



**Completion Report of ITTO Small Project
RED SPD 055/11 Rev.4 (F)**

Integrating Sustainable Livelihoods, Environmental Mortgages, and Science-based Reforestation for Tangible Forest Conservation Change in the Ecuadorian Chocó



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Executive Summary

In low-income nations, efforts to alleviate poverty often produce incentives to degrade the local environment, and efforts to protect the environment often fail to improve livelihoods. This project's objective was to develop and pilot an innovative PES approach that inextricably links sustainable livelihood improvements for the rural poor to conservation of surrounding tropical forests via the model's application to forest-dwelling communities in the Mache-Chindul Ecological Reserve, Esmeraldas Province, Ecuador.

The project's specific objective was to develop and successfully integrate the components of a first 'environmental mortgages' pilot program in three Mache-Chindul forest communities, generating a sustainable and viable approach to PES that ensures a concurrent reduction in tropical forest degradation and deforestation. For this region, cacao represents the primary source of cash income for most families despite an immature and inefficient market. As such, 'livelihood improvements' for this pilot translate into a revamping of the local cacao market system: 1) removal of intermediary brokers, 2) improvements in harvest yields, 3) acquisition of third-party organic certification, and 4) organization of a drying and fermenting cooperative to attain export-level quality and volume. As proposed, required funding for these steps would run through the 'environmental mortgages' model of microfinance-lending, in which lines of available credit are calculated against the global conservation value of intact natural resources beneath a community's *de facto* control.

While all components of a first 'environmental mortgages' pilot program were developed and integrated as planned, the project's implementation phase was completed with one rather than three Mache-Chindul forest communities. Several other modifications were also required: a) microfinance was replaced with direct conservation-livelihood trades as the finance mechanism for transferring environmental asset value, and b) reforestation as a second means of enrolling community "environmental assets" in the program was postponed until post-pilot phases, in favor of a model focused entirely on conservation of existing primary rainforest. Additional funding required to enable this modified financial approach was secured via ITTO budget reprogramming and a \$28,000 crowd-funding campaign. Pilot communities successfully reached a consensus on cacao market system goals, and an organized cooperative was established in the single pilot community that successfully completed the program, with approximately 50% of their cacao farmers enrolled as affiliated coop members. All technical and administrative staff have been community-elected, and are now undergoing intensive training programs. The cacao cooperative that was established is firmly engaged in the environmental mortgage program and has completed two market system steps to date, with a total of four steps initiated (meaning that all identified market system improvements have been initiated).

At project conclusion, a single environmental mortgages program had been comprehensively developed and established in the community of Mono Bravo, including a roadmap for the program's operations post-ITTO support. Project management has been transferred to Amsterdam-based chocolate company Original Beans, as management by a for-profit entity represents the best opportunity at a financially sustainable future. Original Beans is committed to running the environmental mortgages program as defined by this ITTO Small Project, and maintains a strong interest in reincorporating the pilot community of Guayacan over the next one to two years. In addition to the tangible livelihood improvements that this project has catalyzed (substantive and reliable cacao price increases, autonomy, an environmentally sustainable community-run microenterprise) and their associated long-term environmental benefits (300 hectares of primary rainforest conserved), it has also importantly served as a cornerstone learning process for the development of direct conservation–livelihood trades as a new sustainable approach to PES in the tropics.

Toward the aim of upscaling this pilot's broad-scale applicability, we have used this learning process to develop a user's guide to assist in the design of case-specific pro-poor conservation incentive mechanisms.

Because this initiative was gradually formulated through a largely self-propelling participatory process amongst stakeholders at all levels of involvement and over approximately ten years' time, the project rationale and identification process were both very adequately suited to addressing the problem at hand. What was not optimally suited to effective implementation was the interrelation amongst project scope, time frame, and budgetary constraints: establishment of a working relationship with a financial institution partner quickly enough to allow for one full year of pilot implementation, the extensive land use mapping required to quantify community forest holdings and monitor enrolled forest areas, the implementation of cacao market improvement steps within the confines of Ecuadorian bureaucracy, and the aim to actually reforest degraded areas as extensions of enrolled community environmental assets were grossly over-ambitious relative to the project's allocated 24-month duration. It is our opinion that as originally framed, this initiative would have been more appropriate for the ITTO Full Project category, both temporally and financially.

Conclusions & Recommendations

Identification: The aim to develop an approach to PES that inextricably links long-term, self-sustaining livelihood improvements for the rural poor to the conservation and restoration of surrounding tropical forests is deemed to be a critically fundamental step toward creating *lasting and economically efficient* conservation outcomes. After two years of project implementation, we remain firmly convinced that this approach holds the key to resolving the conservation–poverty dilemma that characterizes so much of the developing world's remaining natural resource expanses.

Design: For short-term pilot initiatives or in regions with a history of lending program failure, direct trades of livelihood improvement services for forest conservation commitments are a more feasible approach to PES innovations than the establishment of lending programs. This strategy circumvents the complications and potential for failure that are inherent to lending-based initiatives; however, it is critical that additional "safeties" be built into program design to ensure that conservation incentives are perpetual rather than terminated upon receipt of livelihood benefits. These safeties can take the form of removable benefit components whose permanence is explicitly dependent on conservation performance, or alternatively can be a reward whose value is dependent on individual conservation performance.

Implementation: Multi-faceted, short-term pilot programs aimed at innovating new PES mechanisms are necessarily limited by one of two factors: either replication or complexity. Sample size must be sacrificed in order to take into account the comprehensive range of components required for a successfully integrated program design, or vice versa—the program's inherent complexity must be sacrificed to guarantee a sample size that will allow for conclusions beyond the case study level. Both of these limitations could be remedied by a longer project duration (of approximately five years) and greater budgetary allocation.

Potential for Upscaling: This particular pilot project will transition into a long-term environmental mortgages program managed by a for-profit entity, including a gradual upscaling to include other cacao-producing and forest-possessing communities in the same reserve. A greater replication of the program's framework is indeed possible but will require significant financial resources (preferably from a sustainable stream) and a longer project duration. Critical in any effort for broad-scale replication will be to secure the unwavering support of local environmental authorities *a priori* and to incorporate the time frame required for cultivating trust and a fundamental understanding of the program's vision in participating communities. With these prerequisites, this PES approach represents a powerful solution to simultaneous poverty alleviation and natural resource conservation in the tropics.

1. Project identification

1.1 Context

Geographic location

In the northwest corner of Ecuador, Esmeraldas Province marks the southern limit of one of the most threatened and least known rainforest systems on earth: the Chocó Biogeographical Region. Spanning 100,000 km² of coastline up through Colombia to the border of Panama, these forests are typified by high biodiversity, extraordinary endemism, and rampant habitat loss. Moreover, since much of the Chocó's rich biodiversity overlaps with that of the Amazon, these Andean foothill forests are predicted to provide crucial climate refugia for species less adaptable to long-distance migration. Today, land conversion trends that began with government-sponsored colonization initiatives in 1964 have reduced the Ecuadorian Chocó to less than 4% of its original forest cover. What remains is largely contained within two sister reserves: the 204,000-hectare Cotacachi-Cayapas Ecological Reserve and the 121,000-hectare Mache-Chindul Ecological Reserve.

Socioeconomic and cultural contexts

Of the two reserves, Mache-Chindul is the more precarious due to its isolation from other forested areas and the presence of some 50 poverty-stricken communities within its borders. These communities lack all basic services, enjoy little governmental or institutional support, and have few options for livelihood improvement. Regional agriculture and timber markets are laden with intermediary brokers, ensuring a steady stream of poorly-paid raw materials from within the reserve. Mature or alternative markets are scarce to non-existent. Surrounded by old-growth rainforest, Mache-Chindul's inhabitants are unable to access any of the tremendous capital that the developed world associates with its existence (e.g. based on carbon sequestration, as a biodiversity storehouse, or climate adaptation values). Consequently, they are hacking away at their greatest asset for a pittance of its worth, one tree at a time.

When Mache-Chindul was declared a reserve in 1996, it is estimated that there were over 8,000 people living within its borders. Most communities at that time were at least third-generation residents, with the exception of Chachi indigenous (17% of the population) and Afro-ecuadorian (10-15% of the population) settlements, whose ancestral ties to the area go much further back. The reserve's management plan, completed in 2005, confers these inhabitants with the legal right to exist as communities but severely constrains their economic activities and prohibits individual land titles.

The vast majority of families in Mache-Chindul possess small-scale plantations of cacao that are now decades old. Most continue to grow '*Nacional*,' a variety of cacao native to the Ecuadorian Amazon and arguably the world's finest. Interestingly, based on twenty years' worth of attempts, the *Nacional* variety is all but impossible to cultivate outside of Ecuador. Based on this limited availability and its renowned aromatic qualities, global demand is consistently high. Presumably recognizing the potential that this scenario creates for low-impact livelihoods, Mache-Chindul's management plan identifies organic cacao production as a priority for sustainable economic development.

Environmental context

Although clearly defined as illegal, the prohibition of deforestation within reserve boundaries is not reinforced. Local inhabitants are the primary force driving deforestation, as alternative income options (including cacao) are insufficient for their subsistence needs. Timber export is seasonal, constrained by the rainy season, and geographically limited to the few roads and river drainages that reach reserve boundaries. Recently, Ecuador's Ministry of Environment imposed a 3-month timber moratorium in the Province of Esmeraldas, reinforced by a local military presence. Timber extraction came to a near-complete standstill, confirming that under organized vigilance and reinforcement it is quite possible to control the region's deforestation crisis. Unfortunately, since the moratorium was lifted in late 2013, timber extraction is steadily returning to its prior rampant pace.

Relevance to Ecuador's policies

The timing of this Small Project coincides with a fundamental change in Ecuador's perspective on forestry, as evidenced by the December 2010 submission to the national congress of a proposal defining new laws in nearly all aspects of the forestry sector. Inspired by Article 275 of the newly revised Constitution of the Republic of Ecuador as well as the criteria adopted during the Rio Conference of 1992, these new forestry laws focus on a shift from rigid and coercive conservation measures to incentive-based "constructive and proactive" measures that generate socioeconomic improvements for the population. More specifically, the government's new approach to forestry is characterized by a strong focus on promoting the development and implementation of SFM, non-timber forest products, and PES nationally. Because this project's aim was to guide the development of new conservation incentive mechanisms that directly facilitate the development of self-sustaining, low-impact livelihoods for forest-dwelling communities, it clearly responds to each of Ecuador's newly defined forestry sector priorities.

1.2 Origin and problem

Origin

This Small Project was formulated in response to an understanding of the target area's sociopolitical landscape and deforestation drivers that was gained during eight years of reforestation research in the Mache-Chindul Reserve. Initial due diligence for this project was managed under the auspices of the Pinchot Institute for Conservation, via creation of a new Institute program aimed at integrated conservation management within Mache-Chindul; this phase was comprised of three years of cross-disciplinary planning and analysis begun in 2008. It should also be noted, however, that the fundamentals of this endeavor evolved through a self-propelling, decade-long participatory process amongst dozens of stakeholders ranging from forest-dwelling communities to tropical forest ecologists to cacao entrepreneurs to conservation finance experts to the national director of Ecuador's forest sector.

Problem

By linking tangible economic benefits for local inhabitants to standing old-growth rainforest and degraded tropical lands under reforestation, this project proposed to directly address the REDDES Programme core problem as identified by the TPD: "*the inadequate capacity of ITTO producing member countries and their*

stakeholders to maintain and enhance environmental services of tropical forests by preventing and reducing deforestation and degradation.” For this geographic area, an overhaul of the cacao market was the most efficient and sustainable means to long-term livelihood improvement for local inhabitants. However, it should be noted that this socioeconomic focus was selected with the singular aim of ensuring that the area’s tropical forest resources—along with their associated environmental services and biodiversity—are conserved in the long-term. Key to the success of the environmental mortgages model is not what specific low-impact livelihood will be improved, but rather that the selected livelihood be grounded in pre-existing social and cultural conditions, and have potential to develop while forests are simultaneously conserved and restored.

Linking such livelihood improvement opportunities with incentives for environmental stewardship via a sustainable finance mechanism is innovative with respect to PES programs. Significantly, this approach promises to allow for the widespread participation of the rural poor—disproportionately important stakeholders (in terms of impact) that are typically excluded from access to compensation for environmental services. Further, because the originally envisioned approach was based on microfinance lending rather than direct payments, the environmental mortgage concept offered an economically sustainable solution to the creation of lasting incentives for forest conservation and restoration. The overwhelming majority of current PES programs are heavily subsidized and far from financially sustainable. This Small Project contributes to maintaining and enhancing forest environmental services in the tropics, a fundamental component of ITTO’s current priorities.

2. Project objectives and implementation strategy

Rationale

In low-income nations, efforts to alleviate poverty often produce incentives to degrade the local environment, and efforts to protect the environment often fail to improve livelihoods. Current strategies for tropical forest conservation have struggled with this challenge. Now commonly implemented in developing nations, ‘indirect approaches’ to conservation promote alternative livelihoods that reduce the use of natural resources, such as non-timber forest product marketing, sustainable agriculture, and eco-tourism. However, on-the-ground efforts have revealed that alternative livelihoods do not guarantee a concurrent decrease in environmental degradation; most often, these approaches have failed to protect biodiversity and ecosystems to the extent needed. Incentive payment approaches have recently been advocated and explored as a more direct means to environmental protection, including payment for ecosystem services, restricted land easements, and performance-based payments for biodiversity. The last of these approaches, such as paying directly for number of forest hectares conserved in critical climate refugia, is the most direct and cost-effective way to protect an environmental asset.

Incentive payments, however, are not livelihoods, and do not take into account the development needs of local inhabitants. Rather, they are short-term payments (typically annual) that rely on a long-term funding stream, translating into a high-risk scenario for ephemeral incentives. Unless continued, these lump or one-time payments do not create sustainable incentives for the long-term protection of an environmental asset.

Direct payment schemes can also be complicated by other factors, such as ethical issues due to economic differences between “buyer” and “seller” nations. In some cases, government policies can complicate or prohibit direct payment schemes. Lastly, these schemes often require legal land tenure for payments—a condition that does not coincide with the reality of natural resource expanses in most developing countries, where the poorest of the population settle out of economic necessity.

An alternative approach that circumvents each of these loopholes is the environmental mortgage. As originally envisioned, this strategy would use debt as a finance mechanism, linking investments in low-impact livelihoods to direct payments for natural resource conservation. While microfinance schemes have made impressive headway in alleviating global poverty over the past two decades, rural areas have not been as successfully reached as urban areas. As a result, most forest-dependent communities in remote tropical areas with intact natural resources remain in persistent poverty, without economic alternatives to deforestation. In addition to specifically targeting these groups, the environmental mortgage would represent the first microfinance model to directly incorporate a conservation component. By linking the availability of capital to conservation commitments, this key point helps to ensure that socioeconomic development does not accidentally create another deforestation driver. Finally, the environmental mortgage concept would incorporate two details critical to program sustainability: 1) community environmental lending trusts would be permanent, offering a perpetual incentive for forest conservation rather than one dependent on future funding streams, and 2) to allow for widespread participation in conservation incentives, the mechanism would transfer forest values based on the PES concept to local inhabitants with very little red tape (e.g. land tenure requirements, national policy on state-owned ecosystem services).

As implemented, a decision was made in conjunction with the project's Steering Committee to replace microfinance as the transfer mechanism for access to capital with a direct trade approach in which specific livelihood improvement needs would be facilitated in exchange for conservation commitments. This decision was based on the results of a year-long due diligence phase that revealed the insurmountable logistical constraints associated with establishing and implementing a working partnership with an Ecuadorian financial institution during a total project duration of 24 months. The modified PES transfer mechanism of direct livelihood-conservation trades was designed in such a way that all original goals were met: remote forest-dependent communities with intact natural resources were targeted, the availability of livelihood improvements was explicitly dependent on conservation commitments, livelihood benefits were set up with "safeties" that created perpetual conservation incentives, and the mechanism was set up with very little red tape to maximize incentive program participation. This modified approach of direct livelihood-conservation trades also serves to mitigate another critical factor revealed during the project's due diligence phase: the high probability of loan default and consequent program failure that characterize Esmeraldas Province, as evidenced by the records of local lending institutions.

Project Objectives

As defined in the project document, this project's development objective was to promote the development of an innovative approach to PES that inextricably links long-term, self-sustaining livelihood improvements

for the rural poor to the conservation and restoration of surrounding tropical forests via the model's application to forest-dwelling communities in the Mache-Chindul Ecological Reserve, Ecuador. Likewise, the specific objective was to clearly develop and successfully integrate the components of a first 'environmental mortgages' pilot program in three Mache-Chindul forest communities, generating a sustainable and viable approach to PES that ensures a concurrent reduction in tropical forest degradation and deforestation. Two adjustments were made to these objectives in the course of the implementation phase: 1) the forest restoration component was postponed until post-pilot stages, and 2) the number of pilot communities was reduced to two, of which one self-eliminated itself from the program in later stages. Both of these adjustments were made in conjunction with the project's Steering Committee, as it was recognized that the original project scope was too ambitious for effective implementation in a 24-month period.

Implementation Strategy

The strategic aim of this program was to demonstrate that deforestation in the Mache-Chindul Reserve could be permanently reversed by facilitating long-term livelihood improvements that are inextricably linked to environmental stewardship, thereby effectively piloting the environmental mortgages model. For this region, cacao represents the primary source of cash income for most families despite an immature and inefficient market. As such, 'livelihood improvements' here translate into a revamping of the current cacao market system. Based on the guidance of an experienced cacao cooperative with similar goals in eastern Ecuador¹, this process specifically entails: 1) the removal of intermediary brokers, 2) improvements in harvest yields, 3) acquisition of third-party organic certification, and 4) organization of a drying and fermenting cooperative to attain export-level quality and volume. As originally proposed, required funding for these steps would run through the 'environmental mortgages' model of microfinance-lending², in which lines of available credit are calculated against the global conservation value of intact natural resources beneath a community's *de facto* control. As implemented, however, the project's Year 1 due diligence phase revealed that the temporal constraints of establishing a working relationship with an Ecuadorian lending institution would definitively preempt pilot progress in the project's Year 2 implementation phase. To mitigate this issue, an alternate finance mechanism for transferring access to livelihood improvements was designed, consisting of direct conservation–livelihood trades that circumvent the necessity of a lending component but similarly ensure long-term, economically efficient conservation incentives.

Assumptions and Risks

Because this was classified as an ITTO Small Project, the approved project document did not include a logic framework matrix, where assumptions and risks are explicitly identified.

¹ The [Kallari Association](#) is a self-governed coalition of organic, fair-trade cacao producers comprised by over 850 indigenous families in the Ecuadorian Amazon. For more information, see their recent coverage in [The New York Times](#).

² The '[environmental mortgage](#)' is a mechanism for transferring access to economic values for intact natural resources into the hands of the local populations that determine their fate. Designed by Advanced Conservation Strategies, this concept was selected as a finalist for the [Marketplace on Innovative Financial Solutions for Development Competition](#).

3. Project Performance

Specific Objective

While the components of a first 'environmental mortgages' pilot program were clearly developed and successfully integrated as planned, the project's implementation phase was successfully completed with one rather than three Mache-Chindul forest communities. Nonetheless, successful pilot completion with one community tangibly contributed to the goal of generating a new, sustainable and viable approach to PES that ensures a concurrent reduction in tropical forest degradation and deforestation.

Outputs and Related Activities

As presented in the Project Document, four outputs were defined as requisite steps to successful project implementation; differences in realized performance are presented below, in italics.

- 1) Comprehensive due diligence for the design of a successful environmental mortgages framework during the project's development phase (i.e., year 1). Outcome indicators: All framework components have been addressed and feasible approaches to each designed; The final framework effectively integrates cacao, microfinance, conservation payment, and reforestation measures; All previously identified problem areas have been resolved.

While the environmental mortgages framework was successfully designed as planned during Year 1, integrating all model components and resolving identified problem areas, several modifications were required: a) microfinance was replaced with direct conservation-livelihood trades as the finance mechanism for transferring value of environmental assets to community members, and b) reforestation as a second means of enrolling community "environmental assets" in the program was postponed until post-pilot phases, in favor of a simplified model focused entirely on conservation of existing primary rainforest. These modifications were based on recommendations from the Steering Committee, which were in turn based on Year 1 due diligence/project development findings.

- 2) Establishment of a permanent environmental lending trust, to be employed in the achievement of cacao market system goals. Outcome indicators: By the beginning of year 2, the trust has been capitalized in conjunction with an experienced Ecuadorian MFI and is embedded locally to allow for community co-management and ownership of the process; A consensus on the relevancy of proposed cacao market system goals for implementation has been reached with target communities.

Microfinance was replaced with a value transfer mechanism of direct conservation-livelihood trades due to both temporal constraints and the high likelihood of lending program failure in Esmeraldas Province; the additional funding required to enable this new approach was secured via ITTO budget reprogramming and a \$28,000 crowd-funding campaign. All pilot communities successfully reached a consensus on cacao market system goals for the implementation phase.

- 3) Establishment of an organized cacao cooperative in each of the 3 communities to attain export-level quality and volume requirements. Outcome indicators: By the beginning of year 2, at least 50% of each community's cacao farmers are participating members of cooperatives; Cooperatives each have elected and trained staff to run operations during the project's second year.

An organized cacao cooperative was established in the single pilot community that successfully completed the project's implementation phase, with approximately 50% of their cacao farmers enrolled as formally affiliated coop members. All technical and administrative staff have been community-elected, and are now undergoing intensive training programs for required skills.

- 4) Progress in steps toward revamping the current cacao market system during the project's implementation phase (i.e., year 2). Outcome indicators: Cooperatives have engaged in the environmental mortgage program and have applied for a minimum of two community loans during the pilot phase; At least one market system step is completed during the project's second year, and at least two steps have been initiated.

The cacao cooperative that was established is firmly engaged in the environmental mortgage program and has completed two market system steps during the Year 2 implementation phase, with a total of four steps initiated (meaning that all identified market system improvements have been initiated).

Schedule and Expenditures

The starting date of this ITTO Small Project was delayed by one year due to the Ecuadorian Ministry of Environment's review process of International Agreements with multilateral donors. This delay introduced challenges in counterpart funding commitments for the Project Coordinator's salary. The project was successfully implemented during the planned 24-month period; however, due to modifications in the value transfer mechanism for livelihood improvements, additional fundraising efforts and budget reprogramming measures were required in order to meet budgetary needs.

4. Project Outcome and Target Beneficiaries' Involvement

Specific Objective and Output Indicators

As outlined in the Project Document, outcome indicators for the specific objective of this project and associated outputs were defined as follows:

1. By 2014, at least 75% of each community's cacao farmers will participate in organized cooperatives.
2. By 2014, each community's cacao cooperative will have engaged in at least two loans via the environmental mortgages microfinance-lending program.
3. By 2014, each community's cacao cooperative will have completed at least one necessary step in the cacao market overhaul.
4. By 2014, at least 50% of each community's surrounding forests will be designated as 'environmental assets' under participation in the environmental mortgages program.
5. By 2014, at least 25% of the degraded lands surrounding the three target communities will be under reforestation as environmental asset 'extensions' of the environmental mortgages program.
6. By 2014, the further capitalization of environmental trusts using carbon offsets funding (under the SocioBosque program) in designated environmental asset areas will be underway.

At the project's conclusion in late August 2014, specific achieved results were as follows:

1. In participating pilot community Mono Bravo, 14 of 34 (41.2%) cacao-farming households were formally affiliated with the cooperative formed as a result of this project ("ASMOBRA," Asociacion de Productores Mono Bravo).
2. The project's lending component has been replaced by direct conservation–livelihood trades (see sections above); at project completion, ASMOBRA had engaged in a total of two conservation–livelihood trades. Each of the two trades was multi-faceted, completing more than a single market system overhaul step in exchange for a substantive proportion of community forest holdings:
 - a. Two hundred hectares of conserved primary forest in exchange for the construction of a drying/fermenting center to enable export-quality cacao, a direct/confirmed linkage to an international buyer, capacity-building in technical and administrative skills required to run the drying/fermenting center, and facilitation of the legal registry process for a cacao producer's coop in Ecuador.
 - b. One hundred hectares of conserved primary forest in exchange for the third-party organic certification required by cacao buyer Original Beans and the implementation of volume-increasing production techniques (comprehensive trimming campaign, planting of shade trees, and use of organic fertilizers, pesticides, and fungicides) to triple current harvests.
3. Participating cacao cooperative ASMOBRA has completed two necessary steps in the cacao market overhaul, with a total of four steps initiated (meaning that all identified system improvements for market overhaul have been initiated):
 - a. Construction of a drying/fermenting center to enable export-quality cacao: completed.
 - b. Confirmed linkage to an international cacao buyer: completed.
 - c. Acquisition of third-party organic certification: initiated.
 - d. Volume-increasing production techniques, training and application: initiated.
4. Of the total 495 hectares of primary forest holdings in pilot community Mono Bravo, 300 hectares are now formally designated as environmental assets under participation in the environmental mortgages program, representing 60.6% of the community's total forest holdings.
5. As described in above sections, the project's reforestation component was postponed for post-pilot phases of the program; as such, no degraded lands surrounding pilot communities are currently under reforestation as environmental asset "extensions" of the program.
6. The project's lending component has been replaced by direct conservation–livelihood trades (see sections above); financing required to pay for specific livelihood improvement services was acquired via budget reprogramming and fundraising efforts during the project's duration, and is currently being augmented for post-pilot phases via both further fundraising and a potential voluntary carbon offsets agreement. Ecuador's SocioBosque program will not be employed due to the lengthy commitment required for participation (20 year minimum contract durations).

Impact: Tangible Outputs & Future Project Sustainability

At project conclusion, a pilot environmental mortgages program had been comprehensively developed and established in the community of Mono Bravo, including a detailed roadmap for the program's operations post-ITTO support. Project management has now been transferred to Amsterdam-based chocolate company Original Beans, based on the logic that management by a for-profit entity would represent the program's best opportunity at a financially sustainable future. Original Beans is committed to running the environmental mortgages program as defined by the ITTO Small Project phase, and maintains a strong interest in reincorporating the pilot community of Guayacan over the next one to two years. Outputs from this Small Project will contribute directly to that goal by providing comprehensive land use maps as well as economic analyses of income dynamics for both Mono Bravo and Guayacan pilot communities. Currently,

Mono Bravo is engaged in its second conservation-livelihood trade, aimed at increasing harvest volumes and acquiring organic certification, under this new management regime.

In addition to the tangible livelihood improvements that this project has catalyzed in the pilot community of Mono Bravo (substantive and reliable cacao price increases, autonomy, an environmentally sustainable community-run microenterprise) and their associated long-term environmental benefits (300 hectares of primary rainforest conserved in perpetuity), it has also importantly served as a cornerstone learning process for the development of direct conservation–livelihood trades as a new sustainable approach to PES in the tropics. Toward the aim of upscaling this pilot's broad-scale applicability, we have used this learning process to develop a user's guide to assist in the design of case-specific pro-poor conservation incentive mechanisms.

A detailed report on project sustainability post-ITTO support was presented in December 2013; it is annexed here for reference (see Annex 3).

Participation of Target Beneficiaries

Primary stakeholders involved in the implementation of this project included the following:

- forest-dwelling communities within Mache-Chindul Ecological Reserve, involved throughout the incentive mechanisms adaptive design process and most recently in managing a community-run cooperative cacao micro-enterprise (the livelihood developed as a result of this project)
- international cacao buyer Original Beans chocolate (Amsterdam-based), assuming the role of post-pilot project management and upscaling
- NGO partners Advanced Conservation Strategies, Social Enterprise Associates, and Pinchot Institute for Conservation, involved in aspects of incentive mechanism design and implementation. Together, these implementing partners are using lessons learned from this ITTO Small Project to formulate a guide to pro-poor conservation incentive mechanism design.
- Esmeraldas Province Ministry of Environment, involved in supervising the legalities of community access to economic alternatives within Mache-Chindul Ecological Reserve
- Academic Institution partner Monterey Institute for International Studies, involved in economic analyses of timber versus cacao income dynamics, as a key input for incentive design
- Independent GIS mapping consultant Laura Daly, responsible for comprehensive land use mapping in pilot communities, as basis for determining the environmental asset requirements of each conservation-livelihood trade

5. Assessment and Analysis

Project Rationale and Identification Process

As outlined in the Project Document, this initiative was gradually formulated through a largely self-propelling participatory process amongst stakeholders at all levels of involvement and over approximately ten years' time. It is our opinion that largely as a result of this process, the project rationale and identification process were both successfully developed and very adequately suited to addressing the problem at hand. What was not optimally suited to effective implementation was the interrelation amongst project scope, time frame, and budgetary constraints (further discussed below); it is our opinion that as originally framed, this initiative would have been more appropriate for the ITTO Full Project category, both temporally and financially.

Results of the Identification Process

Whereas the problems to be addressed and the project objectives aimed at doing so were both correctly defined, in retrospect, it is our opinion that the chosen implementation strategy was not well suited to the time and funding limitations that characterize the ITTO Small Project category. Collectively, the establishment of a working relationship with an Ecuadorian financial institution partner quickly enough to allow for one full year of pilot implementation, the extensive land use mapping required to accurately quantify community forest holdings and monitor enrolled forest areas, the implementation of cacao market improvement steps within the confines of Ecuadorian bureaucracy, and the aim to actually reforest degraded areas as extensions of enrolled community environmental assets were grossly over-ambitious relative to the project's allocated 24-month duration. This fact resulted in the need for several substantive modifications of the planned implementation approach, including one that significantly strained available financial resources (the shift away from externally provided loan funds to direct project financing of livelihood improvement services). In the end, said modifications were successful in adapting to the given time constraints, allowing for completion of the Project Objectives and Outputs.

Planned versus Actual Project Implementation

Three primary differences existed between planned and actual project implementation. Here, we present those differences along with measures and actions which may have helped to avoid the necessity for modifications:

a) Microfinance was replaced with a value transfer mechanism of direct conservation-livelihood trades as the PES finance method used to compensate community members for their environmental assets enrolled in the program. A longer project duration would have mitigated the need for this modification by allowing sufficient time for the establishment of a working relationship with an Ecuadorian financial institution and subsequent year-long pilot implementation phase. However, a project extension alone would not have resolved this issue due to budgetary constraints.

b) Reforestation, as a second means of enrolling community environmental assets in the program, was postponed until post-pilot phases in favor of a simplified model focused entirely on the conservation of existing primary rainforest. Again, this was primarily a temporal issue; the implementation of a reforestation component could have been included as originally envisioned were the project to have had a longer duration (i.e. 3-4 years instead of 2 years).

c) The number of participating pilot communities was reduced from three to one. Initial reduction from three to two pilot communities, following reconnaissance of ~15 communities throughout the reserve, was based on the limited number of communities that met required project criteria of 1) possessing substantial remaining forest, 2) a clear existing focus on cacao as a livelihood, and 3) strong "social capital" or unity. An additional consideration was based on pronounced differences observed in each candidate pilot community and the resultant complexity of pilot design under non-replicable circumstances. Subsequent events led to the further reduction of project activities from two pilot communities to one in February 2014, as described in detail here:

During ITTO Project Officer Floriano Pastore's field visit in July 2013, it was proposed and formalized that the amount of conserved forest required in exchange for the first livelihood benefit would be calculated as a proportion of each pilot community's total territory rather than as a fixed number. This

decision was based on the dramatic difference in forest holdings between the two communities (835 ha in Mono Bravo versus an original estimate of 4000 ha in Guayacan). The need for this adjustment was discussed with both communities, emphasizing the relative magnitude of positive impact that the first livelihood benefit would impart, and all confirmed to be in agreement: enrolled forest requirements would be calculated as 25% of each community's total territory holdings, once reliably quantified via mapping. This turned out to be 600 ha for Guayacan, based on a final 2400 ha total. Because the mapping of Guayacan's steep, hilly, and extensive terrain took a total of five months, a decision was made to move forward with the implementation of livelihood benefit #1 based on good faith and their verbal commitment. Five months of project resources were dedicated to this while mapping was conducted. When presented with final GIS maps of each member's land and required to formalize their conservation commitment in January 2014, the community failed to produce the agreed upon number of hectares (offering 243 instead of 600 ha). We gave them another two weeks to coordinate and hired a new community liaison to spearhead the process, but progress was minimal at a follow-up meeting. The community stated that they had no memory of having agreed to the new terms of 25% laid out during Mr. Pastore's field visit and meetings (despite having signed corresponding Acts), and insisted that we give them the proposed livelihood benefit in exchange for the originally discussed 200 hectares of conserved forest. At this point, we offered them a plan B under which the 243 ha could be conserved in exchange for an alternative livelihood benefit package aimed at improving harvest volumes, while still allowing them access to the other pilot community's drying & fermenting center (including direct linkage to the international cacao buyer). They refused this offer as well, even after it was explained that this would allow for more timely cultivation of trust and working relationship that could then be leveraged for implementation of the 600 ha trade in exchange for their own drying & fermenting center. Efforts to reason and develop alternate solutions were repeatedly refused. In short, the pilot community of Guayacan was self-eliminated.

In retrospect, we believe that the original goal of replicating the project in three pilot communities was not cohesive with the ambitious complexity and multifaceted nature of the project implementation strategy. This modification could have been mitigated by either increasing the project duration to allow for the effective simultaneous management of multiple project components in three diverse communities, or by having initiated the pilot with a more simplified and streamlined implementation strategy, such as the one that resulted with the modifications that were developed and implemented during year two.

Time and Project Inputs

Project resources provided—in terms of the quality and quantity of personnel and equipment, available knowledge, and expertise—were adequate for effective project implementation. As discussed in greater detail above, however, both time and budget were insufficient to match the full scope of this project as originally outlined in the Project Document.

External Influences

Two primary external influences had direct effects on the efficiency of project implementation. First, Ecuador's Ministry of Environment played a role in project dynamics by introducing obstacles at both national and regional levels: 1) nationally, the year-long review process of ITTO's international agreement for project collaboration financially strained the budget as originally proposed, by occupying counterpart funding earmarked for the project coordinator's salary that later had to be raised again, and 2) regionally, a lack of intra-agency coordination with respect to the theme of materials permitted for constructing livelihood improvement step #1 within reserve boundaries led to the need for significant mitigation measures, both

temporally and financially in order to get the project back on track. Second, competing financial interests in the local cacao market also presented temporal obstacles to project progress by intentionally trying to undermine trust cultivated with pilot communities and submitting false allegations to local environmental authorities about the negative impacts of project activities. Straightforward mitigating measures were effective in all cases, but nonetheless time consuming and consequently budget-consuming.

Participation of Project Beneficiaries

The participation and involvement of relevant stakeholders was adequate in all programmed project activities, including the significant role of pilot communities in contributing to the adaptive design of incentive mechanism strategies. This role continues in the post-pilot phase, as the project shifts to a new executing structure under for-profit financial management in collaboration with Original Beans chocolate company. In contrast, whereas the interest and involvement of national Ministry of Environment authorities (both National Forestry Director and the National Director of Biodiversity & Conserved Areas) gained an impressive momentum during the project's first year, with great prospects for upscaling and policy impact, this unfortunately dissipated during the project's second year under the current administration's comprehensive overhaul of all Ministry personnel.

Post-project Sustainability

As described above (section 4., *Impact: Tangible Outputs & Future Project Sustainability*), a detailed roadmap has been developed for post-ITTO project management under Original Beans chocolate company, the confirmed cacao buyer for pilot community Mono Bravo's new cacao cooperative ASMOBRA. Original Beans plans to manage the environmental mortgages program in perpetuity in Mono Bravo, as envisioned and developed during this ITTO pilot project, and to later incorporate the second, previously participating community of Guayacan. For the near future, national influences on forestry policy and sustainable economic development within protected areas appear unlikely, due to the restructuring and overhaul of all personnel in all of Ecuador's various Ministries.

Institutions Involved

In our opinion, the institutions selected as collaborating partners and external specialists for project implementation were an excellent fit for the work at hand, in terms of available knowledge base, specialized expertise, and hands-on experience in remote rural forest communities.

6. Lessons Learned

Project Identification, Design, and Implementation

The following lessons have been learned from identification, design, and implementation of this ITTO Small Project:

- Projects which seek to establish formally defined functioning relationships with national institutions such as banks, academic institutions, or government agencies in developing countries should allow for approximately one year's time specifically dedicated to this aim.
- Projects which consider incorporating a lending component of any kind should conduct initial pre-project due diligence to determine lending trends in their particular geographic region, as repayment and relative program success vary greatly according to local socio-cultural conditions.
- Whereas a minimum sample size of three is desirable in order to be able to draw any conclusions other than "case study" type observations, in multi-faceted, interdisciplinary initiatives with

ambitious scopes it is often not realistic. Either one or the other must be sacrificed—all project components be included with a replication level of only one to two, or project components be greatly simplified to achieve a greater replication level.

- Projects that attempt to establish new programs from the ground-up in remote, poverty-stricken villages require approximately one year more in duration to allow for cultivation of trust and effective mitigation of external forces that try to undermine that trust.
- Projects that incorporate a reforestation component should be of a minimum three-year duration, and have a limited number of other principal focal components (1-2 total).
- The participatory design of pilot programs is especially challenging and frustrating for remote communities that have not previously experienced, first-hand, the process of program implementation from outside sponsors; this issue is inevitable in designing innovative solutions.
- Especially in the case of incentive mechanisms, program design is an innately iterative process that depends on accurate quantification of elusive baseline data and a comprehensive understanding of local, site-specific conditions. These conditions can vary over a spatial scale as small as from one community to another, and baseline data collection requires substantial project resources in terms of time and effort.
- Projects that aim to influence national policy or achieve effective upscaling should be of a long-term nature (5 year minimum), with sustainable rather than ephemeral funding sources to ensure continuity. Hybrid, for-profit ventures and venture capital may play key roles in creating successful programs of this nature.
- A critical component of pilot community success is the presence of at least one natural-born leader to champion project progress and effectively communicate the program's vision to "the masses." Even a single individual with these characteristics can make the difference between program success and failure.

Operational Matters

The following lessons have been learned from operational matters of this ITTO Small Project:

- Ideally, the option of a funded project extension should be offered to initiatives in the Small Project category that can demonstrate substantive potential for impact if extended; this option could be justified by the reality that many bureaucratic delays and external influences are not predictable or preventable by the executing agency.
- Ideally, budget reprogramming would be offered with an option for additional funds where justified, if it was determined that the additional funds would make a significant difference in project success.
- A separate administrative salary should be budgeted for project documentation requirements alone.
- In the case of community-based initiatives, the involvement of local community liaisons should be a requirement from project outset.

7. Conclusions and Recommendations

Identification

The aim to develop an approach to PES that inextricably links long-term, self-sustaining livelihood improvements for the rural poor to the conservation and restoration of surrounding tropical forests is deemed to be a critically fundamental step toward creating *lasting and economically efficient* conservation outcomes. After two years of project implementation, we remain firmly convinced that this approach holds the key to resolving the conservation–poverty dilemma that characterizes so much of the developing world's remaining natural resource expanses.

Design

For short-term pilot initiatives or in regions with a history of lending program failure, direct trades of livelihood improvement services for forest conservation commitments are a logistically more feasible approach to PES innovations than the establishment of lending programs. This strategy circumvents the complications and potential for failure that are inherent to lending-based initiatives; however, it is critical that additional "safeties" be built into program design to ensure that conservation incentives are perpetual rather than terminated upon receipt of livelihood benefits. These safeties can take the form of removable benefit components whose permanence is explicitly dependent on conservation performance (i.e. a sanction), or alternatively can be financial incentives whose value is dependent on individual conservation performance (i.e. a reward).

Implementation

Multi-faceted, short-term, interdisciplinary pilot programs aimed at innovating new PES mechanisms are necessarily limited by one of two factors: either replication or complexity. That is, sample size must be sacrificed in order to take into account the comprehensive range of components required for a successfully integrated program design, or vice versa—the program's inherent complexity must be sacrificed in order to guarantee a sample size that will allow for conclusions beyond the case study level. Both of these limitations could be remedied with a longer project duration (we estimate approximately five years) and greater budgetary allocation.


Organization & Management

Overall, collaboration amongst NGO implementing agencies was quite successful despite the challenges of simultaneous component-specific design and consequent program integration. Governmental support of the program was highly variable, with pronounced collaboration during year one and strained relations during year two (following a personnel overhaul). Local community liaisons were found to be absolutely critical components of program advancement during the implementation phase; in retrospect, they should have been incorporated during the due diligence phase to augment early program design learning. Administrative tasking was often found to be unmanageable in conjunction with multiple other program components that required attention; a designated local administrative personnel would have greatly contributed to remedying this temporal constraint.

Potential for Upscaling

As terminated, this particular pilot project will transition into a long-term environmental mortgages program managed by Original Beans chocolate company, including a gradual upscaling to include other cacao-producing and forest-possessing communities in the same reserve. A more significant replication of the program's framework is indeed possible but will require greater financial resources (preferably from a sustainable stream) and a much longer project duration. Critical in any effort for broad-scale replication will be to secure the unwavering support of local environmental authorities *a priori* and to incorporate the time frame required for cultivating trust and a fundamental understanding of the program's vision in participating communities. With these components as deliberate prerequisites, it is our belief that this PES approach represents a powerful solution to simultaneous poverty alleviation and natural resource conservation.

Responsible for the Report

Name: Dr. Amy E. Rogers
Position held: Project Coordinator
Signature: 
Date: November 24, 2014

Annex 1. Project Financial Statement

Please note that the budget of ITTO Small Project RED SPD 055/11 Rev.4(F) was proposed for reallocation and approved during the Project Steering Committee Meeting in 2013. Primary changes to the project's original budget are outlined in the NOL presented here; the financial statement & cash flow tables following this page are based on the approved, reallocated budget in utilization at the time of project completion.



**Organización Internacional
de las Maderas Tropicales (OIMT)**
INTERNATIONAL ORGANIZATIONS CENTER – 5F, PACIFICO-YOKOHAMA
1-1-1, MINATO-MIRAI, NISHI-KU, YOKOHAMA 220-0012, JAPAN

F A C S I M I L

Page 1 of 1 page

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Date: September 13 th , 2013	Ref. No. F.13-0224	
To: Mr. Felipe Vallejo Espinosa Chief Executive Director Fundación Equilibrio Azul –FEA Dr. Amy E. Rogers Project Coordinator		From: Mr. Emmanuel Ze Meka Executive Director ITTO – Yokohama, Japan
E-mail: arogers@pinchot.org felipe@equilibrioazul.org		

RED SPD 55/11 Rev.2 (F)
**“INTEGRATING SUSTAINABLE LIVELIHOODS, ENVIRONMENTAL MORTGAGES, AND
SCIENCE-BASED REFORESTATION FOR TANGIBLE FOREST CONSERVATION CHANGE IN
THE ECUADORIAN CHOCÓ”**

Dear Mr. Vallejo:

Thank you for submitting the details of the Proposed Reallocation of ITTO Budget Funds, amounting to a total of US\$ 30,749.50. We further observe that 9 budget components are increasing their final values, being the main ones the followings: lines **11.1** (Project Coordination, plus US\$ 10,124.50); **52** (Raw-materials, plus US\$ 6,000.00) and **12.4** (Sustainable Development trainee, plus US\$ 3,150.00). On the other hand, 8 lines are decreasing their final amount, being the main ones: line **14.1** (International Consultant, less US\$ 17,000.00) and **14.2** (International Consultant, less US\$ 7,600.00).

We will be keeping the original table showing all changes as reference for the reallocation that we are now approving.

I am pleased to inform you that I have no objection to your proposal for the budget reallocation as described above.

I take this opportunity to renew the feelings of my consideration.

Yours Sincerely,

Emmanuel Ze Meka
Executive Director

DECLARACION FINANCIERA DEL PROYECTO
Organizacion Internacional de las Maderas Tropicales

Numero del Proyecto. RED_SPD_055_11_Ecuador

Periodo que termina el: 31 Agosto 2014

Titulo del Proyecto: *Integración de medios de vida sostenibles, micro-créditos de 'hipoteca ambiental', y reforestación basada en la ciencia para alcanzar logros tangibles de conservación en los bosques del Chocó Ecuatoriano.*

Componente	Monto Aprobado (A)	Gastos Hasta-la-fecha			Monto No-gastado (F) { A - E }
		Comprometido (B)	Gastado Trim (C)	Total (E) { B + C }	
I. Fondos Manejados por Agencia Ejecutora					
10. Personal del Proyecto					
11. Expertos Nacionales (a largo plazo)					
11.1 Coordinadora del Proyecto	\$64,036.80		\$ 64,076.33	\$ 64,076.33	-\$ 39.53
11.3 Contador	\$5,632.00		\$ 6,132.00	\$ 6,132.00	-\$ 500.00
11.4 Punto de Contacto Equilibrio Azul	\$7,168.00		\$ 7,168.00	\$ 7,168.00	\$ 0.00
12. Otro Personal					
12.11 Asistente de Campo 1	\$500.00		\$ 500.00	\$ 500.00	\$ 0.00
12.12 Asistente de Campo 2	\$500.00		\$ 0.00	\$ 0.00	\$ 500.00
12.31 Promotor Comunitario 1	\$1,500.00		\$ 1,653.70	\$ 1,653.70	-\$ 153.70
12.32 Promotor Comunitario 2	\$1,185.31		\$ 1,197.00	\$ 1,197.00	-\$ 11.69
12.33 Promotor Comunitario 3	\$1,358.69		\$ 1,419.30	\$ 1,419.30	-\$ 60.61
12.4 Pasante de Desarrollo Sostenible	\$5,250.00		\$ 5,250.00	\$ 5,250.00	\$ 0.00
12.5 Pasante de Cacao	\$6,347.45		\$ 5,896.80	\$ 5,896.80	\$ 450.65
12.6 Pasante de Mapeo	\$7,800.00		\$ 8,250.00	\$ 8,250.00	-\$ 450.00
12.7 Administrador (campo)	\$7,200.00		\$ 7,600.00	\$ 7,600.00	-\$ 400.00
14. Consultores Internacionales					
14.1 Consultor 1 (marco hipoteca ambiental)	\$0.00		\$ 0.00	\$ 0.00	\$ 0.00
14.2 Consultor 2 (micro-finanza/aspectos de negocio)	\$0.00		\$ 0.00	\$ 0.00	\$ 0.00
15. Becas y Capacitaciones					
15.1 Taller 1 (co-manejo de fideicomisos ambientales)	\$0.00		\$ 0.00	\$ 0.00	\$ 0.00
15.2 Taller 2 (personal para cooperativas de cacao)	\$381.56		\$ 381.56	\$ 381.56	\$ 0.00
15.3 Taller 3 (mejoras en cosecha de cacao)	\$0.00		\$ 0.00	\$ 0.00	\$ 0.00
19. Total del Componente:	\$108,859.81		\$109,524.69	\$ 109,524.69	-\$ 664.88
30. Viajes					
31. Viáticos					
31.1 Coordinadora del Proyecto	\$1,550.00		\$ 1,576.62	\$ 1,576.62	-\$ 26.62
31.2 Consultores Internacionales	\$1,210.01		\$ 1,210.01	\$ 1,210.01	\$ 0.00
31.3 Pasantes	\$4,000.00		\$ 3,909.53	\$ 3,909.53	\$ 90.47
32. Viajes Internacionales					
32.2 Consultores Internacionales	\$2,385.18		\$ 2,385.18	\$ 2,385.18	\$ 0.00
33. Gastos de Transporte Local	\$6,800.00		\$ 6,786.43	\$ 6,786.43	\$ 13.57
39. Total del Componente:	\$15,945.19		\$15,867.77	\$ 15,867.77	\$ 77.42
40. Bienes de Capital					
44. Equipos de Capital					
44.1 Equipos de Computación	\$920.00		\$ 906.81	\$ 906.81	\$ 13.19
44.3 Equipos de Mapeo	\$1,000.00		\$ 1,008.99	\$ 1,008.99	-\$ 8.99
49. Total del Componente:	\$1,920.00		\$1,915.80	\$ 1,915.80	\$ 4.20
50. Suministros					
51. Misceláneo	\$3,000.00		\$ 2,941.34	\$ 2,941.34	\$ 58.66
52. Materias Primas	\$5,700.00		\$ 5,062.94	\$ 5,062.94	\$ 637.06
53. Utilidades	\$3,172.00		\$ 3,265.82	\$ 3,265.82	-\$ 93.82
59. Total del Componente:	\$11,872.00		\$ 11,270.10	\$ 11,270.10	\$ 601.90
60. Misceláneo					
62. Servicios (instituciones financieras)	\$200.00		\$ 218.64	\$ 218.64	-\$ 18.64
63. Servicios (certificaciones)	\$20.00		\$ 20.00	\$ 20.00	\$ 0.00
69. Total del Componente:	\$220.00		\$ 238.64	\$ 238.64	-\$ 18.64
Sub-Total:	\$138,817.00		\$ 138,817.00	\$ 138,817.00	\$ 0.00
II. Fondos Retenidos por la OIMT					
80. Monitoreo y Administración del Proyecto					
83. Costos de Apoyo al Programa OIMT (8%)	\$11,105.36				
89. Total del Componente:	\$11,105.36				
Sub-Total:	\$11,105.36				
99. TOTAL GENERAL:	\$149,922.36				

Nota: Componentes del Presupuesto son los que fueron detallados en el Documento del Proyecto.

a/ Fondos retenidos y contabilizados por la OIMT - Agencia Ejecutora no se dispone de los detalles.

DECLARACION FINANCIERA DEL PROYECTO

Fundación Equilibrio Azul (Organismo Ejecutor)

Numero del Proyecto. RED_SPD_055_11_Ecuador

Periodo que termina el: 31 agosto 2014

Titulo del Proyecto: *Integración de medios de vida sostenibles, micro-créditos de 'hipoteca ambiental', y reforestación basada en la ciencia para alcanzar logros tangibles de conservación en los bosques del Chocó Ecuatoriano.*

Componente	Monto Aprobado (A)	Gastos Hasta-la-fecha			Monto No-gastado (E) { A - D }
		Comprometido (B)	Gastado (C)	Total (D) { B + C }	
I. Fondos Manejados por Agencia Ejecutora					
10. Personal del Proyecto					
11. Expertos Nacionales (a largo plazo)					
11.5 Coordinadora de Voluntarios	\$7,680.00		\$7,680.00	\$7,680.00	\$0.00
11.6 Dirección Ejecutiva	\$9,600.00		\$9,600.00	\$9,600.00	\$0.00
11.7 Asesor Legal	\$9,600.00		\$9,600.00	\$9,600.00	\$0.00
19. Total del Componente:	\$26,880.00		\$26,880.00	\$26,880.00	\$0.00
50. Suministros					
54. Suministros de Oficina	\$2,400.00		\$2,400.00	\$2,400.00	\$0.00
59. Total del Componente:	\$2,400.00		\$2,400.00	\$2,400.00	\$0.00
60. Misceláneo					
64. Equipos de oficina y computación	\$7,200.00		\$7,200.00	\$7,200.00	\$0.00
69. Total del Componente:	\$7,200.00		\$7,200.00	\$7,200.00	\$0.00
70. Costos Administrativos Nacionales					
71. Costos administrativos organismo ejecutor	\$11,520.00		\$11,520.00	\$11,520.00	\$0.00
79. Total del Componente:	\$11,520.00		\$11,520.00	\$11,520.00	\$0.00
100. TOTAL GENERAL:	\$48,000.00		\$48,000.00	\$48,000.00	\$0.00

Nota: Componentes del Presupuesto son los que fueron detallados en el Documento del Proyecto.

a/ Fondos retenidos y contabilizados por la OIMT - Agencia Ejecutora no se dispone de los detalles.

DECLARACION FINANCIERA DEL PROYECTO
Pinchot Institute for Conservation (Otras Fuentes de Fondos)

Numero del Proyecto. RED_SPD_055_11_Ecuador

Periodo que termina el: 31 agosto 2014

Titulo del Proyecto: *Integración de medios de vida sostenibles, micro-créditos de 'hipoteca ambiental', y reforestación basada en la ciencia para alcanzar logros tangibles de conservación en los bosques del Chocó Ecuatoriano.*

Componente	Monto Aprobado (A)	Expenditures To-date			Monto No-gastado (E) { A - D }
		Comprometido (B)	Gastado (C)	Total (D) { B + C }	
I. Fondos Manejados por Agencia Ejecutora					
10. Personal del Proyecto					
11. Expertos Nacionales (a largo plazo)					
11.1 Coordinadora del Proyecto	20,000.00		13,646.03	13,646.03	6,353.97
12. Otro Personal					
12.31 Promotor Comunitario 1	-		1,128.60	1,128.60	(1,128.60)
12.5 Pasante de Cacao	-		342.00	342.00	(342.00)
12.6 Pasante de Mapeo	-		1,350.00	1,350.00	(1,350.00)
12.7 Administrador (campo)	-		1,600.00	1,600.00	(1,600.00)
19. Total del Componente:	20,000.00		18,066.63	18,066.63	1,933.37
30. Viajes					
31. Viáticos					
31.3 Pasantes	-		624.00	624.00	(624.00)
33. Gastos de Transporte Local	1,050.00		1,934.41	1,934.41	(884.41)
39. Total del Componente:	1,050.00		2,558.41	2,558.41	(1,508.41)
40. Bienes de Capital					
43. Vehículos	12,500.00		12,500.00	12,500.00	-
44. Equipos de Capital					
44.1 Equipos de Computación	4,500.00		4,500.00	4,500.00	-
44.2 Equipos Forestales	1,700.00		1,700.00	1,700.00	-
49. Total del Componente:	18,700.00		18,700.00	18,700.00	-
50. Suministros					
51. Misceláneo	-		699.27	699.27	(699.27)
52. Materia Prima	400.00		3,978.74	3,978.74	(3,578.74)
53. Utilidades	1,872.00		1,294.81	1,294.81	577.19
54. Suministros de Oficina	200.00		200.00	200.00	-
59. Total del Componente:	2,472.00		6,172.82	6,172.82	(3,700.82)
60. Misceláneo					
66. Servicios (auditoria independiente financiera)	2,000.00		2,000.00	2,000.00	-
69. Total del Componente:	2,000.00		2,000.00	2,000.00	-
70. Costos Administrativos Nacionales					
71. Costos administrativos organismo ejecutor	\$0.00		\$880.00	\$880.00	-\$880.00
79. Total del Componente:	\$0.00		\$880.00	\$880.00	-\$880.00
Sub-Total:	44,222.00		47,497.86	47,497.86	(3,275.86)
II. Fondos Retenidos por la OIMT					
Sub-Total:	\$0.00	-	-	-	a/
99. TOTAL GENERAL:	\$44,222.00				

Nota: Componentes del Presupuesto son los que fueron detallados en el Documento del Proyecto.

a/ Fondos retenidos y contabilizados por la OIMT - Agencia Ejecutora no se dispone de los detalles.

DECLARACION FINANCIERA DEL PROYECTO
Advanced Conservation Strategies (Otras Fuentes de Fondos)

Numero del Proyecto. RED_SPD_055_11_Ecuador

Periodo que termina el: 31 agosto 2014

Titulo del Proyecto: *Integración de medios de vida sostenibles, micro-créditos de 'hipoteca ambiental', y reforestación basada en la ciencia para alcanzar logros tangibles de conservación en los bosques del Chocó Ecuatoriano.*

Componente	Monto Aprobado (A)	Expenditures To-date			Monto No-gastado (E) { A - D }
		Comprometido (B)	Gastado (C)	Total (D) { B + C }	
I. Fondos Manejados por Agencia Ejecutora					
12. Otro Personal					
12.2 Pasante de Oficina (EEUU)	\$9,600.00		\$ 9,600.00	\$ 9,600.00	\$0.00
19. Total del Componente:	\$9,600.00		\$ 9,600.00	\$ 9,600.00	\$ -
40. Bienes de Capital					
44. Equipos de Capital					
44.1 Equipos de Computación	\$4,000.00		\$ 4,000.00	\$ 4,000.00	\$ -
49. Total del Componente:	\$4,000.00		\$ 4,000.00	\$ 4,000.00	\$ -
Sub-Total:	\$13,600.00		\$ 13,600.00	\$ 13,600.00	\$ -
II. Fondos Retenidos por la OIMT					
Sub-Total:	\$0.00	-	-	-	a/
99. TOTAL GENERAL:	\$13,600.00				

Nota: Componentes del Presupuesto son los que fueron detallados en el Documento del Proyecto.

a/ Fondos retenidos y contabilizados por la OIMT - Agencia Ejecutora no se dispone de los detalles.

Annex 2. Project Cash Flow Statement

DECLARACION DE FLUJO DE FONDOS DEL PROYECTO

Organizacion Internacional de las Maderas Tropicales

Numero del Proyecto. RED_SPD_055_11_Ecuador

Periodo que termina el: 31 Agosto 2014

Titulo del Proyecto: *Integración de medios de vida sostenibles, micro-créditos de 'hipoteca ambiental', y reforestación basada en la ciencia para alcanzar logros tangibles de conservación en los bosques del Chocó Ecuatoriano.*

Componente	Referencia	Fecha	Monto	
			en \$USD	en Moneda Local
A. Fondos recibidos de la OIMT				
1. Primera instalacion			60,000.00	
2. Segunda instalacion			40,000.00	
3. Tercera instalacion			20,000.00	
4. Cuarta instalacion			18,817.00	
Total Fondos Recibidos:			138,817.00	
B. Gastos por Agencia Ejecutora				
10. Personal del Proyecto				
11. Expertos Nacionales (a largo plazo)				
11.1 Coordinadora del Proyecto			\$ 64,076.33	
11.3 Contador			\$ 6,132.00	
11.4 Punto de Contacto Equilibrio Azul			\$ 7,168.00	
12. Otro Personal				
12.11 Asistente de Campo 1			\$ 500.00	
12.12 Asistente de Campo 2			\$ 0.00	
12.31 Promotor Comunitario 1			\$ 1,653.70	
12.32 Promotor Comunitario 2			\$ 1,197.00	
12.33 Promotor Comunitario 3			\$ 1,419.30	
12.4 Pasante de Desarrollo Sostenible			\$ 5,250.00	
12.5 Pasante de Cacao			\$ 5,896.80	
12.6 Pasante de Mapeo			\$ 8,250.00	
12.7 Administrador (campo)			\$ 7,600.00	
14. Consultores Internacionales				
14.1 Consultor 1 (marco hipoteca ambiental)			\$ 0.00	
14.2 Consultor 2 (micro-finanza/aspectos de negocio)			\$ 0.00	
15. Becas y Capacitaciones				
15.1 Taller 1 (co-manejo de fideicomisos ambientales)			\$ 0.00	
15.2 Taller 2 (personal para cooperativas de cacao)			\$ 381.56	
15.3 Taller 3 (mejoras en cosecha de cacao)			\$ 0.00	
19. Total del Componente:			109,524.69	
30. Viajes				
31. Viáticos				
31.1 Coordinadora del Proyecto			\$ 1,576.62	
31.2 Consultores Internacionales			\$ 1,210.01	
31.3 Pasantes			\$ 3,909.53	
32. Viajes Internacionales				
32.2 Consultores Internacionales			\$ 2,385.18	
33. Gastos de Transporte Local			\$ 6,786.43	
39. Total del Componente:			15,867.77	
40. Bienes de Capital				
44. Equipos de Capital				
44.1 Equipos de Computación			906.81	
44.3 Equipos de Mapeo			1,008.99	
49. Total del Componente:			1,915.80	
50. Suministros				
51. Misceláneo			\$ 2,941.34	
52. Materias Primas			\$ 5,062.94	
53. Utilidades			\$ 3,265.82	
59. Total del Componente:			11,270.10	
60. Misceláneo				
62. Servicios (instituciones financieras)			\$ 218.64	
63. Servicios (certificaciones)			\$ 20.00	
69. Total del Componente:			238.64	
Total Gastos Hasta-la-fecha:			138,817.00	
Fondos Restantes (A-B):			0.00	

Notas: (1) Montos de dolares americanos fueron convertidos utilizando la tasa promedio de intercambio cuando los fondos fueron recibidos por la Agencia Ejecutora.

(2) El Total Gastos Hasta-la-fecha (en moneda local) deberia ser el mismo monto anotado como Sub-Total de la columna (C) de la Declaracion Financiera.

DECLARACION DE FLUJO DE FONDOS DEL PROYECTO

Fundación Equilibrio Azul (Organismo Ejecutor)

Numero del Proyecto. RED_SPD_055_11_Ecuador

Periodo que termina el: 31 agosto 2014

Titulo del Proyecto: *Integración de medios de vida sostenibles, micro-créditos de 'hipoteca ambiental', y reforestación basada en la ciencia para alcanzar logros tangibles de conservación en los bosques del Chocó Ecuatoriano.*

Componente	Referencia	Fecha	Monto	
			en \$USD	en Moneda Local
A. Fondos recibidos de la OIMT				
1. Primera instalacion			\$ 60,000.00	\$ 60,000.00
2. Segunda instalacion			\$ 40,000.00	\$ 40,000.00
3. Tercera instalacion			\$ 20,000.00	\$ 20,000.00
4. Cuarta instalacion			\$ 18,817.00	\$ 18,817.00
Total Fondos Recibidos:			\$ 138,817.00	\$ 138,817.00
B. Gastos por Agencia Ejecutora				
10. Personal del Proyecto				
11. Expertos Nacionales (a largo plazo)				
11.5 Coordinadora de Voluntarios			\$7,680.00	\$7,680.00
11.6 Dirección Ejecutiva			\$9,600.00	\$9,600.00
11.7 Asesor Legal			\$9,600.00	\$9,600.00
19. Total del Componente:			\$26,880.00	\$26,880.00
50. Suministros				
54. Suministros de Oficina			\$2,400.00	\$2,400.00
59. Total del Componente:			\$2,400.00	\$2,400.00
60. Misceláneo				
64. Equipos de oficina y computación			\$7,200.00	\$7,200.00
69. Total del Componente:			\$7,200.00	\$7,200.00
70. Costos Nacionales Administrativos				
71. Costos administrativos organismo ejecutor			\$11,520.00	\$11,520.00
79. Total del Componente:			\$11,520.00	\$11,520.00
Total Gastos Hasta-la-fecha:			\$48,000.00	\$48,000.00
Fondos Restantes (A-B):			\$ -	\$ -

Notes: (1) Montos de dolares americanos fueron convertidos utilizando la tasa promedia de intercambio cuando los fondos fueron recibidos por la Agencia Ejecutora.
 (2) El Total Gastos Hasta-la-fecha (en moneda local) deberia ser el mismo monto anotado como Sub-Total de la columna (C) de la Declaracion Financiera.

DECLARACION DE FLUJO DE FONDOS DEL PROYECTO

Pinchot Institute for Conservation (Otras Fuentes de Fondos)

Numero del Proyecto. RED_SPD_055_11_Ecuador Periodo que termina el: 31 agosto 2014

Título del Proyecto: *Integración de medios de vida sostenibles, micro-créditos de 'hipoteca ambiental', y reforestación basada en la ciencia para alcanzar logros tangibles de conservación en los bosques del Chocó Ecuatoriano.*

Componente	Referencia	Fecha	Monto	
			en \$USD	en Moneda Local
A. Fondos recibidos de la OIMT				
1. Primera instalacion			\$ 60,000.00	\$ 60,000.00
2. Segunda instalacion			\$ 40,000.00	\$ 40,000.00
3. Tercera instalacion			\$ 20,000.00	\$ 20,000.00
4. Cuarta instalacion			\$ 18,817.00	\$ 18,817.00
Total Fondos Recibidos:			\$ 138,817.00	\$ 138,817.00
B. Gastos por Agencia Ejecutora				
10. Personal del Proyecto				
11 Expertos Nacionales (a largo plazo)				
11.1 Coordinadora del Proyecto			\$ 13,646.03	\$ 13,646.03
12 Otro Personal				
12.31 Promotor Comunitario 1			\$ 1,128.60	\$ 1,128.60
12.5 Pasante de Cacao			\$ 342.00	\$ 342.00
12.6 Pasante de Mapeo			\$ 1,350.00	\$ 1,350.00
12.7 Administrador (campo)			\$ 1,600.00	\$ 1,600.00
19. Total del Componente:			\$ 18,066.63	\$ 18,066.63
30. Viajes				
31 Viaticos				
31.3 Pasantes			\$ 624.00	\$ 624.00
33. Gastos de Transporte Local			\$ 1,934.41	\$ 1,934.41
39. Total del Componente:			\$ 2,558.41	\$ 2,558.41
40. Bienes de Capital				
43. Vehiculos			\$ 12,500.00	\$ 12,500.00
44. Equipos de Capital				
44.1 Equipos de Computación			\$ 4,500.00	\$ 4,500.00
44.2 Equipos Forestales			\$ 1,700.00	\$ 1,700.00
49. Total del Componente:			\$ 18,700.00	\$ 18,700.00
50. Suministros				
51 Miscelaneo			\$ 699.27	\$ 699.27
52. Materia Prima			\$ 3,978.74	\$ 3,978.74
53. Utilidades			\$ 1,294.81	\$ 1,294.81
54. Suministros de Oficina			\$ 200.00	\$ 200.00
59. Total del Componente:			\$ 6,172.82	\$ 6,172.82
60. Misceláneo				
66. Servicios (auditoria independiente financiera)			\$ -	\$ -
69. Total del Componente:			\$ -	\$ -
70. Costos administrativos nacionales				
72. Costos administrativos agencia colaboradora			\$ 2,000.00	\$ 2,000.00
79. Total del Componente:			\$ 2,000.00	\$ 2,000.00
Total Gastos Hasta-la-fecha:			\$ 47,497.86	\$ 47,497.86
Fondos Restantes (A-B):			\$ -	\$ -

Notas: (1) Montos de dolares americanos fueron convertidos utilizando la tasa promedio de intercambio cuando los fondos fueron recibidos por la Agencia Ejecutora.
(2) El Total Gastos Hasta-la-fecha (en moneda local) deberia ser el mismo monto anotado como Sub-Total de la columna (C) de la Declaracion Financiera.

DECLARACION DE FLUJO DE FONDOS DEL PROYECTO

Advanced Conservation Strategies (Otras Fuentes de Fondos)

Numero del Proyecto. RED_SPD_055_11_Ecuador Periodo que termina el: 31 agosto 2014

Titulo del Proyecto: *Integración de medios de vida sostenibles, micro-créditos de 'hipoteca ambiental', y reforestación basada en la ciencia para alcanzar logros tangibles de conservación en los bosques del Chocó Ecuatoriano.*

Componente	Referencia	Fecha	Monto	
			en \$USD	en Moneda Local
A. Fondos recibidos de la OIMT				
1. Primera instalacion			\$ 60,000.00	\$ 60,000.00
2. Segunda instalacion			\$ 40,000.00	\$ 40,000.00
3. Tercera instalacion			\$ 20,000.00	\$ 20,000.00
4. Cuarta instalacion			\$ 18,817.00	\$ 18,817.00
Total Fondos Recibidos:			\$ 138,817.00	\$ 138,817.00
B. Gastos por Agencia Ejecutora				
12. Otro Personal				
12.2 Pasante de Oficina (EEUU)			\$ 9,600.00	\$ 9,600.00
19. Total del Componente:			\$ 9,600.00	\$ 9,600.00
40. Bienes de Capital				
44.1 Equipos de Computación			\$ 4,000.00	\$ 4,000.00
49. Total del Componente:			\$ 4,000.00	\$ 4,000.00
Total Gastos Hasta-la-fecha:			\$ 13,600.00	\$ 13,600.00
Fondos Restantes (A-B):			\$ -	\$ -

Notas: (1) Montos de dolares americanos fueron convertidos utilizando la tasa promedio de intercambio cuando los fondos fueron recibidos por la Agencia Ejecutora.

(2) El Total Gastos Hasta-la-fecha (en moneda local) deberia ser el mismo monto anotado como Sub-Total de la columna (C) de la Declaracion Financiera.

Annex 3.

RED-SPD 055/11 Rev.4 (F)

"INTEGRATING SUSTAINABLE LIVELIHOODS, ENVIRONMENTAL MORTGAGES, AND SCIENCE-BASED
REFORESTATION FOR TANGIBLE FOREST CONSERVATION CHANGE IN
THE ECUADORIAN CHOCÓ"

REPORT ON SUSTAINABILITY OF PROJECT POST-ITTO SUPPORT

EXECUTING AGENCY:
FUNDACION EQUILIBRIO AZUL

with collaborating agencies
PINCHOT INSTITUTE FOR CONSERVATION
&
ADVANCED CONSERVATION STRATEGIES

HOST COUNTRY:
ECUADOR

PROJECT INCEPTION DATE:
AUGUST 24, 2012

PROJECT CATEGORY & DURATION:
SMALL PROJECT, 24 MONTHS

PREPARED BY:
PROJECT COORDINATOR DR. AMY E. ROGERS
ESMERALDAS, ECUADOR
14 DECEMBER 2013

Project Contributions to the REDDES Protocol:

As identified in the Project Document, by linking tangible economic benefits for local inhabitants to standing old-growth rainforest, this project directly addresses the REDDES Programme core problem of:

“the inadequate capacity of ITTO producing member countries and their stakeholders to maintain and enhance environmental services of tropical forests by preventing and reducing deforestation and degradation.”

While still in its early stages, we are pleased to report the following specific achievements to date, organized in relation to the TPD deliverables described in Chapter 4, Table 1:

1. Progress in facilitating long-term livelihood improvements for forest-dwelling communities via the revamping of the region’s current cacao market system, which contributes directly to:

- Improved family income in communities directly involved in the PES initiatives:
Our first livelihood improvement package, now underway and consisting of installation of a small drying & fermenting center in each community, local capacity-building in technical & administrative tasks required to manage the center, and direct linkage to a confirmed international buyer will increase the price that producers receive for their cacao from an average of \$0.94/lb to \$1.60/lb by enabling communities to transition to dry, export-quality beans. This income increase of 70% is the first of three to be facilitated by the project's pilot phase; the remaining two are increased harvest volume and value-added (organic) certification.
- Potential for income generation activities realized from forest-related environmental services and other outputs in Programme impact areas:
Early results indicate that community interest is notably shifting from timber to cacao as the preferred source of income. At this stage, this trend is due to a single differentiating factor: the removal of intermediary brokers from the cacao market chain, which significantly increases profit margins in comparison to those earned via the timber market. Because the environmental mortgages program is long-term in nature and revamping the cacao market provides multiple, step-wise opportunities for improvement, this represents the first of many increases in cacao-based income for forest-dwelling communities.

2. Progress in the pilot-level development and implementation of environmental mortgages conservation-livelihood trades in reserve communities, which contributes directly to:

- Communities trained and assisted in development and implementation of PES mechanisms:
This project's two pilot communities have been active participants in the design, adaptation, and implementation of the environmental mortgages approach to PES in Ecuador. With their assistance, we have arrived at the following specific model as the best option for conditions in the reserve:
 - a. Community-level incentives for forest conservation: Specific livelihood needs for revamping the current cacao system are trades as packages in return for a substantive area of forest collectively pooled by the community. In exchange for the first livelihood benefit, a combined 800 hectares of forest have been set aside for conservation.
 - b. Individual-level incentives for further forest conservation: We are developing a second, more dynamic incentive mechanism aimed at securing conserved forest hectares beyond those required for

livelihood improvement packages. The "Forest Premium" will be implemented as a bonus to the improved cacao prices gained through direct linkage to buyers, and based on the number of forest hectares that each farmer enrolls. We are collaboratively designing this incentive with chocolate company Original Beans, our projected buyer, by identifying options for capitalization and focusing on consumer-based mechanisms.

- PES mechanisms developed or undergoing implementation at least in three countries covered by the Programme in the pilot phase:

This project, by directly trading livelihood improvements for conservation rather than money for ecosystem services, represents the implementation of a PES approach that is legal under Ecuador's current state of highly restricted PES programs. We have completed the due diligence phase and are currently implementing the first conservation-livelihood trade in two communities.

- Number of communities directly involved in PES mechanisms developed and/or undergoing implementation with support of the Programme:

Project pilot communities Guayacan and Mono Bravo represent two communities directly involved in implementation of the environmental mortgages approach to PES in Ecuador.

- Evidence of inclusion of views from various interested parties in forest management plans and payment for environmental services:

Multiple aspects of the model's design originated during participatory community meetings and regular coordination sessions with the Ministry of Environment; some of the most notable are:

- a. The idea to distribute new cacao earnings across months that were previously dedicated to timber
- b. Incorporation of community-based 'forest vigilance patrols' as part of our environmental assets monitoring protocol
- c. The critical need for a custom-built agricultural dryer to mitigate climatic challenges to drying cacao in forest communities
- d. How to deal with inequities in each community member's contribution of forest hectares in the name of the common good, while still maximizing cacao volume to interest buyers

- Trained human resources in implementation of...PES schemes:

To date, we have trained one community member in the GPS mapping skills required for quantifying community forest holdings, delineating individual enrolled forest areas, estimating cacao volumes, and preventing perverse incentives for new cacao plantations in forested areas. Land use classification was not contemplated in the original project document but has defined itself as a critical component of baseline data collection in participating communities. A second community member will be trained in the same skills, in anticipation of his/her involvement in expansion to other communities post-pilot.

3. Progress in measurable outcomes of the project's implementation phase, which contribute directly to:

- Increase of the area under (actual) conservation in the tropical forests in Programme impact areas
As a direct result of the first conservation-livelihood trade (now underway), a total of 800 hectares of primary Chocó forest has been set aside for conservation by participating communities. This area represents approximately 25% of the total land holdings in each community (3,175 hectares total in Guayacan and 835 hectares total in Mono Bravo). Mapping results indicate that for the community members that are currently committed to program participation, enrolled forest areas under conservation actually represent:
 - a. 200 enrolled/350 forested hectares owned by participants = 57% of participant forest holdings in the community of Mono Bravo

- b. 600 enrolled/1013 forested hectares owned by participants = 59% of participant forest holdings in the community of Guayacan

Outcome Indicators: Progress to Date

This project's specific objective was identified as follows: *"to clearly develop and successfully integrate the components of a first 'environmental mortgages' pilot program in three Mache-Chindul forest communities, generating a sustainable and viable approach to PES that ensures a concurrent reduction in tropical forest degradation and deforestation."*

Outcome indicator progress to date (December 2013) is as follows:

- By 2014, at least 75% of each community's cacao farmers will participate in organized cooperatives.
13/27 cacao farmers are currently participating in the environmental mortgages program in Mono Bravo; 25/64 cacao farmers are currently participating in the environmental mortgages program in Guayacan. We are working with both communities toward the acquisition of formalized Cacao Producer Association status, via the appropriate government procedures.
- By 2014, each community's cacao cooperative will have engaged in at least two conservation-livelihood trades via the environmental mortgages program.
Both communities have engaged in one conservation-livelihood trade to date, consisting of drying/fermenting center installation and direct market linkage in exchange for 800 hectares of conserved forest.
- By 2014, each community's cacao cooperative will have completed at least one necessary step in the cacao market overhaul.
To date, no steps have been entirely completed in the cacao market overhaul. Completion of the first livelihood benefit package is anticipated in May 2014.
- By 2014, at least 50% of each community's surrounding forests will be designated as 'environmental assets' under participation in the environmental mortgages program.
Approximately 25% of the total land holdings in each community have been designated as environmental assets under participating in the environmental mortgages program to date. While not all individual land holdings have been mapped according to land use classification (due to some owners' fear of the program), this represents 57% and 59%, respectively, of the total forest holdings amongst Mono Bravo and Guayacan program participants.

Project Sustainability Post-ITTO Support

Since its inception, this project has been implemented with the aim of establishing a permanent program that would first be replicated in other communities within the same forest reserve, and later in other forest reserves nation-wide. Our collaborations with Ecuador's Ministry of Environment have been principally focused on this aim, and were originally bolstered by the enthusiastic support of the National Forestry Director (Wladimir Tene) and the National Biodiversity & Protected Areas Director (Isabel Endara). Both explicitly expressed their interest in applying the model to other protected areas once successfully ground-tested. With the recent overhaul of all upper-level Ministry of Environment personnel, the strength of this collaboration has diminished considerably; nonetheless, we are now beginning the process of cultivating relations from scratch with their replacements.

On behalf of the region's communities, there appears to be an endless interest in this program. To date, approximately twenty forest-dwelling communities have communicated directly with project personnel, inviting us to visit and requesting the opportunity to be considered as future participants. Within the two confirmed pilot communities, the proportion of inhabitants participating in project activities is steadily increasing.

The principal challenges to expanding this pilot beyond its initial 2-year period consist of a) the acquisition of larger funds to support program operating costs at scale, and b) the design of a framework sufficiently adaptable to encompass the universe of actual variables present within candidate participant communities. We are taking steps toward the resolution of both objectives, cultivating the potential for multi-year funding support with donors whose objectives mesh well with those of the project, and placing prioritized importance on project components aimed at adapting design to reality (including the prediction of accurate numbers and finances).

Currently, we have requests pending with the following potential donors for continued program funding: the MacArthur Foundation (US), the Ashden Trust (UK), the Ministry of Environment's Financial Sustainability Project – Competitive Funds Mechanism (Ecuador), and the DOEN Foundation (Holland).