due to deforestation, agrochemical use, and monocultures. Honduras currently loses 80,000 hectares of forest per year to logging, grazing and agriculture, and this is accelerating due to pine beetle damage.

Additional Findings from RBM Baseline Surveys (n=67)

<i>Families under Poverty Line</i>	70%
<i>Illiteracy Rate</i>	28%
<i>Malnutrition in Children</i>	25%
<i>Gastrointestinal Illness</i>	80%
<i>Use of Open Fire stoves</i>	80%

Timeline

Year 1 Project Timeline



Leadership

Trees, Water & People will be responsible for the monitoring and evaluation of this project. Support will be provided via direct involvement of International Director Sebastian Africano, based in Colorado, USA, and Assistant International Director Lucas Wolf, based in Managua, Nicaragua, with regular travel to the project site. Together, the two have a combined 23 years of experience working in rural Honduras, and have worked alongside CEASO in designing the project and conducting initial baseline research in the target communities. TWP's role is to oversee expenditure of project funds, monitor progress and impacts, adjust strategy as needed, and communicate project outcomes to donors and the general public, including via radio broadcasts to rural areas within Honduras.

CEASO will be responsible for maintaining engagement with the trainees and implementing both the classroom training and the practical implementation of the project. They have already hosted an initial tour of their demonstration farm, conducted 67 baseline surveys across 12 communities, and have secured materials for planting 80,000 seedlings in 4 community nurseries. Principal implementers are René Santos Mata Jr., Director of Operations for CEASO, and Gerardo Santos Mata, Certified Permaculture, Agroforestry and Appropriate Technology expert on the farm.

Budget

Year 1 RBM Project Budget - \$35,000 secured by TWP to date

Category	Amount	Description
Labor	\$ 6,988.00	Sebastian Africano, TWP Int'l Dir @ 20% PT
	\$ 10,705.50	Lucas Wolf, TWP Asst Int'l Dir @ 25% FT
	\$ 6,343.33	Rene Santos Mata Jr., CEASO Dir of Ops @ 50% FT
	\$ 12,686.67	Geradro Santos Mata, CEASO Tech Expert @ 100% FT
	\$ 8,692.67	Field Technicians (2)
	\$ 36,723.50	Subtotal
Materials/Supplies	\$ 8,000.00	80,000 seedlings in 4 Nurseries
	\$ 15,400.00	220 Clean Cookstoves
	\$ 23,400.00	Subtotal
Outreach	\$ 1,364.00	Community Workshops
	\$ 7,473.33	CEASO Workshops
	\$ 4,545.00	Startup Capital for Savings & Loans groups
	\$ 963.67	Community Engagement (Radio Ads & Recruiting)
	\$ 14,346.00	Subtotal
Travel/Per Diem/Food/Lodging	\$ 150.00	Lucas Wolf, Bus: Managua > Tegucigalpa
	\$ 850.00	Sebastian Africano, Flight: Denver > Tegucigalpa
	\$ 750.00	Lodging, Food, and Fuel (TWP Visits)
	\$ 4,909.00	Local Transportation - Motorcycle, Delivery Truck Rental, Workshop Transport
	\$ 6,659.00	Subtotal
Administration	\$ 20,282.13	TWP 20% OH
TOTAL	\$ 101,410.63	