MEASURING IMPACT

Lessons Learned from the
Forest, Climate and Communities Alliance

PREPARED FOR THE BUREAU FOR ECONOMIC GROWTH, EDUCATION AND THE ENVIRONMENT/OFFICE OF FORESTRY AND BIODIVERSITY

MEASURING IMPACT

CONTENTS

LIST OF ACRONYMS

APS	Annual Program Statement
CCB	Climate, Community and Biodiversity Standard
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CMP	Conservation Measures Partnership
E3/FAB	USAID Bureau for Economic Growth, Education, and Environment/Office of Forestry and Biodiversity
FCCA	Forest, Climate, and Communities Alliance
FCPF	Forest Carbon Partnership Facility of the World Bank
FINZMOS	Indigenous Federation of the Mocorón Zone (*Federación de indígenas Nativos de la Zona de Mocorón*)
FPIC	Free, Prior and Informed Consent
FSC	Forest Stewardship Council
GCC	Global Climate Change
GDA	Global Development Alliance
GHG	Greenhouse gas
GoH	Government of Honduras
HCVF	High Conservation Value Forests
ICS	Internal Control System
IR	Intermediate Result
IUCN	International Union for the Conservation of Nature
LMB	Land Management Board
MASTA	Moskitia Asla Takanka
MI	Measuring Impact
MRV	Measurement, Reporting, and Verification
NAWPI	North American Wood Products International
NGO	Non-Governmental Organization
NORAD	Norwegian Agency for Development Cooperation
NTFP	Non-timber Forest Product
P&C	Principles and Criteria
PDD	Project Design Document
PES	Payment for Environmental Services
PIN	Project Idea Note
PMP	Performance Management Plan
R-PP	Readiness Plan Proposal
RA	Rainforest Alliance
REDD+	Reducing Emissions from Deforestation and Degradation
RPBR	Río Plátano Biosphere Reserve
SAN	Sustainable Agriculture Network
SFM	Sustainable Forest Management
SMFE	Small and Medium-sized Forest Enterprises
STCP	Sustainable Tree Crop Programme
ToC	Theory of Change
TREES	Training, Extension, Enterprises and Sourcing
UNICAF	Union of Agroforestry Cooperatives of the Río Plátano Biosphere Reserve
USAID	United States Agency for International Development
VCS	Verified Carbon Standard

EXECUTIVE SUMMARY

INTRODUCTION

The Forest, Climate, and Communities Alliance (FCCA) was an initiative funded by USAID's Bureau for Economic Growth, Education, and the Environment/Office of Forestry and Biodiversity (E3/FAB) under the USAID Global Development Alliance (GDA)[1] between 2009 and 2013. FCCA was one of the first USAID-funded projects for reducing emissions from deforestation and degradation (REDD+). The Rainforest Alliance (RA) implemented FCCA in Ghana and Honduras.

Operating in two different contexts allowed FCCA to generate important lessons learned that may be useful as countries around the world search for approaches to prepare for and implement successful REDD+ mechanisms. In 2013, as FCCA was coming to an end, USAID tasked the Measuring Impact (MI) initiative with an independent review to generate lessons learned from FCCA. In capturing and disseminating lessons from the FCCA project, the Agency intends to contribute to the understanding of what may be effective, and under what conditions, when promoting REDD+ in conjunction with forest and agricultural product certification.

MI is a five-year USAID project executed by the E3/FAB Office designed to improve the Agency's practice of conservation by building USAID's capacity to better design, manage, evaluate, and learn from biodiversity conservation initiatives. As such, MI was tasked with carrying out this review of lessons learned from FCCA while using RA's general hypothesis as the basis to describe the project and its lessons.

METHODS AND PROJECT DESIGN SUMMARY

MI retrospectively developed theories of change[2] as the framework to assess qualitative and quantitative evidence for project outcomes and lessons learned from the implementation of the program interventions. At the time of designing FCCA, RA had not yet implemented a formal theory of change approach that explicitly described the assumed causal relationships between the implementation of key interventions (e.g., training) and the intended intermediate results (e.g., improved capacity of enterprises, increased income), pressure-reduction results (e.g., agricultural encroachment), and ultimately the achievement of the project purpose (e.g., improved biodiversity).

While not explicitly identified in a theory of change, many of these assumed causal relationships were described in narrative form in project documents. Working closely with staff of RA and E3-FAB, MI collected evidence for the outcomes and lessons learned by reviewing available project documentation (work plans, performance monitoring plans (PMPs), annual reports, etc.) and by conducting interviews with current and former project staff. The assessment was intended to capture and share important lessons that could inform the design and implementation of REDD+ interventions; it was not designed as an evaluation compliant with USAID's evaluation policy.

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[1] For more information, see USAID Global Development Alliance Annual Program Statement, which is designed to catalyze, facilitate, and support collaboration with the private sector in order to increase the sustainable impact of its development assistance programs. Such alliances enable USAID to leverage private sector markets, expertise, interests, and assets in a manner that solves critical development problems and promotes effective market-led development. The alliances also enable the private sector to leverage USAID's expertise, assets, and working relationships in a manner that advances business success and fosters the broader economic growth and poverty reduction that is vital to sustaining such success. Through strategic and ongoing collaboration, the private sector and USAID are better able to increase the impact, reach, efficiency, and effectiveness of our respective investments in developing countries worldwide.

[2] The term "theory of change" is used to describe the sequence of outcomes that is expected to occur as a result of an intervention (See Weiss, C. H. (1995). Nothing as practical as a good theory: Exploring theory-based evaluation for comprehensive community initiatives for children and families. In J.P. Connell, J. L. Aber, & G. Walker (Eds.), *New approaches to evaluating community initiatives: concepts methods, and context* (pp 65–92). Washington, DC: Aspen Institute; http://www.theoryofchange.org).

The project theory of change included the following three main components and general assumptions, with the purpose of reducing pressures that lead to deforestation and degradation and achieving the result of biodiversity conservation (see Figure 3):

1) Support enterprise development for sustainable production: The assumption was that forestry and agroforestry cooperatives would be motivated to improve production practices through incentives, such as premium prices for products that are produced under a sustainability standard, leading to increased carbon values in the area where the cooperatives were active.

2) Develop a REDD+ project: The assumption was that a landscape-wide approach that included elements such as land-use planning and community forest management would serve as the technical and organizational basis of a viable REDD+ project.

3) Support national REDD+ readiness: The assumption was that supporting national REDD+ readiness planning would enable site-level efforts to move forward in the context of an enabling national policy environment.

If all three of these theories held true, then deforestation and forest degradation would be reduced and biodiversity would be conserved.

To better define FCCA's implicit assumptions about how project interventions would result in achievement of anticipated outcomes at each project site, MI worked with FCCA to develop a retrospective theory of change. MI used a graphical results chain to depict the theory of change[3] (see Box 1 and Figure 1). The results chain was then used as the framework to investigate and describe key project outcomes, as well as important enabling conditions and limiting factors that were encountered along the pathway to achieving the anticipated outcomes. In essence, the results chain was used to explicitly describe how and why the interventions implemented by FCCA contributed to the project outcomes. This review relied on quantitative data collected by RA for its monitoring purposes; MI did not collect any additional quantitative data for measuring results against baselines.

After reviewing relevant project documents, MI interviewed RA staff involved in the project at both sites. The key informant interviews were guided by a series of questions specific to each project and the expertise of each interviewee. The interview questions were developed from an analysis of each project using the result chains.

Of note, information regarding the project relied significantly on available documents and the memories, perceptions, and experiences of involved RA staff. Given that the project was closing at the time the interviews were conducted, significant time constraints affected the collection of complete information from project staff in the field. Interviews were limited primarily to self-reporting by FCCA project leaders. Because some staff interviewed were not part of the project from the onset, the reliance on qualitative data and individuals' memories was a limiting factor. Interviewee bias may also have been a factor, since the key informants included only one person who was not directly involved in the design or implementation of the project. There was no direct observation of project outcomes, given that neither project site was visited, nor were interviews conducted with local participants (i.e., community members) in the project.

This analysis of lessons learned is necessarily *ex post*.[4] During the project implementation period, USAID made a renewed commitment to systematic learning and evidence-based decisionmaking through improved project evaluation practice. The 2011 USAID Evaluation Policy set new standards and requirements for performance and impact evaluations of Agency programs, though those requirements

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[3] A results chain is a diagram that depicts the assumed causal linkage between an intervention and desired impact through a series of expected intermediate results (Foundation of Success. 2009. Using result chains to improve strategy effectiveness: an FOS how-to guide. Foundations of Success, Bethesda, Maryland, USA [online] http://www.fosonline.org/resources/using-results-chains; Margoluis, R., C. Stem, V. Swaminathan, M. Brown, A. Johnson, G. Placci, N. Salafsky, and I. Tilders. 2013. Results chains: a tool for conservation action design, management, and evaluation. *Ecology and Society* 18(3): 22. http://dx.doi.org/10.5751/ES-05610-180322)

[4] An *ex-post* assessment is one in which data are collected and analyzed exclusively from a time period after the intervention in question has been implemented.

were not in place during the design and most of the implementation of the FCCA initiative. While some variables were monitored throughout the FCCA project period as part of the project's performance monitoring efforts, no formal baseline was conducted. Furthermore, no evaluation design was incorporated into the project, so pre-test and post-test analysis could not be conducted.[5] Finally, no comparison groups were designated from the outset, so project outcomes could not be compared to any counterfactual. During the project, some data collected for results was not disaggregated by gender, limiting the ability to assess differences of outcomes in women and men. Even with these limitations, the lessons learned and recommendations should contribute to the understanding of what approaches may be effective under different conditions in promoting REDD+ readiness and developing REDD+ projects, as well as to other areas of USAID's forestry and biodiversity portfolio, other projects and programs by USAID field missions, and the broader conservation community that implements similar conservation interventions.

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[5] A pre-test and post-test assessment necessarily relies on the measurement and analysis of specific and consistent indicators both *before* an intervention takes place (often referred to as "baseline") and at some point *after* the intervention, when one would expect to see the effects of the intervention.

Box 1. Use of Results Chains for Developing a Theory of Change.

A results chain is a powerful tool integrated into the Conservation Measures Partnership *Open Standards for the Practice of Conservation* (http://www.conservationmeasures.org) that are used to develop and illustrate a theory of change. Results chains are widely accepted and applied in an adaptive management framework that brings together common concepts, approaches, and terminology in project design, management, and monitoring—in order to assist practitioners in improving the effectiveness and efficiency of conservation projects. USAID has adapted the Open Standards method, incorporating agency terminology for each factor.

A results chain can be used to show how a project team believes a particular development hypothesis will lead to desired results, contribute to reducing pressures, and ultimately lead to the conservation of priority biodiversity targets or other focal interests.

Result chains are presented in a diagram that maps out a series of causal statements that link short-, medium-, and long-term results in an "if…then" fashion, leading ultimately to the expected impacts on the focal and related interests.

Figure 1. Results chain template and box definitions.

Intervention: A set of activities undertaken by the project staff or partners to reach one or more results and ultimately reduce pressures to improve the viability of the conservation feature (e.g., train rangers) or focal interest.	
Result: A specific benchmark or milestone that a project is working to achieve en route to accomplishing the project purpose as a result of the interventions (e.g., rangers have improved knowledge, more effective law enforcement). There can be many results in a development hypothesis; key results get outcome statements.	
Pressure-reduction result: A specific type of intermediate result that represents a reduction in a direct pressure to the focal interest (e.g., decrease in illegal hunting).	
Focal interest: An element of biodiversity at a project site, which can be a species, habitat/ecological system, or ecological process that a project has chosen to focus on (e.g., elephants, forests).	
Related interest: In the context of a conservation project, related interest features focus on those components of human well-being affected by the status of conservation focal interests (e.g., livelihoods from ecotourism).	

Using the results chain, project teams can go on to define specific results and purposes to describe the desired outcomes of the project, and to determine indicators for measurement of these results in a monitoring and evaluation plan. This framework for an adaptive management approach allows practitioners to systematically plan their strategic interventions, determine if these actions are achieving expected results, and indicate when adjustments may be necessary.

KEY LESSONS LEARNED FROM FCCA

A detailed summary of lessons learned, organized by FCCA project component and ultimate purpose, is provided in the Key Lessons Learned Across Both Project Sites section of this document. Several lessons were identified for each component of the project, and several held true for FCCA overall:

- Enterprise development for the production and sale of certified products was an effective strategy for creating the governance and management conditions that will be necessary for a successful REDD+ pilot project (RA, 2013b).

- The markets for higher-quality and certified products are strong, but the primary limiting factor in accessing markets is the cooperatives' capacity (Benjamin Hodgdon, personal communication, 2013).

- There may be a major risk of cooperatives putting too much focus on quickly achieving certification and sales at the expense of not continuing to build sufficient capacity for sound social organization and enterprise management. Long-term external investment is necessary to building capacity and the enabling conditions for successful and functioning REDD+ projects.

- Clearly defined rights and benefits sharing for carbon were a critical prerequisite to initiate REDD+ project planning at the local level. Establishing clear and enforceable carbon rights for local communities, however, is a complicated and expensive undertaking.

- Local REDD+ pilots should not shortcut important policy changes at the national REDD+ level; at the same time, experience at the field level can help inform the need for national-level policy change to make REDD+ feasible.

- The economic viability of REDD+ varies with respect to different landscape conditions at each site. RA suggests that decisions regarding meeting verification standards, such as the Climate, Community and Biodiversity (CCB) Standard and Verified Carbon Standard (VCS), should be assessed in the context of the likely economic value of the REDD+ project.

- Cost-benefit analysis should be carried out early in the REDD+ project planning process. Given the complex and lengthy process and large investment necessary to develop a REDD+ project and meet verification standards, coupled with the uncertainty in the carbon market, the costs and benefits of different verification options should be carefully weighed (RA, 2013b).

- Project managers found that having multiple purposes that reflect the broad scope of REDD+ was effective in speaking to different beneficiaries and supporters of the project, since different audiences valued different purposes.

PURPOSE AND ORGANIZATION OF REPORT

Operating in two different contexts allowed FCCA to generate important lessons learned that may be useful as countries around the world search for approaches to prepare for and implement successful REDD+ mechanisms. The purpose in capturing and disseminating these lessons from the FCCA project is to contribute to the understanding of what may be effective—and under what conditions—in promoting REDD+ in conjunction with forest and agricultural product certification.

This report is organized into the following sections:

- **Introduction (this section):** Provides background on the FCCA, its purpose and objectives, and current status.

- **Context for Project Sites:** Provides a general description of each site and project implemented under FCCA.

- **Discussion of Interventions and Outcomes:** Provides a description of the theory of change for the FCCA project, a diagram of the results chain depicting the theory of change, and a description of the interventions and key outcomes for each project site.

- **Key Lessons Learned Across Both Project Sites:** Summarizes the lessons learned from the project, drawing on a comparison of the similarities and differences of enabling conditions and limiting factors between the two sites.

- **Recommendations Regarding FCCA Results Framework and Use of USAID Indicators:** Provides suggestions, based on the FCCA results framework, on how results chains could be used as a tool for designing, monitoring, and evaluating USAID-supported REDD+ projects.

INTRODUCTION

PROJECT DESCRIPTION AND STATUS

The Forest, Climate, and Communities Alliance (FCCA) was an initiative funded by the USAID Bureau for Economic Growth, Education, and the Environment/Office of Forestry and Biodiversity (E3/FAB) through the USAID Global Development Alliance (GDA).[6] FCCA was one of the first USAID-funded projects for reducing emissions from deforestation and degradation (REDD+). The Rainforest Alliance (RA) implemented FCCA in Ghana and Honduras between 2009 and 2013.

Under FCCA, RA implemented a similar set of interventions in both countries to build the capacity of cooperatives for enterprise development around sustainable production. Ghana and Honduras have provided two contexts for testing this hypothesis, as the landscapes, economies, cultures, deforestation dynamics, and political processes in these countries are quite different. FCCA was designed to test the innovative hypothesis that sustainable forestry (Honduras) and agroforestry (Ghana), with improved landscape management and competitive local enterprises, are the fundamental building blocks for attracting investment for the development of high-value forest carbon credits (RA, 2013b). As such, FCCA was a departure from traditional approaches of protected area management.

While it is not envisioned that there will be a direct follow-on project to FCCA funded by USAID, the specific conservation interventions implemented by FCCA are components of other projects and programs that are funded by USAID and implemented by the broader conservation community. The detail and lessons learned provided in this report are intended to support those continued efforts by RA, USAID, and others as one component of the evidence base for future decisionmaking.

Figure 2. Juabeso-Bia landscape, showing partner communities and land uses. Map prepared by Rainforest Alliance, Feb 8, 2013. Photo credit: Rainforest Alliance.

CONTEXT FOR PROJECT SITES

CONTEXT FOR GHANA PROJECT

Today, less than 1.2 million hectares of rainforest remains in Ghana, much of which occurs in forest reserves (Figure 2), and only 40,000 hectares of old-growth forest remain outside of national parks and forest reserves. The main driver of this deforestation has been conversion to small-scale agriculture. Ghana has lost an estimated 2.2% of its remaining forests annually between 2005 and 2010.

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[6] USAID Global Development Alliance Annual Program Statement, which is designed to catalyze, facilitate, and support collaboration with the private sector in order to increase the sustainable impact of its development assistance programs. Such alliances enable USAID to leverage private sector markets, expertise, interests, and assets in a manner that solves critical development problems and promotes effective market-led development. The alliances also enable the private sector to leverage USAID's expertise, assets, and working relationships in a manner that advances business success and fosters the broader economic growth and poverty reduction that is vital to sustaining such success. Through strategic and ongoing collaboration, the private sector and USAID are better able to increase the impact, reach, efficiency, and effectiveness of our respective investments in developing countries worldwide.

As in most countries in the tropics outside the Americas, Ghana has historically been conservative in devolving rights over forests to communities. Ghanaian citizens lack ownership rights to their forests, and the government owns all natural standing timber. As a result, farmers often choose to remove the trees on their property as a preemptive measure to avoid possible incursion on their farms by government-authorized loggers. Furthermore, there are limited incentives for reforestation. Even though planting a tree is the only way for a farmer to own a tree, getting such ownership recognized by the government is a cumbersome task. Slow movement at the central level to devolve rights has hindered the piloting of community production forestry in off-reserve natural forest areas.

RA's initial design for the project in Ghana was based on a model of community forestry in off-reserve natural forest areas in the Juabeso-Bia Region, an area providing important habitat connectivity between two of the most important forest remnants in the country's western region, the Bia National Park and Krokusa Hills Forest Reserve.

When FCCA was initiated, the project team encountered a landscape that was heavily fragmented. More than 75% of the landscape's 36,211 hectares was used for cocoa production (*Theobroma cacao*, the source of chocolate), only 1–8% of forest cover still remained, and there was ongoing heavy encroachment into forest areas for the expansion of cocoa cultivation (RA, 2013c). The majority of remaining natural forest in off-reserve areas is degraded and fragmented.

> **Box 2. The Sustainable Agriculture Network Standard.**
>
> The Sustainable Agriculture Network (SAN) Standard includes comprehensive environmental criteria for agriculture. They cover an array of areas, including soil and water conservation, the protection of wildlife and forests, planning and monitoring, responsible waste management, and the prohibition of dangerous pesticides and genetically modified organisms. Additionally, the SAN Standards encompass a range of worker protection issues, including the right to organize; the right to a safe, clean working environment; the right to be paid at least the national minimum wage; the right to dignified housing (including potable water); access to medical care for workers and their families; and access to free education for children.
>
> A voluntary additional module to the SAN Standard contains 15 new criteria aimed at ensuring that farmers have the awareness and technical ability to adapt to and mitigate climate change by reducing emissions and increasing the carbon stored in their farms in trees, plants, and soil.

Community rights to manage natural forests were, and still remain, functionally nonexistent. While there was professed commitment from Ghana's government to devolve control over forests to local communities as part of several internationally led processes, and while FCCA worked throughout the project to propose such arrangements, the idea was continually rejected by the Ghanaian Forestry Department. Although two Community Resource Management Areas piloted by the Wildlife Division and CARE International form part of this landscape and have received certificates of devolution from the Wildlife Division of the Forestry Commission, their bylaws have still not yet been gazetted by the District Assemblies. Due to these challenges, the FCCA project team essentially had to redesign the project approach with the participation of local stakeholders over the first year of project implementation. Based on analysis of pressures that lead to deforestation and development opportunities, RA developed a landscape-scale approach to planning and management, with a strong focus on improving cocoa agroforestry through certification, complemented by community-led forest protection and restoration (RA, 2013b).

Worldwide, Ghana is the second-largest producer of cocoa, and most of the cocoa farms in Ghana are small and family-owned. A significant factor in the success of the cocoa industry in Ghana has been the availability of nutrient-rich forest soils, with profits driven by cutting primary forests for conversion to farmland. However, in such areas, lack of proper soil and water management measures tends to reduce yields over time. Critical issues that limit the production potential of cocoa farmers in Ghana include lack of liquidity or access to finance, which result in limited access to inputs; poor plant material; and limited training in farming techniques. This has led to low yields, poor crop quality, and low incomes, which are all exacerbated by more frequent and intense droughts and flooding resulting from climate change. In addition, the lack of transport infrastructure and the many intermediaries buying their products depress the price that farmers can obtain for their cocoa (Brasser, 2013).

The Juabeso-Bia Region is one of the most productive cocoa regions in Ghana. Local residents and settler farmers, who have authorization from local traditional authorities under different tenancy agreements, undertake the majority of cocoa farming. These tenancy agreements include sharecropping, leasehold, and outright purchase of land for cocoa production. Without an alternative economic incentive for maintaining and improving forest cover in these areas, the forests and fallow fields are increasingly being converted into cocoa farms or used to grow annual crops, which includes encroachment into sacred groves, river bank forests, and neighboring protected areas (RA, 2011). Without alternative economic incentives, the project area would likely progressively become a landscape of only cocoa farms and annual crops, virtually devoid of tree cover. Without best practices in soil and water management, as well as incorporation of shade trees, the viability of cocoa farming would decline over time. Such dwindling viability would be exacerbated by climate change (RA, 2013c).

Through FCCA, RA worked with local cocoa farmers who are members of 12 cooperatives operating in the 36 communities of the Juabeso-Bia Region. The project worked to introduce standards for socially, environmentally, and economically sound management of their cocoa farms. The landscape-scale approach applied by RA under FCCA promoted a mix of sustainable land-use practices, including improved agroforestry and cocoa certification, enrichment planting, enterprise development in alternative livelihoods, climate education, and REDD+ documentation. Together, these interventions aimed to provide the incentives needed to improve management practices, decrease unsustainable activities (e.g., illegal logging, farm expansion) and conserve and enhance carbon stocks across the landscape, with the ultimate purposes of improving livelihoods while increasing the connectivity between the two protected areas and mitigating climate change (RA, 2011).

CONTEXT FOR HONDURAS PROJECT

The extraordinary biodiversity and ecosystem values found in Honduras' tropical forests are under increasing pressure from human activities leading to deforestation. Widespread illegal logging as well as expropriation of land by migrant farmers, business and government elites, and drug trafficking interests is resulting in forest loss and destabilized local livelihoods. By some accounts, illegal logging accounts for up to half of the timber harvested in the country (and up to 85% of tropical hardwood production). Complex bureaucratic processes, inadequate government presence, and increased criminal activity are creating an environment where these pressures are flourishing (Benjamin Hodgdon, personal communication, 2013).

Although 40% of Hondurans live in forest regions, only a small percentage of the population currently benefits from the country's forest resources due to a lack of clear land tenure and use rights, minimal local technical and financial capacity, and barriers to legal compliance among established forestry operations.

Under current forestry law, some communities do have the legal right to access and manage forest resources. Where permission is granted and tenure is recognized, however, most communities lack the skills to undertake sustainable management and monitoring, and to develop and run successful forestry enterprises. As a result, local forestry operations often engage in unsustainable logging activities, selling high-value wood (mainly mahogany) to intermediaries at low prices. This undermines the forest resource and obviates the significant benefits that could accrue to rural, marginalized forest communities.

RA has been active in Honduras since 2005, prior to FCCA initiation, working with community cooperatives in the Río Plátano Biosphere Reserve (RPBR). Capacities were limited among these cooperatives to harvest, process, and trade

> **Box 3. Forest Stewardship Council Standard**
>
> The Forest Stewardship Council (FSC) vision is that the world's forests meet the social, ecological, and economic rights and needs of the present generation without compromising those of future generations. The FSC Principles and Criteria were first published in 1994. All 10 principles and criteria must be applied in any forest management unit before it can receive FSC certification. The Principles and Criteria (P&C) apply to all forest types and to all areas within the management unit included in the scope of the certificate. The P&C are applicable worldwide and relevant to forest areas and different ecosystems, as well as cultural, political, and legal systems. This means that they are not specific to any particular country or region.

timber, and to navigate the administrative requirements to produce legal timber. They lacked sufficient equipment and training, and encountered a range of technical, financial, and administrative limitations (Ana Fortin, personal communication, 2013). Furthermore, the cooperatives had a difficult time gaining direct access to international markets due to their remote location and other limitations. The effort required to harvest the mahogany and get it into the nearest town for transport is, in itself, highly labor intensive and time consuming; thus, operational costs are high.

In 2005, with support from RA and the German Development Service, cooperatives joined together to form the Union of Agroforestry Cooperatives of the Río Plátano Biosphere Reserve (UNICAF, *Unión de Cooperatives Agroforestales de la Biosfera del Río Plátano* in Spanish). This union of cooperatives assists its members in value-added processing and marketing, and in securing forest management permits. UNICAF also holds a group Forest Stewardship Council (FSC) certificate for five members that have achieved FSC certification. UNICAF buys, processes, and sells wood from the cooperatives to North American Wood Products International (NAWPI), a global distributor of exotic wood product based in Portland, Oregon. NAWPI, in turn, sells some of the wood to Gibson Guitars.

Since 2005, RA has assisted the UNICAF cooperatives in working toward FSC certification[7] and building capacity in enterprise development. When FCCA began, RA expanded its work beyond the RPBR. Efforts implemented under FCCA during the life of the project focused on supporting the following enterprises, made up of a total of 18 cooperatives, including UNICAF itself:

- UNICAF community cooperatives in the buffer zone of the RPBR, comprising 11 community cooperatives that produce tropical wood products.

- The second-tier enterprises Moskibatana and Lisangni, two cooperatives in the eastern portion of Honduras, known as La Mosquitia, who are indigenous Miskito producers of the non-timber forest products, ojon (or batana, from the palm Elaeis oleifera) and swa oil (from fruits of Cedro macho, Carapa guianensis), respectively.

- The Finzmos indigenous territory in Gracias a Dios Department, including four timber cooperatives.

FCCA in Honduras was designed to support these community cooperatives to better manage their forests, achieve FSC certification, and market certified wood and non-timber forest products through the development of competitive local enterprises. The initiative was also aimed at developing a REDD+ pilot project as a means of generating complementary income streams for forest-based enterprise through participation in emerging markets for forest-based carbon credits.

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[7] In line with RA's internal conflict of interest policy, RA assistance related to FSC certification preparation is either handled through public events, or, when targeting specific operations, contracted to third parties.

DISCUSSION OF INTERVENTIONS AND OUTCOMES

The project implemented by RA at each site was complex. RA implemented interventions at multiple levels with various stakeholders, with the intent of achieving multiple purposes. MI developed a retrospective results chain with RA to describe the interventions and anticipated outcomes in the underlying theory of change that was implicit in the design of FCCA; this results chain was confirmed by the project proponents as accurately representing the project's intended theory of change.

This section describes the theory of change for the FCCA project, which is graphically depicted as a results chain (Figure 1). RA implemented interventions (shown as yellow hexagons in the results chain in Figure 3) at both the local and national levels to achieve its purposes.

- At the local level, RA implemented interventions to support farmers and cooperatives in enterprise development and sustainable production.

- At the local level, RA implemented interventions to support local actors in preparation for a REDD+ pilot project.

- At the national level, RA implemented interventions to promote REDD+ readiness.

These interventions were implemented to reduce the pressures leading to deforestation and degradation (purple rectangle), and thus achieve the ultimate purposes of conserving forest, decreasing biodiversity loss, improving livelihoods, and mitigating climate change (green and brown ovals).

These outcomes have been used as the basis for the summary of lessons learned across both sites in the next section of the report.

Figure 3. FCCA theory of change.
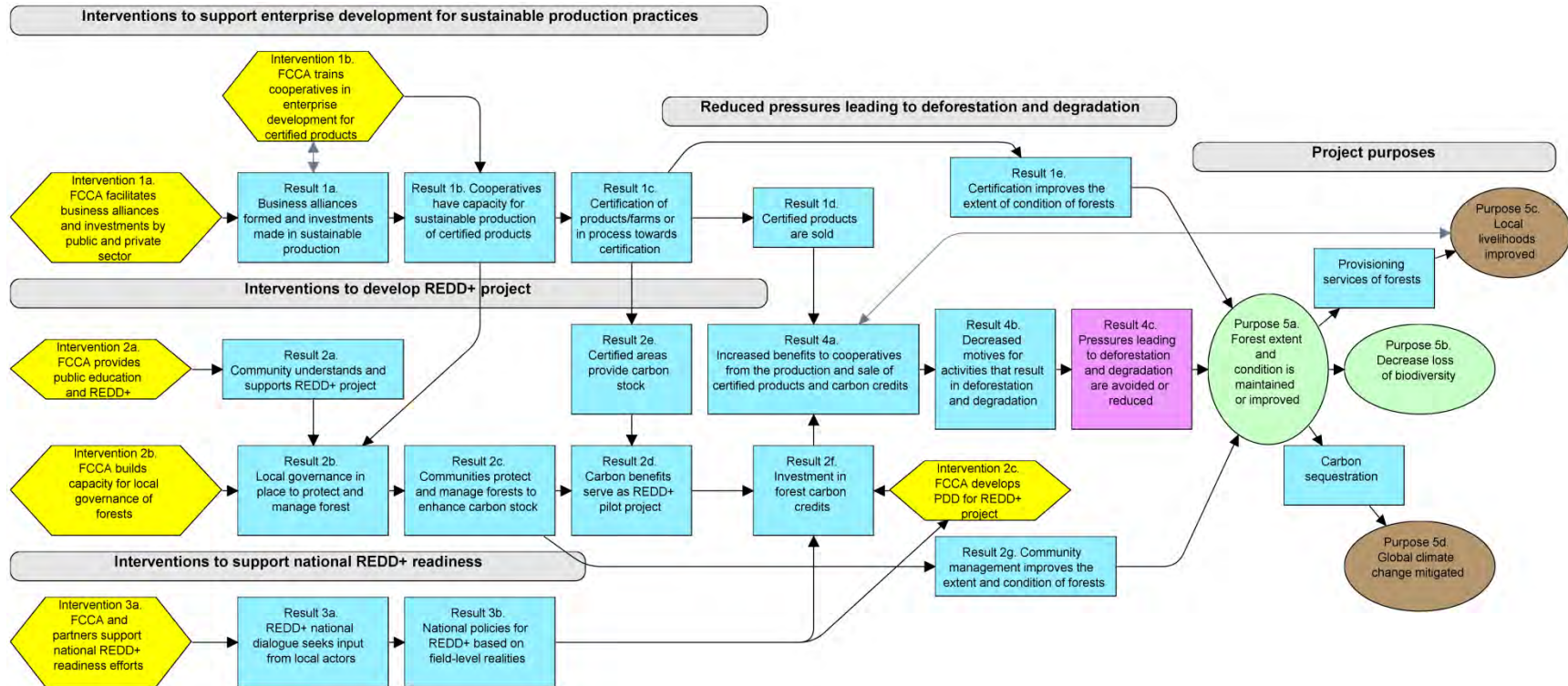
INTERVENTIONS TO SUPPORT ENTERPRISE DEVELOPMENT FOR SUSTAINABLE PRODUCTION

A key intervention of FCCA at both sites was intended to help beneficiary cooperatives access international markets by facilitating business alliances between companies that purchase certified products and the cooperatives that produce them. As shown in Figure 4, RA worked with donors, as well as the private sector through business alliances, to provide investments in cooperatives for the production of certified products (Intervention 1a). They also trained farmers (in Ghana) or forestry cooperatives (in Honduras) in enterprise development and sustainable production of certified products (Intervention 1b). The assumption was that, if the farmers or cooperatives were trained and had improved capacity (Result 1b), then they would implement best practices and achieve certification (Result 1c). If the farms or forests were certified, then the farmers or cooperatives would receive multiple benefits from the production and sale of certified products (Result 1d). Increased capacity through certification (Result 1c) would also contribute to improved local governance to protect and manage forests (Result 2b). A key assumption directly related to the overall hypothesis of the project is that certification (Result 1c) would also lead to certified areas providing carbon stock (Result 2e). Ultimately, certified products being sold (Result 1d) would lead to increased benefits to cooperatives (Result 4a).

Figure 4. Portion of results chain for interventions to support enterprise development for sustainable production.
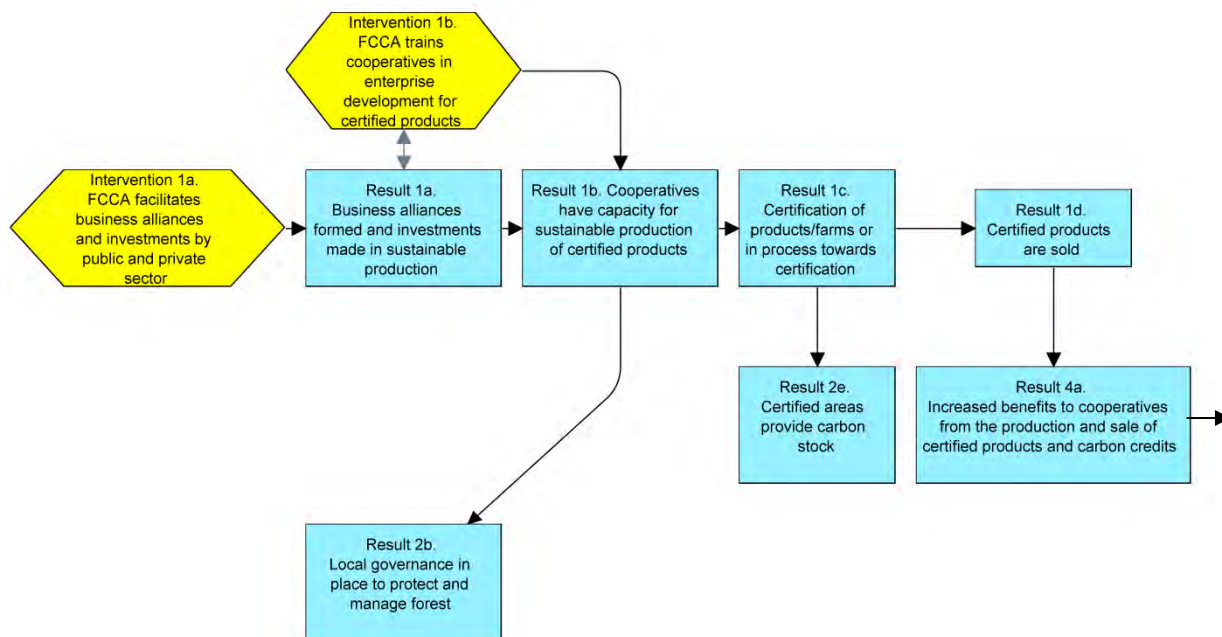
KEY OUTCOMES FOR GHANA

RA believed that mobilizing investments and building business alliances (Intervention 1a) was critical to incentivizing cocoa farmers to participate in the certification process in Ghana. The primary funding sources for building the capacity of farmers to enroll in the certification process came from the Norwegian Agency for Development Cooperation (NORAD), Norway's international aid organization, and Olam, a leading cocoa buyer in the world market and the primary purchaser of certified cocoa in Ghana. Both provided essential counterpart funding to USAID's support to FCCA for RA's work in Ghana (Result 1a).

Olam's primary interest was in increasing the supply of certified cocoa. But another aim, which still remains to be achieved, is to be the first company to bring climate-friendly cocoa to market. The primary risks identified by Olam in its operations in the project area included farmers' ability to dependably supply Olam with high-quality certified product and the impact of climate change on cocoa production (Brasser,

2013). Because of these risks, Olam provided initial funding through the project to build the capacity of farmers to produce certified climate-friendly product. As an incentive to the farmers to participate in the program, Olam agreed to purchase the certified beans at a premium price. Farmers anticipated other benefits from working with Olam, including a secure relationship with a buyer, increased competitiveness, expanded access to international markets, expanded private sector relationships, and the knowledge of best practices that would increase yields and lower production costs (RA, 2013a; Atsu Titiati, personal communication, 2013).

Collaboration with Olam **facilitated more than $500,000 in finance to cocoa producers** in the project area over a three-year period. The majority of this funding went to providing direct technical assistance to farmers in the certification process. **NORAD provided a $1.5 million grant** over three years, and financed RA field teams and activities. Funding also provided loans for startup costs by the farmers; for example, for the purchase of fertilizers (acceptable under the SAN Standard) to boost yields.

In addition to mobilizing investments, training farmers in the SAN Standard—including a new Climate Module[8]—was a major intervention under FCCA (Intervention 1b). RA training consisted of meeting the 10 principles and more than 90 criteria of the SAN Standard. Participation in the training was voluntary and was open to any farmer, and the trained farmers were from areas throughout the landscape. The RA training strategy followed a "lead farmer" or training-of-trainers approach, with the idea that trained farmers would demonstrate to neighboring farmers the benefits of the certification program (Atsu Titiati, personal communication, 2013). RA formed a series of Farmer Field Schools and **built the capacity of 24 lead farmers to serve as farmer extension agents** and to facilitate the schools. In collaboration with Olam, RA provided additional training to the lead farmers in cocoa purchasing to monitor transactions of their respective community cooperatives. A **key capacity**, built by RA to ensure that FCCA-supported cooperatives meet audit requirements and for Olam to purchase traceable cocoa, was the **development and implementation of an internal control system** for compliance with SAN group certification protocol.

Figure 5. Grasscutters, the second-largest rodent on the African continent, are an alternative income source developed for farmers through FCCA Ghana. Photo credit: Rainforest Alliance.

In addition to training for certification in the SAN Standard, RA also worked to develop alternative livelihood enterprises as part of FCCA. Based on the results of a number of value chain analyses carried out early in the project, RA determined that developing local enterprises around beekeeping and grasscutter rearing in Juabeso-Bia had potential as an alternative livelihood initiative. With FCCA assistance, 40 farmers from four communities were selected, trained, and equipped in beekeeping. As a result, **community members established four small beekeeping cooperatives** to take advantage of the strong local markets for honey, propolis, pollen, and beeswax. Added income is expected to be important during the lean times between cocoa harvests, when seasonal hunger becomes an issue for many farming families. Bees are important to the cocoa industry, as they are responsible for the pollination of both cocoa and wild plants in the

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[8] A climate-inclusive approach has been developed in "The Case and Pathway Towards a Climate-Smart Cocoa Future in Ghana" (Katoomba Group et al., 2011.) The model presents a sustainable intensification strategy that combines increased shade cover (40–50%), as recommended by the Sustainable Tree Crop Programme (http://www.treecrops.org), with the adoption of "best agricultural practices." In this scenario, cocoa management would result in higher productivity per area unit but would also increase the climate resilience of the cocoa systems as fertilizer and shade trees contribute to better litter decomposition rates and higher drought resistance. In addition, the degradation and (deforestation) pressure on forest reserves will be reduced, and forest and trees in the off-reserve landscape will be enhanced, leading to the maintenance and enhancement of carbon stocks in the landscape (Brasser, 2013).

forest. In addition, **20 farmers piloted grasscutter husbandry enterprises**. Grasscutters, an African rodent, are a rich source of protein and a popular food (Figure 5). The husbandry of the species, however, is relatively new. FCCA provided breeding stock, cage housing, and basic training (RA 2013b).

Once farmers were trained in the SAN Standard and supported in compliance, they were eligible to be audited for certification (Result 1c). As a result of FCCA support, **2,312 hectares have achieved certification to the SAN Standard, and another approximately 3,700 hectares are in the process of certification.**

The enterprise development and certification interventions were intended to result in SAN-certified cocoa being sold by farmer cooperatives to generate income (Result 1d). **Sales from certified farms during the project life amounted to USD $896,456**. The majority (7,633 bags, or 477 metric tons [MT]) of the **cocoa was sold as certified and received a premium price**, while the remaining amount (588 bags, 36 MT) was sold as conventional. Cocoa with an estimated value of USD $1,300,000 was sold by the farmers "in process" of certification during the life of the project. (RA, 2013b) The increased benefits (Result 4a) resulting from the sale of certified cocoa are discussed in the Reduced Pressures Leading to Deforestation and Degradation section.

In addition to the potential financial benefits to farmers resulting from certification, RA assumed that certification activities would be an important vehicle for FCCA to promote the maintenance of carbon stocks and increase carbon sequestration on cacao farms (Result 2e) in a landscape where most cocoa grown is "sun cocoa" (i.e., without shade). As a requirement of maintaining SAN certification, participating farmers are expected to maintain at least 20 to 25 trees or hectares on their farms. In addition to the training, RA supported the farmers to shift to shade cocoa by providing seedlings and technical support to meet this requirement. The outcomes related to carbon stock (Result 2e) are discussed under the REDD+ project.

KEY OUTCOMES FOR HONDURAS

When RA initiated the Honduras project in 2005 (before FCCA), the forestry cooperatives were not certified and sold their products at low prices. In supporting enterprise development, RA intended to improve the cooperatives' forest products from just "prime material" (e.g., logs) to more refined products (e.g., guitar components), increasing the value of the products sold and ultimately the income received by the cooperatives. In turn, increased incomes would incentivize sustainable forestry practices and value-added production. Two major dynamics underpinned the viability of this approach: the availability of a high-value product (mahogany) and the existence of a motivated international buyer interested in FSC-certified product (NAWPI).

The NAWPI relationship was transformative and continues to exist today. Over the life of FCCA, **12 new business alliances were forged with domestic and regional wood buyers,** providing a more robust local market for small producers (Result 1a) (RA, 2013b). RA noted that even when timber cooperatives have international market linkages, the majority of their product typically goes to domestic buyers. In building these alliances, RA helped cooperatives to both diversify the species mix used in products sold and add value by selling finished products. Through FCCA, the **cooperatives were able to bring three new timber species to the market, as well as five new product lines** (José Román Carrera, personal communication, 2013; RA 2013b).

As the community forest enterprises matured, FCCA facilitated access to credit, a prerequisite for achieving financial sustainability. In addition, **UNICAF accessed the single largest loan for a community forest operation in Honduras' history, a deal that brought the country $500,000 in credit in 2010 and later helped leverage another $160,000 in finance** for operational improvements (RA, 2013b). FCCA invested considerably in ensuring successful management of these lines of credit, which the union uses to invest in new infrastructure and to provide its member cooperatives with working capital. With the non-timber forest products (NTFP) enterprises, which are even more incipient, FCCA assisted Moskibatana to apply for a $100,000 line of credit through a government-backed mechanism. At the time of FCCA's close, Moskibatana's application had passed through a first stage of review.

RA also focused on assisting the two cooperatives that produce NTFPs to diversify their buyer portfolio to increase demand for products. For example, the Moskibatana enterprise identified its reliance on a Canadian cosmetics company as its only buyer as an issue. With assistance from FCCA, negotiations were initiated with two new potential batana oil buyers: a domestic Honduran company and a Brazilian firm (RA, 2013b).

In addition to assisting with business alliances and investments, RA provided training to improve the enterprise capacities of participating community cooperatives, and technical assistance for certification to cooperatives[9] (Figure 6) (Intervention 1b). Core assumptions in providing training in enterprise development and technical assistance in certification were that cooperatives would thereby acquire the necessary capacity to produce and sell sustainable products themselves (Result 1b) and that forest areas would be enrolled in certification and ultimately achieve certification (Result 1c). These assumptions were informed by an RA evaluation of its training activities between 2005 and 2008 (previous to FCCA). This evaluation concluded that RA's training in business management, organization, and techniques for value-added production, among others, contributed to a sustained and more efficient production of high-quality wood, an increase in local income, and a reduction of illegal wood traffic in the area of influence of the UNICAF partner cooperatives (Fortin et al., 2010).

FCCA focused on building the capacity of the certified community to run successful businesses, which would tip the balance away from forest conversion. Training topics included organizational management and business skills, export procedures for the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), best practices for quality and sustainability, and outreach to new markets (RA, 2013b). The training and technical assistance provided through FCCA were intended to improve skills all along the harvesting and production chain and to assist cooperatives in meeting the FSC standards.

RA also worked to streamline the process for cooperatives to meet government requirements. RA worked closely with the Honduran Forest Service to simplify harvest and transport permitting, especially as it related to CITES requirements for mahogany (RA, 2013b). RA facilitated the process for the cooperatives to receive the needed approvals from the government to be able to sell their products on the international and local markets, helping systemize and therefore expedite the process of governmental approvals. The assistance resulted in **cooperatives' increased ability to comply with legal requirements in a timely manner** in order to fulfill the needs of buyers (Ana Fortin, personal communication, 2013). While cooperatives were supported by RA in their permitting processes, streamlining the system more broadly (especially for certified producers) is still needed in the near term (RA, 2013b).

As a result of RA activities under FCCA, **the forest management contracts for community cooperatives in the RPBR buffer zones were extended**. To harvest mahogany legally, the cooperatives must have approved forest management plans and annual operation plans. The processes identified in these plans involve approximately 23 administrative procedures, a number of participating stakeholders, and a system to track the wood (Nogueron and Middleton, 2013). At the time of FCCA inception, the cooperatives had five-year forest management contracts to extract and produce timber. FCCA contributed to dialogues that resulted in a decision whereby contracts can now be renewed for up to 40 years. This change was an important step for the cooperatives in that it provided a justification for

Figure 6. Field trainings in harvesting and primary processing formed a key part of FCCA technical assistance in all timber-producing cooperatives. Photo credit: Rainforest Alliance.

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[9] RA did not provide direct technical assistance on FSC certification, as its certification service wing (RA-Cert) undertook the audit, which would have been a conflict of interest following its internal policy.

the investment of time and resources in certification and the sustainable management of the forest itself; it also helped to reassure buyers that they would have dependable supplies (Ana Fortin, personal communication, 2013).

An assumption in the theory of change for FCCA is that, as a result of improved skills, knowledge, equipment, and policies, the capacity of the cooperatives to become certified (Result 1c) and produce and sell certified forest products (Result 1d) would be enhanced. Although it is still early in the process, the project reports that notable improvements can be seen in a majority of the participating cooperatives, as evidenced by their progress tracked in RA's "auto-diagnostic" tool. Examples of improvements include a more than **15% increase in primary processing efficiency in the Caiful cooperative, and a nearly 100% compliance rate by Moskibatana in applying its internal rules for participation and transparency in enterprise planning** (RA, 2013b). However, although RA invested heavily in improving compliance with UNICAF's bylaws, a number of challenges remain. These include poor management and, in one notable case, fraud, which has endangered UNICAF's future. Currently, UNICAF is applying a revised set of regulations to achieve stronger controls over financial management.

Another important assumption was that increased cooperative capacity would result in increased forest area enrolled in the stepwise process toward certification, followed by certification of those areas (Result 1c). Under FCCA, **133,400 hectares of forest were certified to FSC standards, and 283,906 hectares were enrolled in the process of certification** (some of which did become certified during the project's life) (Figure 7). Certified area achieved totaled 53,114 hectares belonging to cooperatives in the buffer and cultural zones of the RPBR, under a group certificate held by UNICAF.

Figure 7. FCCA facilitated the certification of more than 133,000 hectares of forest to FSC standards in the Moskitia Region. Photo credit: Rainforest Alliance.

In addition to the timber producers, RA also supported partner NTFP producers in the sale of both batana and swa oil. Halfway through the project period, FCCA began to expand its intervention area in the Moskitia Region and started working in two indigenous federations outside the RPBR. **The Moskibatana and Lisangni enterprises were established with project support during 2010.** An area covering 55,600 hectares is under management by Moskibatana (which groups together more than 2,000 indigenous Miskito producers) to produce batana and swa oils; another 24,686 hectares achieved certification by Lisangni to produce swa. The batana oil was sold to a Canadian cosmetics company, and the swa oil was sold into a nascent domestic market (RA, 2013b). In total, **nearly 75,000 hectares for NTFP were enrolled in the process of FSC certification and are expected to achieve certification over the next two to three years.** The certifications of the NTFP operations were the first in the history of the country. **Indigenous NTFP management was codified and legitimized in Honduras for the first time;** never before had wholly-owned indigenous enterprises based on traditional practices made use of an international set of standards to guarantee sustainability and build market access.

During the FCCA project, the **18 cooperatives generated $1.97 million in sales of certified forest products and nearly $875,000 of forest products in the process of certification. UNICAF improved their price per unit income by more than 60% during the project period through improved quality and value-added processing** (RA, 2013b).

In Honduras, the achievement of certification on its own by cooperatives has not resulted in a premium price for their products. **However, having access to a broader market and improving the quality production of value-added products have increased the unit price of the mahogany sold by UNICAF** in international markets (RA, 2013b). The perceived community benefits, along with the buyer's interest in securing a long-term supply of legal wood, are strong incentives for the cooperatives to

maintain certification (Nogueron and Middleton, 2013). The project reports that **little incremental economic benefit can be highlighted as a result of certification of NTFP producers**, especially given that Ojon Corporation, the buyer of nearly 100% of the batana oil sold, decided to back out of the certification process and does not use the FSC label on its end product.

INTERVENTIONS TO DEVELOP REDD+ PROJECT

As shown in Figure 8 below, RA provided public education and training on REDD+ (Intervention 2a), with the intent that local people would understand REDD+ and its potential risks and benefits to local livelihoods (Result 2a). Furthermore, RA built capacity for the governance and management of landscapes by local farmers and cooperatives and other key community members (Intervention 2b). A key assumption was that capacity for sustainable production of certified products (Result 1b) would also improve governance to protect and manage forest required for a successful REDD+ project (Result 2b), and thereby enhance carbon stocks across the landscape (Result 2c), which would serve as the basis for REDD+ pilot projects (Result 2d). RA's core approach to REDD+ is that if and when cooperatives are able to realize income from carbon credits, this additional income is expected to only supplement revenue from the sale of sustainable products. RA first helps cooperatives build the capacity to undertake sustainable resource management and enterprise administration (Result 1b), which is expected to result in a carbon benefit (Result 2b) and the local capacity to manage a REDD+ project (Result 2b). Another key assumption was that certification of products and farms (Result 1c) would result in those areas providing carbon stock (Result 2e) to also serve as the basis for a REDD+ project (Result 2d). A third intervention was to develop a Project Design Document (PDD) in accordance with international standards (Intervention 2c). If sufficient verifiable carbon stocks were maintained in the landscape, REDD+ project development efforts would result in investment through the purchase of carbon credits (Result 2f), which would then, in turn, increase benefits to cooperatives (Result 4a).

Figure 8. Portion of the results chain for interventions to develop REDD+ project.
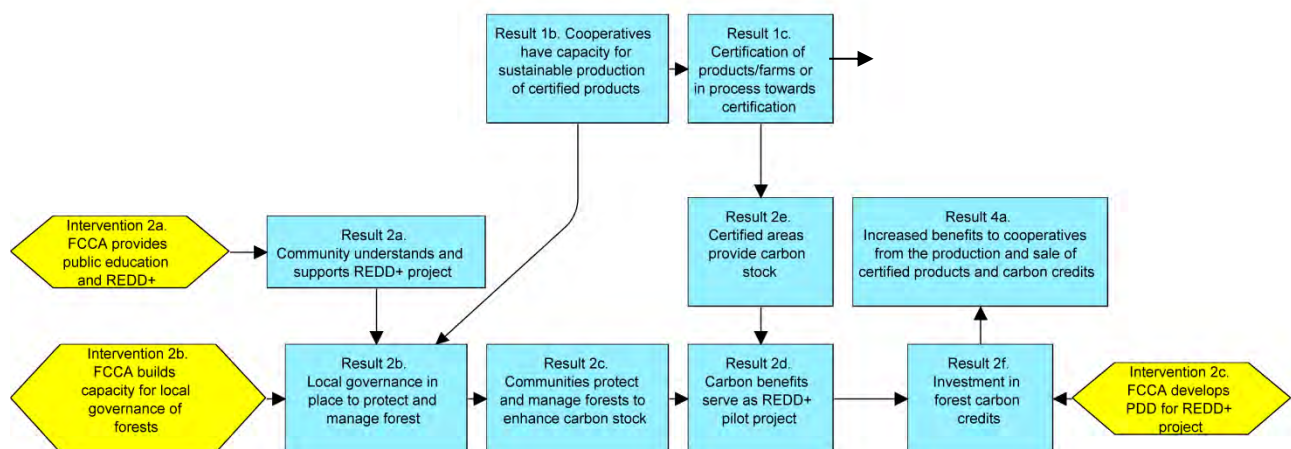
KEY OUTCOMES FOR GHANA

A key assumption in RA's theory of change for the project redesign in Juabeso-Bia was that a landscape-scale approach to planning and management, with a strong focus on improving cocoa agroforestry through certification, complemented by community-led forest protection and restoration, would provide sufficient greenhouse gas (GHG) benefits to form the basis for a sustainable REDD+ project (Result 2e) (see Context for the Ghana Project).

As a prerequisite to starting with REDD+ project planning, RA facilitated a host of community workshops to raise awareness on climate change and REDD+ (Intervention 2a) (Figure 9). With support from the Ashden Trust, the RA climate education module was adapted and applied in Ghana for the purpose of providing education on climate change and other related environmental issues to students and teachers in the landscape. RA also engaged all 36 local communities, non-government organizations (NGOs) and other local stakeholders in workshops designed to clarify the complex issues surrounding REDD+, discuss the risks and potential benefits, map out different scenarios for REDD+ implementation and benefit sharing, and secure partnerships in developing a landscape-wide pilot project. A common misconception about REDD+ is that it will result in quick income for communities. The workshops were proactive in setting expectations about the values of REDD+ and establishing understanding that it is still an evolving concept that is tied to complex market realities. RA focused primarily on education and awareness activities to help the community understand the concepts and to support the REDD+ pilot in their communities. (David McNally, personal communication, 2013). As a result of the awareness-raising workshops, combined with the RA climate education trainings, **RA successfully secured both community understanding of the project and buy-in for the development of REDD+**. However, no formal Free Prior and Informed Consent (FPIC) documentation was completed. If validation moves forward, there would be a public comment and consultation phase would be conducted to document FPIC (Benjamin Hodgdon, personal communication, 2013).

Central to RA's work in Juabeso-Bia to prepare for a REDD+ pilot was **the organization of a Landscape Management Board (LMB), a region-wide governance body with elected officials representing all 36 communities in the landscape** (Result 2b). The LMB is the top-tier body in a multi-level governance structure, with additional bodies at the community, "cluster", and landscape scales. It includes traditional elders, community leaders, and local members, many of whom are also cocoa farmers. The LMB was

established in 2010 as the main local counterpart for all FCCA activities, including landscape management planning and mobilization around certification and REDD+. The LMB has a central role in planning and coordinating all local interventions, such as sacred grove demarcation and management, identification of areas for enrichment planting and monitoring, as well as the alternative livelihood efforts such as beekeeping. The LMB is also the main project proponent in the REDD+ pilot PDD.

Figure 9. Carbon measurement during training. Photo credit: Rainforest Alliance.

To facilitate reporting to the LMB on the status of all activities, RA trained community representatives to monitor implementation using simple yet sensitive tabulation systems that do not require extensive literacy. Community representatives then aggregated data sets monthly. Monthly planning and review meetings provided the platform for joint review of the previous month's activities, taking note of shortfalls, challenges, and areas for improvement to inform the LMB and plan the next month's activities. Elections have been held at community and cluster levels to elect new members to the LMB in compliance with their governance statutes. **Regular reporting and elections are a positive indication of the maturity and sustainability of the LMB**. This is a significant positive outcome, since the LMB will need to be functional and legally registered in order to qualify for REDD+ and other financial support (RA, 2013).

In addition to increasing on-farm tree cover, RA worked with the LMB to improve the management of remnant forested areas within the community and to restore forest on fallow fields to increase carbon benefits for the REDD+ pilot. The landscape has a number of areas of local biological significance, mainly in forest reserves and forested sacred groves, totaling 73 hectares. These constitute essentially the only areas in the landscape that are still "old-growth" natural forest. Working with local traditional authorities and the communities where sacred groves are located, RA carried out border planting to properly demarcate boundaries and establish a system for monitoring the groves. **The sacred groves, once demarcated, would be part of a functioning landscape-scale REDD+ project.** RA also facilitated the

establishment of two nurseries where seedlings were raised for planting on fallow lands previously identified for enrichment.

> **Box 4. Assessment of Carbon Stock in Large Heterogeneous Landscapes**
>
> RA has developed an innovative approach for the assessment of carbon in large, heterogeneous landscapes. Calculating carbon on each farm would be impractical. A more efficient approach is the selection of sample plots with specific remote-sensing signatures, using these signatures to classify a larger region. The methodology could be relevant for other areas of Ghana and other areas of the world where cocoa is grown. It is more accurate than the Forest Carbon Calculator used by USAID. Most REDD+ projects have the purpose of improving the Forest Carbon Calculator Database for a region or country (Jeff Haywood, personal communication, 2013; RA, 2013b; RA, 2013c).

Under FCCA, RA **tested innovative methodologies and standards for piloting the REDD+ project** to ensure that carbon stock estimates are sound and that social and environmental safeguards are in place (see Box 4) (Result 2d). A **draft PDD was completed** (Result 2d), which stands as an outline for a landscape-wide integrated management plan articulated through RA's work with the LMB. The PDD incorporates SAN-based agroforestry best practices as well as forest protection and restoration. This plan forms the basis for long-range carbon enhancement and now resides with partner communities. Based on RA analyses, a **VCS REDD+ project was judged to be not financially viable,** given the low expected carbon revenue values relative to the investments necessary for a functioning REDD+ project. As a result, RA opted instead to prepare a PDD in line with CCB standards only. The draft is complete, leading to the next step in the process: The communities will decide if and how it may make sense to pursue CCB validation, most likely in partnership with Olam. As the local representative body established with FCCA support, the LMB is ultimately responsible for moving forward with the PDD.

KEY OUTCOMES FOR HONDURAS

As a prerequisite to initiating REDD+ project planning, RA facilitated a series of community workshops to raise awareness of climate change and REDD+ (Intervention 2a). The RA climate education module was used to engage local communities, NGOs, and other local stakeholders in workshops designed to clarify the complex issues surrounding REDD+, discuss the risks and potential benefits, map out different scenarios for REDD+ implementation and benefit-sharing, and secure partnerships in developing a REDD+ pilot project. Because of the workshops, along with efforts by other organizations, **the community supports the REDD+ project. Most notably, the indigenous peoples' group Moskitia Asla Takanka (MASTA) has agreed to the concept of REDD+, conditional upon FPIC implementation, and indigenous organizations endorsed Honduras' Readiness Plan Proposal (R-PP)** (Result 2a).

In the RPBR, the cooperatives and possibly UNICAF would provide the local governance structures to manage the REDD+ project. Outside the reserve, the indigenous federations and possibly MASTA would play this role. In both places, **local governance capacity to manage a REDD+ project would require considerable additional training and support** (Benjamin Hodgdon, personal communication, 2013)

Although progress has been made on enhancing carbon stock through certification, building community support, and local governance structures, **a market-ready REDD+ pilot is not yet in place** as a result of FCCA (Result 2d), and **therefore, carbon credits have not been sold** (Result 2f). Early on in the project, RA decided to focus on improving the national readiness dialogue to build indigenous support for REDD+ under FCCA. RA believed that moving forward with a pilot at the local scale would have been counterproductive, given unresolved issues around tenure, indigenous rights, carbon benefits, and FPIC at the national level. Furthermore, when FCCA was initiated, there were high expectations surrounding private sector interest in investing in the development of REDD+ projects. Since then, the market case for investing in REDD+ up front has become considerably less compelling as a result of faltering international negotiations on emission reductions (RA, 2013b).

The cooperatives could sell carbon credits before the completion of a PDD, and some buyers are interested in this. There is some risk to this approach, given that the credits might be worth more once the

validation is complete. With the wood enterprise in place, the community can afford to wait until the time is right for the sale of the carbon credits; the REDD+ project is only intended to supplement the enterprises. While the community awaits the sale of carbon credits, the forest will not be degraded, as it is the basis of the community's enterprise (José Román Carrera, personal communication, 2013).

For a long time, RA and others had been advocating for the government to extend forest management contracts for cooperatives, arguing that longer time horizons were generally necessary for sustainable forestry. Planning for REDD+ based on the cooperative model had an important near-term benefit: **the government agreed to expand the term for renewing required forest management contracts from five years to 40 years to be more in line with a REDD+ project time horizon**. Even in cooperatives where REDD+ projects may never take hold, this change greatly enhanced incentives to invest in long-term strategies for sustainable management and secure business alliances with buyers of certified products (Jose Roman Carrera, personal communication, 2013).

A key assumption underlying the FCCA theory of change was that certified areas would provide carbon stock (Result 2a) to serve as the basis for a REDD+ project (Result 2b). While this might be a reasonable expectation if certification is successfully maintained over time, **RA has not yet measured the specific carbon stock changes that might be attributable to the project. RA expects that the value of emission reduction credits will be relatively high, given that the forest is relatively intact and there is a high level of pressure from deforestation**.

Strong organizational and project management, control over forest areas, and longer-term planning horizons are all conditions that RA believes contribute to the success of forest enterprises (and that are also necessary for REDD+ project planning). RA also reports that the **demand from motivated private sector buyers of certified forest products has brought about rapid progress by the cooperatives** in building the capacity needed in natural resource management and governance systems in order to meet the rigorous standards for certification. This capacity will also be needed for successful governance and management of a REDD+ project (Result 2b). However, **RA has not yet measured the improvement in capacity resulting from forest management in certified areas**.

INTERVENTIONS TO SUPPORT NATIONAL REDD+ READINESS

Another intervention under FCCA was to support REDD+ readiness at the national level (Figure 10, Intervention 3a). The assumption was that if RA engages in REDD+ readiness, the national dialogue would actively seek input from local actors and lessons from the field to inform policy development (Result 3a), and national policies for REDD+ would therefore be more inclusive and based on field-level realities (Result 3b). A supportive national REDD+ policy environment would also contribute to the successful design and approval of a project PDD (Result 2f) and attract investment (Result 2f), which would in turn increase benefits to cooperatives (Result 4a).

Figure 10. Portion of results chain for interventions to support national REDD+ readiness.
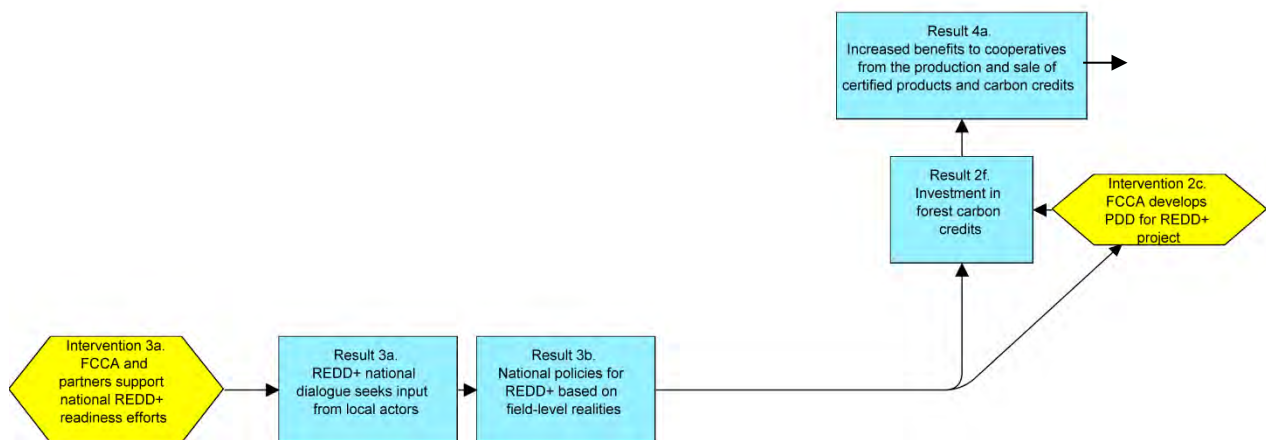
KEY OUTCOMES FOR GHANA

Under FCCA, RA worked to engage in national- and international-level dialogues on both timber legality and REDD+ readiness (Intervention 3a). The purpose was to ensure that RA's approach, through certification and community-led processes, would be integrated into the national Forest Law Enforcement, Governance and Trade-Voluntary Partnership Agreement (FLEGT-VPA) and REDD+ readiness processes (RA, 2013b). However, Ghana had already made significant progress in developing its national level REDD+ R-PP in 2010. Therefore, national REDD+ readiness was a relatively minor focus under FCCA, and the project did not have significant outcomes to highlight under Results 3a and 3b. Notably, one important effort supported by numerous actors, including RA—increasing devolution of tree and land tenure—remains to be resolved.

KEY OUTCOMES FOR HONDURAS

RA held that national policies for REDD+ readiness that clearly define the rights and benefits-sharing mechanisms for carbon benefits were a critical prerequisite to initiate REDD+ project planning at the local level in Honduras. When FCCA was initiated in Honduras, there was a lack of clarity surrounding the basic issues of tenure and resource rights for indigenous communities, as well as less-than-optimal engagement by the government of Honduras with local groups (Whelan, 2013).

With the intent of bringing indigenous groups into the national REDD+ readiness dialogue, FCCA took the opportunity to reconstitute the national REDD+ working group (Intervention 3a) in the wake of a 2009 coup d'état. **With support from a range of international partners, this new national working group on REDD+ took on a range of key issues, including local rights to forest carbon stocks, benefit-sharing mechanisms for eventual carbon offset payments, subnational project development, and options for local forest tenure beyond the cooperative model** (Benjamin Hodgdon, personal communication; Whelan, 2013) (Result 3a).

As a result of community engagement work through FCCA, MASTA and other influential indigenous peoples' organizations in Moskitia are now open to the establishment of REDD+ initiatives in indigenous territories, provided they follow the rules of FPIC. In a radical change of position since FCCA's inception, **MASTA now sees REDD+ as a potentially important way to strengthen indigenous rights to land and local systems for natural resource management**. Additionally, local groups supported the elaboration of the subnational forest carbon baseline (Result 3b), which covers the eastern portion of Honduras, including the area where FCCA partners operate. Although having stakeholders in agreement was essential to moving forward on REDD+ readiness, this process resulted in a one-year delay in approval of the R-PP (Jose Roman Carrera, personal communication, 2013).

With core support from FCCA, a **subnational baseline has been elaborated, covering more than one-half of the country, where the bulk of deforestation is occurring**. Finalizing the subnational baseline is an important step for the government, as it provides the technical groundwork for the development of potentially multiple REDD+ projects in Honduras. To contribute to the overall development of REDD+ in the country, RA chose to invest heavily in the elaboration of the baseline, as did an allied USAID-financed project, ProParque. RA also provided assistance to the Government of Honduras in its REDD+ readiness program by facilitating local consultation, revision, and indigenous agreement to submission of the national R-PP to the World Bank. With the support of RA and other actors, **all key stakeholders have approved the R-PP**, which is under final review (Result 3b).

REDUCED PRESSURES LEADING TO DEFORESTATION AND DEGRADATION

A critical assumption of RA was that all of the above interventions and their intermediate results would lead to multiple benefits for farmers and cooperatives (Figure 11, Result 4a). These benefits were expected to come from the sale of certified products from small enterprises (Result 1c), and potentially be supplemented by the sale of carbon credits through the REDD+ pilot (Result 2f). Another critical assumption was that if communities have increased income and other benefits from sustainable practices, then they would have decreased motives to engage in unsustainable practices (e.g., illegal logging, clearing forest for agriculture) (Result 4b). In turn, it was hoped that the increased benefits for

cooperatives would be sufficient to overcome the opportunity costs of stopping the unsustainable practices (e.g., farm expansion, illegal logging) (Result 4b).

Figure 11. Portion of results chain for reduced pressures leading to deforestation and degradation.
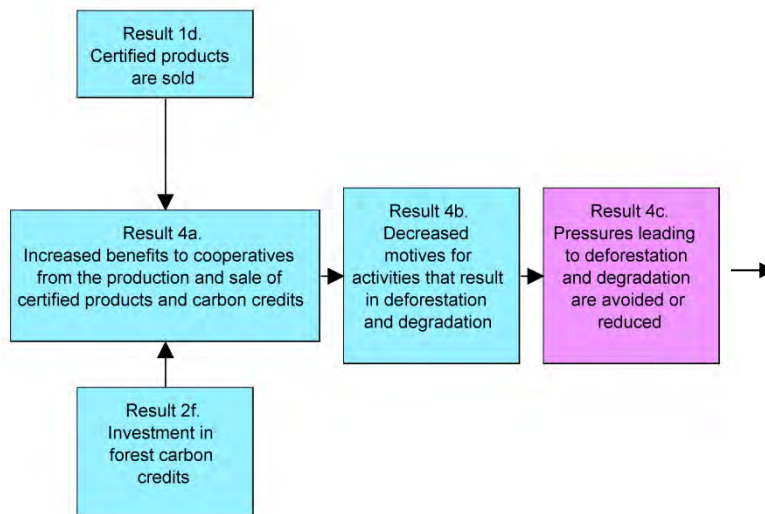
KEY OUTCOMES FOR GHANA

As a result of FCCA-supported activities, **833 farmers covering a total area of 2,312 hectares under certification have access to premium prices and preferred markets for their cocoa from Olam**, the main end-buyer of the certified cocoa. Although the price of beans is fixed by the Ghana Cocoa Board, the Board has agreed to allow Olam to pay farmers an additional premium for quality and sustainability.

Beyond increased income from price premiums, RA expects additional benefits to accrue from the use of best practices stipulated in certification standards, including improvements to soil and water management and better control systems. These benefits should improve productivity and the quality of cocoa over the near to medium term, which should generate higher returns for farmers (PDD). Yet, these **assumptions regarding benefits other than income have not yet been tested by RA and will take time to be observable**. **It is also too early for RA to assess if the increased benefits to cooperatives are sufficient to prevent farmers from expanding their farms into forested areas and thereby decrease the rate of deforestation** (Benjamin Hodgdon, personal communication, 2013).

Box 5. Multiple Benefits of Shade-Grown Cocoa

RA estimates that shaded cocoa holds more than twice the carbon volume of non-shaded cocoa. *"Apart from lowering the temperature and protecting the farms from the sun, the shade trees provide several other services. They help to reduce soil erosion, improve soil quality as well as binding more water, carbon and nitrogen into the soil. Which in turn can reduce the need for fertilizers and also increase carbon stocks,"* says Martin Noponen. *"But buying seedlings to cover thousands of hectares is expensive. In Juabeso-Bia, the Rainforest Alliance has provided farmers with seedlings and helped to start nurseries so the communities can grow their own seedlings. To date 19,151 shade trees have been planted."*

As a result of FCCA-supported activities, **nine cooperatives covering more than 130,000 hectares of forest have achieved certification**, with seven more cooperatives currently in the process of certification. Many certified cooperatives are receiving improved prices, but not due to the FSC certification; this increase is often due to preferred market access, and improvements in value-added production, quality, and productivity (Benjamin Hodgdon, personal communication, 2013).

> *"The bottom line of any sustainability project is knowledge transfer and creating an acceptance of new methods. Through the local management structure, we created an understanding that increased yields, alternative sources of income, and cost control have a much greater effect on the bottom line than price alone. In a longer perspective, adapting farms to climate change, securing good yields now and in the future is perhaps the most important."*
> Anthony Adon, Field Team Leader for Rainforest Alliance in Juabeso-Bia.

In Honduras, RA identified the unsustainable activities that are the proximate causes of deforestation to be conversion for livestock operations, palm oil cultivation, and, to a lesser extent, illegal logging. Drug trafficking is a key underlying driver of all these activities, which are unsustainable, illegal, lucrative, and difficult to combat with law enforcement alone. RA does not expect that community forestry enterprises can compete with these other activities purely in terms of financial returns. Rather, they believe that the processes involved in building sustainable forest management and, more importantly, local enterprise will create the social capital and resilience necessary to resist drug trafficking incursions.

RA has evidence from other places (e.g., Petén in Guatemala and sites in Mexico) that building community forestry enterprise helps to strengthen local institutions and provide alternatives that make communities less vulnerable to land conversion driven by drug traffickers (Benjamin Hodgdon and José Román Carrera, personal communications, 2013). In the Maya Biosphere Reserve in Guatemala, RA found that enterprise development around certified products can be a valuable tool for reducing illegal forestry and land conversion. The certification ensures buyers that the products come from a sustainably managed area. Additionally, illegal forestry is reduced through the local management of forests by the cooperatives (Ana Fortin, personal communication, 2013). However, RA also reports that, in the case of two small enterprises supported under FCCA, the Yabal Ingnika and Lisangni, it is uncertain whether they will be able to withstand the lack of government presence and increasing dominance of criminal rings linked to drug trafficking (RA, 2013b). **A specific assessment of the decrease of unsustainable practices as a result of project activities has not been conducted as part of FCCA** (Benjamin Hodgdon, personal communication, 2013).

There is not yet specific evidence that deforestation and degradation has been avoided or that rates have decreased during the FCCA project period. Using the results of the baseline analysis (2000–2010), RA is currently comparing deforestation rates within and outside the agroforestry cooperatives of the RPBR. Since FCCA support did not effectively begin until 2010, the results of this analysis will not reveal anything about the impacts of certification or enterprise improvements (RA, 2013b). RA is undertaking another study that will analyze forest cover change up to 2013, which will offer insights related to the impacts of certification and RA interventions in the cooperatives of the RPBR under FCCA.

ULTIMATE PURPOSES OF MAINTAINED FOREST, WHICH CONSERVES BIODIVERSITY, SUPPORTS LOCAL LIVELIHOODS, AND MITIGATES GREENHOUSE GAS EMISSIONS

A critical assumption of RA under FCCA was that a reduction in deforestation and degradation (Figure 12, Result 4c) would result in the achievement of multiple purposes.[10] The primary purposes for the project were: maintained or improved tropical rainforest (Purpose 5a), decreased loss of biodiversity (Purpose 5b) and improved sustainable local livelihoods (Purpose 5c). A secondary purpose, resulting from conservation of tropical rainforest, was that global climate change would be mitigated (Purpose 5d).

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[10] Purpose is defined as a formal statement detailing a desired impact of a project, such as the desired future status of a feature.

RA's general assumption was that, if forest extent and condition can be maintained or improved through certification, then local livelihoods would be improved and mitigation of global climate change would also be achieved.[11] Further, RA assumed that reducing the pressures leading to deforestation and degradation would also decrease loss of biodiversity. However, they recognized that forest biodiversity may be influenced by contextual factors (e.g. political upheaval, security issues, social conflict) and changes in ecological processes (e.g. fire, floods) that are beyond the influence of this project.

Figure 12. Portion of results chain for ultimate purposes
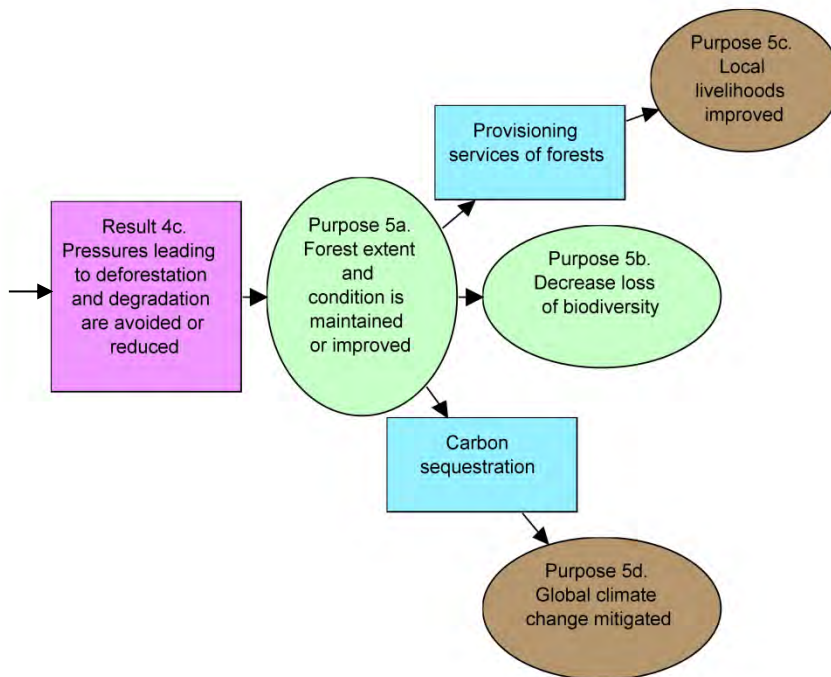
KEY OUTCOMES FOR GHANA

A fundamental assumption for FCCA was that certification and improved agroforestry management practices would reduce pressure on the remaining natural forests within the Juabeso-Bia landscape while improving tree cover in agroforestry systems and degraded sites (Purpose 5a). The PDD stated that replanting native and multiple-use trees, restoring fallow areas, enriching sacred groves and transitioning intensive, full-sun cocoa farms into shade-based farming systems would significantly increase forest cover.

Another purpose and key assumption for the project was that cocoa certification and forest protection and enhancement would decrease the loss of biodiversity in the landscape (Purpose 5b). A key consideration in the selection of Juabeso-Bia was the opportunity to link the adjacent Krokosua Hills Forest Reserve and Bia National Park, thereby establishing a biodiversity corridor for key species. The project area is home to the vulnerable white-breasted guinea fowl (*Agelastes meleagrides)* and the near-threatened bongo (*Tragelaphus eurycerus*), both of which are listed on the IUCN Red list of threatened species (http://www.iucnredlist.org/). The project expected to improve the conservation status of these species (RA 2011). While general conservation experience suggests that these assumptions may have merit, **there has not yet been enough progress to generate evidence that the forest and biodiversity conservation purposes are, in fact, being achieved. However, the project is well-positioned to measure such progress in the future.**

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[11] http://www.rainforest-alliance.org/work/climate

A biodiversity baseline study was completed during the reporting period, which generated information for developing an impact monitoring plan as required by the CCB Standards. The study covers vegetation and wildlife dynamics in the landscape and presents a description of the current trends in biodiversity values, making basic projections about change with or without project intervention. Permanent sample plots were established to allow for impact monitoring in the future. Under a without-project scenario, biodiversity in this region would continue to decline with the current trend of land use change and land degradation (RA 2013c). RA expects that the project will result in improvements in ecosystem services including improved soil fertility and increased protection and management of rivers and streams, including the management of riverine vegetation.

Figure 13. FCCA-supported farmer in fallow plot undergoing enrichment planting. Photo credit: Rainforest Alliance.

Another primary purpose for FCCA was that local livelihoods would be improved as a result of the multiple benefits stemming from project activities and more sustainable management practices (Figure 13) (Purpose 5c). As mentioned previously, RA facilitated the LMB that includes all communities within the project area. Project managers anticipate that this will result in increased social cohesion among communities, and enhance traditional governance structures through the implementation of local bylaws to back the implementation of the PDD. It is anticipated that such **community cohesion and local governance may itself result in improvement of livelihoods by enabling communities to access increased resources** from national and local governments for improved road access, rural electrification, potable water delivery, and education and health facilities (RA, 2011). However, it is too early to assess whether this expectation will be met.

A fourth purpose under FCCA was that maintaining or improving forest conservation would ultimately result in mitigation of global climate change (Purpose 5d). **Measurement of the project's benefits to global climate change mitigation is under way by RA.** If efforts continue as planned, RA estimates 255,229 tons CO_2 emissions would be reduced (RA, 2013c).

KEY OUTCOMES FOR HONDURAS

A key assumption of RA was that certification and cooperative management of forests would ultimately lead to achievement of the project's primary purpose of maintaining or improving the extent and condition of forests within the project area in Honduras (Purpose 5a). **Assessments regarding improvement in the extent and condition of the forest as a result of the project were beyond the scope of FCCA, although RA is currently undertaking a forest cover change analysis**. While forest areas have been mapped for conservation as part of certification processes, actual management practices aimed at enhancing biodiversity conservation measures in these areas have not taken hold across as large an area as targeted. In part, this reflects the incipient nature of the operations FCCA has worked with, as well as the cooperatives' relative inability to prioritize investments in conservation measures given the range of other challenges they face (RA, 2013b).

A second purpose under FCCA was a decrease in the loss of biodiversity (Purpose 5b) from the reduced pressures leading to deforestation and degradation. Specific **assessments of biodiversity status have not been designed or conducted as part of FCCA**. Within a majority of the forest areas that FCCA helped to become certified or enrolled in the certification process, close to 39,000 hectares were identified as High Conservation Value Forest or under some other form of protection (due to slope, watercourses, etc.). **RA's main impacts were related to delineation and validation of HCVF within certified management plans**. However, concrete investments in actual measures to enhance habitat or actively manage for biodiversity values have yet to be made by partner operations.

Figure 14. Training sessions with FCCA cooperatives in Sico-Paulaya focused on improved governance mechanisms, compliance with internal bylaws, and inter-cooperative communications.
Photo credit: Rainforest Alliance.

A third purpose under FCCA was that the project activities would result in improved livelihoods for poor, marginalized communities (Purpose 5c) (Figure 14). However, **there is no data that economic opportunities resulting from project interventions have directly improved the livelihoods of cooperative members**. Collecting this type of data remains a priority for RA. Moreover, RA is undertaking a case study of one of the cooperatives FCCA assisted, and part of this analysis will assess benefit flows from forest enterprises.

A fourth purpose under FCCA was that maintaining or improving forest conservation would ultimately result in mitigation of global climate change (Purpose 5d). **Measurement of the project's benefits to global climate change mitigation is under way by RA.** An analysis of the project area from 2000 through 2010 has been completed; however, these findings would not include the effects of certification, which occurred in 2010.

KEY LESSONS LEARNED ACROSS BOTH PROJECT SITES

KEY LESSONS: INTERVENTIONS TO SUPPORT ENTERPRISE DEVELOPMENT FOR SUSTAINABLE PRODUCTION

LESSONS FROM GHANA

RA has found that **the premium paid by Olam for certified cocoa is a strong incentive for farmers to continue to comply with certification standards and for other farmers to adopt best management practices** in the project area. A potential limiting factor in sustaining and scaling-up capacity of farmers over time is the need for continued training for additional farmers. The concept of certification is becoming more popular among the farmers, but the need to recruit and train other farmers in the standard will require additional outside investment. RA anticipates that as long as Olam is purchasing the certified cocoa, **more farmers will express interest as early adopters advocate for the program**.

RA also expects that the farmers already certified will require continued support to remain certified and achieve long-term success with incorporation of shade trees (Benjamin Hodgdon, personal communication, 2013). RA's primary focus was on preparing farmers and small enterprises for certification, as opposed to strengthening the actual cooperatives to which they belong. While the work they have initiated in enterprise development and certification has had important outcomes, **the long-term sustainability of small enterprises in Juabeso-Bia still remains to be developed** (RA, 2013b).

This project has represented almost double the cost of a normal business venture of this scale for Olam; however, the company intends to reduce costs as they learn from experience and the project develops over time. Immediate return on investment has not been a critical priority for Olam, and they have shown a willingness to continue to invest in the project, even though it is not yet commercially viable, with a vision towards the long-term sustainability of the business (Brasser 2013; David McNally, personal communication, 2013).

LESSONS FROM HONDURAS

RA has found that the **benefits generated from the production and sale of certified forest products are a strong incentive for cooperatives to continue to comply with certification standards and expand their enterprises**. This conclusion is supported by the outcomes related to an increase in the cooperatives' primary processing efficiency and application of the rules for participation and transparency in enterprise planning. FCCA has shown that **there can be a direct relationship between the buyer and producer**. In this way, the project is a model to follow in the region and in other tropical forests (José Román Carrera, personal communication, 2013). Although certification has not resulted in a premium price paid (as is the case with cocoa in Ghana), ancillary benefits of the processes engaged to achieve and maintain certification related to forest management, social organization, enterprise development and preferred market access appear to be adequate incentives for a majority of the cooperatives to maintain their certification.

Unfortunately, **gains in enterprise development were eroded, in part due to contextual issues beyond the project's control related to increased criminality in some regions and a lack of government presence**. During FY13, one of the UNICAF cooperatives was eliminated from the certificate due to lack of government presence in that part of the Moskitia. For the cooperatives to continue harvesting, government officials have to be present to (a) approve their annual operational plan, (b) accompany harvesting in the field, (c) undertake post-harvest monitoring, and (d) verify compliance with regulations regarding sales and transport. With the effective disappearance of government presence in the southern and cultural zones of the RPBR, it has essentially been impossible for the cooperatives to continue harvesting. The Lisangni enterprise, moreover, had its certification terminated after it opted not to continue with the audit process, mainly due to the lack of market for swa, but also because of governance issues in the Moskitia. It is expected that these operations will renew if criminal activity in the region can be brought under control and government presence returns to the area.

Sustaining and scaling-up capacity of the cooperatives over time may also be limited by the need for continued investment in training. The interventions applied under FCCA were possible in large part

because of the investment of external donors for building the technical capacity and social development of the community cooperatives. Based on experience with other projects, RA anticipates that capacity building will be continuous and a potentially long process. Even though significant progress has been made under FCCA, RA expects that **continued market-driven investments as well as other forms of outside funding will be required to sustain the cooperatives' operations and growth** (Benjamin Hodgdon, personal communication, 2013).

Starting in the second year of the project, FCCA worked to apply an "auto-diagnostic" tool in the enterprises they worked with in Honduras to measure their performance towards improving organizational capacity and enterprise competitiveness. By 2012, all 18 enterprises had a baseline and received training in application of the tool. With local capacity to apply the tool in place in all partner enterprises, FCCA was able to quantify performance. Performance results among the 18 enterprises were mixed. In summary, nine made substantive improvements, and three performed negatively in one or more areas. In six cases, however, the auto-diagnostic had not been reapplied (RA, 2013b).

OVERALL LESSONS FOR ENTERPRISE DEVELOPMENT FOR SUSTAINABLE PRODUCTION

In both sites, business alliances and investments were an important driver of cooperatives' participation in enterprise development and the certification process. In Honduras, the business-readiness of the cooperatives was generally stronger to begin with and therefore RA was able to focus on building the capacity of the cooperatives to achieve and maintain certification. In Ghana, however, the overall business-readiness of cooperatives was much weaker, requiring RA to invest more in basic business training. Instead of building the capacity of the cocoa cooperatives themselves, RA invested in the establishment of a new governance structure in Ghana (Benjamin Hodgdon, personal communication, 2013). Considering the varying contexts and approaches RA learned the following:

- The markets for higher-quality and certified products are strong, but the primary limiting factor in accessing markets is the cooperatives' capacity (Benjamin Hodgdon, personal communication, 2013).

- Where high-quality products and certification is a driver for investment by the private sector, the demand from a motivated buyer can bring about rapid progress by the cooperatives in building the needed capacities.

- Even where a price premium for certified product may not be realized, cooperatives will in some cases maintain certification because they perceive certification will grant them access to "preferred" markets (RA, 2013b).

- Continued external investments will be required at both sites to, train cooperatives to improve supply and meet demands for certified products, build sufficient capacity within the cooperatives to manage enterprises and maintain certification; and certify additional farms/cooperatives.

- The differences in cooperatives' capacity had impacts on their relative ability to benefit from product certification. RA has found that where local organizations are stronger, their ability to achieve, maintain, and benefit from certification is greater.

- Regular monitoring of key results is important in order to understand whether progress along a theory of change is being made.

KEY LESSONS: INTERVENTIONS TO DEVELOP REDD+ PROJECT

LESSONS FROM GHANA

RA's initial design for the project in Ghana was based on a model of community forestry in off-reserve natural forest areas in the Juabeso-Bia Region as the basis for a REDD+ pilot. However, the legal context in Ghana is not amenable to active natural forest management by local communities. In addition, under current law, all naturally regenerating trees are owned by the state; farmers have no rights to trees on their farms unless they are planted and registered with the state. RA assisted farmers with the detailed maps of their lands that are required to document all planted trees. Given both the lack of local

management and ownership rights over trees, as well as marginal carbon values in the landscape, a voluntary-market REDD+ project focused on community forestry areas was quickly called into question.

As a result, RA shifted its original strategy of community forestry to working with cocoa farmers to improve agro-forestry systems with a focus on enhancing carbon values on farms through sustainable practices, while assisting farmers to register planted trees with the Forestry Department to establish tree tenure.

Figure 15. Participating farmers at Olam International inauguration ceremony for cocoa produced under SAN standards. Photo credit Rainforest Alliance.

However, given the complex mosaic of mostly low-carbon land uses in the Juabeso-Bia landscape, the financial feasibility of a REDD+ project just focused on cocoa plantations for carbon enhancement was also questionable. RA realized that **a landscape-scale approach was needed to increase the likelihood that a REDD+ project would be viable**. The re-design of the project based on a landscape-scale approach included not only the incorporation of shade trees into individual farms, but also the enhancement of sacred groves and restoration of fallow areas. It was hoped that by encouraging the communities to halt the expansion of new cocoa farms into forested areas, including Forest Reserves and unprotected patches of forests, additional carbon would be maintained beyond that sequestered by integrating more shade trees into individual farms. RA hoped that payments for carbon credits would provide an additional incentive for locals to keep native trees standing, plant trees in areas that have been degraded, and invest in best management practices.

Even though considerable progress has been made and a draft PDD has been advanced, the REDD+ project is still in its beginning stages and no investments have yet been made in carbon credits. **The likelihood of substantially enhancing carbon storage in the landscape still remains in some doubt**. While analysis carried out under FCCA indicates that the potential exists, successful implementation of such enrichment activities is still a long-term endeavor that FCCA has only begun to set in motion. Since the project will not be developed to the more-rigorous VCS standards for carbon credits, it is unlikely to generate significant interest from voluntary carbon market buyers; moreover, the relatively marginal carbon benefit would be difficult to justify the hefty investments necessary for validation and measurement, reporting, and verification systems to maintain a VCS project.

The PDD produced under FCCA may, however, be used as the basis for **negotiating an added carbon premium for future cocoa sales, which may represent a positive alternative pathway toward the project's ultimate purposes**. The carbon benefit potentially purchased directly, or built into a premium price paid to farmers for 'climate-friendly' cocoa by buyers such as Olam (Figure 15). In this case, a lower investment in meeting compliance with CCB standards (as opposed to more expensive VCS standards) may be warranted. The next step in the process is for the LMB and other local stakeholders to decide if and how it makes sense to pursue CCB validation (RA, 2013b).

RA recognizes that if a REDD+ project is to be successful, **the entire landscape will ultimately need to be under committed management and continual local monitoring** as outlined in the PDD. Community members will be central to all aspects of implementation and monitoring of the REDD+ project; their active understanding and participation is also stipulated by the CCB Standards. RA believes that community support for the idea of receiving payments for improved farming practices was achieved under FCCA, but they are still uncertain about community support for the other aspects of REDD+. Evidence for support will be seen in whether the communities in the landscape choose to move forward with the PDD (Benjamin Hodgdon, personal communication, 2013).

RA has reported that given the complicated land use dynamics in the landscape and the multiple actors involved, **the transaction costs for an investor to monitor the carbon benefit to the farmer and other community members are likely to be extremely high** even under CCB Standards. Moreover, the amount of risk to a buyer in an eventual project will probably be high as well, given the heavy focus on enrichment planting which global experience indicates requires a heavy investment in technical assistance and oversight to achieve success. As of yet, no analysis of the quality of the shade tree enrichment process or the restoration activities on degraded lands that FCCA set in motion has been undertaken (RA, 2013b).

LESSONS FROM HONDURAS

RA's approach in Honduras emphasized enterprise development for the production and sale of certified forest products as a strategy for creating the conditions that will be necessary to both generate carbon benefits and then sustain a REDD+ pilot project (RA 2013b). Although RA did not move ahead with a REDD+ project given the context at the national level with FPIC, outcomes were achieved in terms of setting the stage for potential future REDD+ projects within the project site. RA anticipates that **the governance and improved management benefits to cooperatives of enterprise development and certification may add to the credibility of REDD+ pilots in international markets while also helping to reduce the risk for the cooperatives given the uncertainty of the REDD+ market**. RA perceives the benefits to cooperatives of selling carbon credits as secondary (and only supplementary) to the benefits derived from sustainable enterprises. **A needed future step is to identify the highest-priority sites for REDD+ project development and assess opportunities to make "no regrets" investments that may lead to functioning REDD+ projects** (RA, 2013b).

Although RA sees strong potential of capacity building in enterprise development and certification for moving cooperatives in the right direction for a successful REDD+ project, they have also found that **developing the needed capacity for management of a REDD+ project will require investment beyond the FCCA timeframe**. In spite of the cooperative's ability to achieve certification relatively quickly, achieving sustainable, transparent, and sound management of a REDD+ project may take years, with the combined support of multiple actors. RA describes one particular situation where mismanagement and fraud on the part of UNICAF's (now former) leadership created a serious crisis. Since early 2012, the project has worked intensively with UNICAF to improve internal governance (results from the diagnostic process have been positive with UNICAF), including reaching basic agreements around transparency and financial controls. The hard lessons learned by accessing credit forced UNICAF to face down serious internal organizational problems. (RA, 2013b)

Additionally, the reduced government presence in the Moskitia points to a grave pressure to the FCCA model, given that the core hypothesis of **certified community forestry as a mechanism towards REDD+ may be at risk as a result of the government's struggles to respond to spreading criminality**.

OVERALL LESSONS FOR REDD+ PROJECT DEVELOPMENT

Given the different land use contexts at each site, different approaches regarding scale of a potential REDD+ project were needed. From their experiences, RA learned the following:

▪ The economic viability of REDD+ varies with respect to different landscape conditions at each site. RA suggests that decisions regarding meeting verification standards (e.g. CCB and VCS) should be assessed in the context of the likely economic value of the REDD+ project. More specifically, the

investment necessary for compliance with the verification standards should be assessed against the potential market demand for carbon credits and the quantity of carbon which the site might feasibly provide.

▪ Cost-benefit analysis should to be carried out early in the REDD+ project planning process. Given the complex and lengthy process and large investment necessary to develop a REDD+ project and meet verification standard, coupled with the uncertainty in the carbon market, the costs and benefits of different verification options should be carefully weighed (RA, 2013b).

▪ Enterprise development for the production and sale of certified products was an effective strategy for creating the governance and management conditions that will be necessary for a successful REDD+ pilot project (RA, 2013b).

▪ In addition, enterprise development efforts strengthen management, administrative, and monitoring systems, which are also critical for a successful REDD+ project. RA believes that having these systems in place may help advance the process for meeting VCS and CCB standards. (José Román Carrera, personal communication, 2013)

▪ The benefits of improved governance and forest management capacity resulting from enterprise development and certification may add to the credibility of REDD+ pilots in international markets.

▪ Enterprise development and certification may also help reduce the risk for the cooperatives, given the uncertainty of the future of the REDD+ market. The idea is that benefits from selling carbon credits would be secondary and only supplementary to the benefits of sustainable enterprises.

▪ Developing the needed capacity for management of a REDD+ project will require longer-term investment, i.e., beyond the FCCA timeframe. In spite of the cooperative's ability to achieve certification relatively quickly, achieving sustainable, transparent, and sound governance may take decades and the combined support of multiple actors.

▪ There may be a major risk of cooperatives putting too much focus on quickly achieving certification and sales at the expense of not continuing to build sufficient capacity for sound social organization and enterprise management. In RA's experience, achieving self-sustaining small enterprise with transparent and effective governance and management practices needed for REDD+ in a complicated context is a long-term process that can require many years of dedicated support and technical assistance (Benjamin Hodgdon, personal communication, 2013).

KEY LESSONS: INTERVENTIONS TO SUPPORT NATIONAL REDD+ READINESS

LESSONS FROM GHANA

As mentioned previously, Ghana had already made significant progress in developing its national level REDD+ R-PP in 2010. However, **slow movement at the national level to devolve rights continued to hinder community production forestry in off-reserve areas as a basis for REDD+**. Throughout the project life, the forestry administration continually rejected proposals to pilot community management of natural forests (Benjamin Hodgdon, personal communication, 2013). However, as a result of FCCA's facilitation of local participation in national workshops, along with efforts of many allied groups, Ghana is reviewing its forest law and potentially devolving more rights to communities (David McNally, personal communication, 2013). RA believes that until more rights are devolved to local actors for greater control and management of carbon benefits and disincentives for protecting trees are removed, a REDD+ model based on community forestry is not feasible in Ghana.

In addition, **the lack of clearly defined rights at the national level to carbon stocks continues to provide strong disincentives for participation in REDD+ in Ghana**. Such a costly and cumbersome process to register trees amounts to a powerful disincentive for farmers to take the steps necessary to improve tree cover and conserve carbon stocks. However, RA believes that demonstrating the ability for the community to manage forest in the project area will provide good examples for the government regarding the benefits of changing forest laws. **REDD+ has provided a vehicle for thinking about land**

reform and tenure, devolving more rights to communities, and generally how global climate issues can be addressed through community-led processes (David McNally, personal communication, 2013).

LESSONS FROM HONDURAS

In Honduras, RA initially pre-selected the UNICAF cooperatives in the buffer and cultural zones of the RPBR for REDD+ piloting because member cooperatives had more established rights to forests than indigenous groups outside the RPBR. The forestlands traditionally used by indigenous groups, such as the Moskitia, have been under customary tenure systems that were not formally recognized by the government. At FCCA's inception, a majority of indigenous communities lacked clear title to their land despite a decades-old campaign for government to grant permanent common property title over customary lands. Despite deepening pressure, the Honduran government had resisted calls to grant permanent title until recently (Benjamin Hodgdon, personal communication, 2013).

While FCCA was initiating efforts to pilot REDD+ among the UNICAF cooperatives, opposition among indigenous groups to REDD+ was becoming more vociferous: Miskito indigenous organizations were voicing their outright rejection of the very notion of REDD+ due to unresolved land claims. The indigenous communities' concerns regarding REDD+ included: the potential loss of their use of resources for subsistence, issues around corruption in the distribution of benefits, the local and regional capacity to manage REDD+ projects, and the possible cultural changes and land use changes. In addition, the community did not trust the government to protect their land or the legitimacy of their role in the current management of resources (Nielson and Plumb, 2011).

Recognizing that pursuing a pilot (even in a non-indigenous area, with UNICAF cooperatives) would be politically counterproductive and might lead to continued conflict, RA worked to bring indigenous groups into the national REDD+ dialogue to secure meaningful participation in the process and confront long-standing disagreements such as tenure.

OVERALL LESSONS FOR SUPPORTING NATIONAL REDD+ READINESS

The RA strategy under FCCA was aimed at ensuring that the national REDD+ readiness process was inclusive and participatory, genuinely soliciting the input of marginalized groups, including indigenous communities. The following were RA's key lessons:

- Clearly defined rights and benefits sharing for carbon were a critical prerequisite to initiate REDD+ project planning at the local level. Establishing clear and enforceable carbon rights for local communities, however, is a complicated and expensive undertaking.

- Future work will need to define the specific legal and institutional framework for REDD+ projects that guarantee equitable benefits for local stakeholders.

- REDD+ projects are unwise to move forward without clarification of key policy questions regarding land and tree tenure, carbon rights, and benefit sharing (RA, 2013b).

- Local REDD+ pilots should not short-cut important policy changes at the national REDD+ level, at the same time, experience at the field level can help inform the need for national-level policy change to make REDD+ feasible.

KEY LESSONS: REDUCED PRESSURES LEADING TO DEFORESTATION AND DEGRADATION

LESSONS FROM GHANA

What seems clear to RA, given the continued and increasing farmer participation in the SAN Standard training, is that **the cocoa cooperatives see a benefit to accessing a more solid, premium market (as well as price) by dealing with Olam** (Figure 16). Farmers have not yet realized benefits related to carbon; however, it is expected that in the longer term there may be an added price premium that Olam or another buyer could pay for the carbon benefit generated by the climate-smart practices employed under the SAN climate module (RA, 2013b).

Figure 16. SAN Standards promote better conditions for workers and the environment. Photo credit Rainforest Alliance.

RA's intended result to reduce incentives for farmers to expand their farms into forest areas is critical in the project area, as cocoa completely dominates the landscapes and illegal encroachment into forest reserves is still observed (Brasser, 2013). **Certification, however, is still too new to provide evidence that incentives for farm expansion have decreased**, and the objectives of avoiding deforestation and degradation (Result 4c) could not be assessed in the short period of time for which FCCA was conceived (Benjamin Hodgdon, personal communication, 2013).

LESSONS FROM HONDURAS

RA recognizes that, although many benefits of enterprise development and certification are apparent at this stage, the long-term financial sustainability of the community forestry cooperatives still remains uncertain, especially without continued outside support (RA, 2013b). It is clear to RA that cooperatives perceive a benefit to participation in enterprise development and certification; however, specific benefits aside from the sale of certified product have not yet been measured. Therefore, given the uncertainty regarding the sustainability of benefits, **it is still uncertain if these benefits will be sufficient to deter activities that lead to deforestation and degradation**. RA worked throughout the project in Honduras to elaborate a subnational baseline. The baseline is of a level of robustness and area coverage (more than 50% of the country) that it can be used for planning multiple REDD+ projects up to VCS standards. It also provides the basis for RA to undertake an analysis of forest cover change, which they are using data now freely available on the web (not at project start) to update to 2013.

OVERALL LESSONS REGARDNG REDUCED PRESSURES LEADING TO DEFORESTATION AND DEGRADATION

In RA's experience at both sites, the benefits of certification to cooperatives include increased competitiveness, expanded access to international markets and private sector relationships, obtaining a premium price for the sustainable products, and cost savings as a result of implementation of best practices (RA, 2013b). Even though considerable progress has been made in both sites, REDD+ projects are still in beginning stages, and no investments have yet been made in carbon credits as a result of FCCA-supported activities. Therefore, cooperatives have not yet realized benefits related to carbon credits.

RA has found that more time will be required make measurable progress toward reducing pressures that lead to deforestation and degradation at both sites. RA is designing a method replicating this approach for a sample of sites where they work globally. In the two FCCA countries, while there is no specific investment planned, they expect to continue to monitor progress where they continue activities. Their engagement in Honduras is set to continue along similar lines as under FCCA for another 3 years. In Ghana, it is less clear how long they will be working there, or what the extent of their role will be.

KEY LESSONS: ULTIMATE PURPOSES OF MAINTAINED FOREST, WHICH CONSERVES BIODIVERSITY, SUPPORTS LOCAL LIVELIHOODS, AND MITIGATES GREENHOUSE GAS EMISSIONS

LESSONS FROM GHANA

Assessing improvement in the extent and condition of the forest, decreased loss of biodiversity, improved local livelihoods, and mitigation of global climate change as a result of project interventions was not feasible within the lifespan of FCCA. The PDD describes the potential benefits of the project and provides estimates for future improvements to forest cover, biodiversity, livelihoods, and carbon stocks. **RA may well have found an alternative pathway to achieving its purpose of climate mitigation** through increased carbon sequestration on farms through production and sale of "climate-smart" cocoa. However, it remains to be seen whether this becomes a viable alternative.

The PDD points out that Ghanaian national policy has two clearly stated but discordant purposes, namely to (1) increase annual cocoa production to 1,000,000 tons and beyond, and (2) reduce emissions from deforestation and forest degradation as per its REDD+ R-PP. RA feels that **without major changes in both the cocoa and forestry sectors, and a genuinely multi-stakeholder effort, it is fundamentally impossible to achieve both national economic and climate purposes.** Under the business-as-usual scenario, cocoa production cannot increase at scale without further deforestation into gazetted forest reserves. Similarly, there is no way to significantly reduce CO2 emissions from agriculture and land-use change in Ghana without halting and possibly reversing the expansion of new cocoa farms.

In the PDD, RA states that improved cocoa management would result in higher productivity per area unit, while at the same time also increasing cocoa climate resilience as fertilizer and shade trees contribute to improved soil fertility and higher drought resistance. RA is in the process of establishing methods to monitor and evaluate progress toward these benefits. **If these benefits can be demonstrated, the project may serve as a model of how to effectively achieve the currently opposing Ghanaian national policy purposes.**

LESSONS FROM HONDURAS

Assessing improvement in the extent and condition of the forest, decreasing loss of biodiversity, improving local livelihoods, and mitigating global climate change as a result of project interventions was not feasible within the lifespan of FCCA.

OVERALL LESSONS FOR ACHIEVING FCCA PROGRAM PURPOSES

As discussed in the outcomes for the projects, RA's primary purposes for FCCA were tropical forest conservation and decrease loss of biodiversity and improved livelihoods. Global climate change mitigation was a secondary purpose. RA assumption is that climate change mitigation will be achieved through the forest conservation benefits gained through certification activities. Efforts under FCCA toward enterprise development and certification can ultimately move the cooperatives not only toward climate change mitigation, the principal purpose for REDD, but at the same time toward slowing the loss of biodiversity and improving livelihoods, which are the "co-benefits" in REDD+. Two key lessons of note are:

- RA holds that, if the REDD+ pilot is eventually pursued, than ultimately these "co-benefits" are what will secure both the generation of carbon benefits and capacity of local stakeholders to manage and sustain the REDD+ project in the long-term.

- Project managers found that having multiple purposes that reflect the broad scope of REDD+ was effective in speaking to different beneficiaries and supporters of the project, since different audiences valued different purposes.

For RA, the array of stakeholders was broader than some of their other projects not focused on REDD+. Biodiversity conservation and improved livelihoods resonate across many audiences, but the addition of greenhouse gas mitigation catalyzed interest from new audiences that might not have been otherwise as engaged in the project (José Román Carrera, personal communication, 2013). Due to the political importance assigned to REDD+, FCCA was able to tackle fundamental policy issues in Honduras that

might otherwise have been difficult to advance in the context of a non-REDD+ forestry project. For example, the indigenous land rights issue in the Moskitia and the length of the cooperative forest contracts in the Río Plátano were issues that needed resolution to make REDD+ viable, although they are foundational for sustainable forestry management as well (Benjamin Hodgdon, personal communication, 2013). In this way, the FCCA project had an impact on key enabling conditions which could improve community livelihoods over the long term, in a way that might not have been expected at the outset of the project.

RECOMMENDATIONS REGARDING FCCA RESULTS FRAMEWORK AND USE OF USAID INDICATORS

Development of a project theory of change is an important tool supported by USAID for implementation of the Program Cycle to guide effective project design, monitoring, and evaluation. However, at the time of designing FCCA, USAID had not prescribed a formal theory-of-change approach that explicitly described the assumed causal relationships between the implementation of key interventions. For FCCA, anticipated results were outlined in the PMP, and many of the assumed causal relationships between them were described in narrative form in FCCA project documents.

In this section, we illustrate the potential utility of results chains as a tool for designing, monitoring, and evaluating USAID-supported REDD+ projects. To demonstrate the utility of results chains as a tool, we show how the results chain we developed with RA retrospectively for FCCA could be used to develop a monitoring and evaluation (M&E) plan for the project. We show how the M&E plan could then lead to the selection of specific indicators important to USAID for the PMP. We compare the intermediate results (IRs) and indicators in the FCCA PMP and the USAID indicators currently available to guide project design, monitoring, and evaluation to those that could be derived using the results chain.

RECOMMENDATIONS REGARDING FCCA RESULTS FRAMEWORK

RA's results framework for the FCCA PMP consisted of three IRs and three corresponding objectives and indicators for each objective. RA established a life-of-project target for each indictor and tracked progress toward this target for annual PMP reporting to USAID. Below we explain how the result chain retroactively developed by MI with RA could be used to make causal relationships among desired project results and ultimate purposes more explicit and to develop indicators that would help to provide information regarding the effectiveness of FCCA interventions in making progress toward intermediate outcomes and ultimate purposes.

The PMP for FCCA (Box 6) reported on three types of indicators for intermediate results from implementation of the project interventions: IR1) the value of economic benefits from the sale of certified products and carbon credits, IR2) the number of hectares under improved management, and IR3) the number of business alliances formed. These are the indicators for results that FCCA anticipated would be measurable within the timeframe of the project. In reviewing project documents and interviews with project staff, we understood that the purpose of increasing the number of business alliances (IR3) and to build the capacity of the cooperatives to produce and sell certified product was intended to result in more hectares under certification (IR2) and in turn increase the sale of certified product (IR1). We also understood that FCCA interventions to support the development of a REDD+ project and national REDD+ readiness was intended to increase the hectares under improved management (IR2) and in turn result in the sale of carbon stock (IR1). In other words, **the FCCA PMP had assumed causal relationships implicit among the project IRs that we were able to make more explicit by use of the results chain to show these linkages within a theory of change.**

Although not explicit in the results framework for FCCA, we understood from project documentation and interviews that the underlying assumption regarding implementing interventions to increase the economic benefits from the sale of certified products and carbon credits (IR1) was to reduce motives for unsustainable activities that were drivers of deforestation and degradation. We also understood that RA's assumption was that, by reducing pressures, forest conservation would lead to the ultimate purposes of decreasing the loss of biodiversity, improving livelihoods, and mitigating climate change. **Using the results chain as a tool to develop a theory of change for FCCA, we were able to clarify RA's assumptions regarding the reduction of pressures and achievement of ultimate project purposes.**

Furthermore, the FCCA PMP provides target values for each indicator. However, the assumptions regarding the value of these indicators (economic benefits, hectares, and number of business alliances) that are required above baseline conditions (i.e., a threshold) to achieve project purposes are not explicit in the targets. In other words, the target values do not make clear to what extent RA would achieve their desired impact on biodiversity, improving livelihoods, and mitigating climate change if target values were achieved through implementation FCCA interventions. **Using the results chain approach, indicators could be developed that would provide information regarding the assumed threshold value above baseline conditions needed to achieve a reduction in activities leading to deforestation and degradation and project purposes.**

RA has explained that IRs and indicators to measure outcomes related to reducing the pressure of deforestation and degradation or the ultimate purposes stemming from forest conservation were not included in their PMP because they anticipated that measurable outcomes toward these intermediate results would not be realized within the timeframe of the project; however, they are currently in the process of establishing methods to monitoring and evaluate these outcomes. They also explained that monitoring of these types of indicators are not typically included in USAID funding for a project of this size (Benjamin Hodgdon, personal communication, 2013).

The risk in establishing indicators and target values *ex-post* for pressure-reduction and ultimate conservation impact indicators is that baseline conditions may have changed during the life of the project. **MI recommends that future USAID-supported REDD+ projects consider the use of result chains as a tool for working with implementing partners as a means to define anticipated pressure-reduction and ultimate conservation and human well-being outcomes during the project design phase, such that the appropriate indicators, measurements, monitoring protocols, and baselines may be designed *ex-ante*.** In the case that an impact evaluation of the project is planned, counterfactuals would also need to be established *ex-ante*. Target values and dates may indicate that outcomes are not expected to be achievable during the project time-frame, but the assumptions will be explicit and methods

for measuring them will be in place. USAID can then make an informed decision regarding funding for monitoring the status of pressure-reduction and ultimate conservation purposes.

RECOMMENDATIONS REGARDING USE OF RESULTS CHAINS AND USAID STANDARD INDICATORS

MI reviewed the USAID Office of Global Climate Change "Standard Climate Change Indicators in Program Element 4.8: Environment" (USAID, 2012d) and USAID's Natural Resources and Biodiversity Indicators (USAID, 2012c). Using the results chain as the basis for the FCCA results framework, we compared the FCCA PMP indicators (Box 6) with those proposed by GCC that would potentially apply to a given result in the chain. We interviewed GCC and E3/FAB staff to verify that we were applying the GCC indicators appropriately. We then made recommendations as to how indicators, consistent with GCC and Environment indicators, could be applied to the project (Table 1). We also showed how target values above baseline conditions could be established at the beginning of the project to more specifically attribute outcomes resulting from project activities.

We do not suggest that all of the recommended indicators would be included in a PMP, but only those that are the most essential to measuring progress towards the ultimate purposes of the project within the constraints of time and resources. We also recognize that many of the recommended indicators would require further definition to develop specific measurements and methodologies for monitoring, for example, level of capacity, level of understanding, improved management.

Table 1. Key Results from Result Chain Developed for This Report, with Corresponding FCCA IR, Objective, PMP Indicator, Potentially Applicable GCC and/or Biodiversity Indicator, and MI Recommendations for Use of Indicators and Establishment of Targets.

Key Result	FCCA IR and Objective	FCCA PMP Indicator	Potentially Applicable GCC and/or Biodiversity Indicators	Recommendations for Indicators
Interventions to support enterprise development for sustainable production practices:				
Result 1a. Business alliances forged, increased demand, and market-driven investments in sustainably produced products.	IR-3: SMFEs improve their competitiveness in local and international markets. Obj 3: Build market linkages and long-term commercial sourcing relationships between SMFEs and the private sector.	3.3. Number of business alliances developed.	Standard Indicator 4.8.2-10: Amount of investment leveraged in U.S. dollars, from private and public sources, for climate change as a result of USG assistance.	Amount of investment. For GCC, this indicator would be specific to investment for climate change, as opposed to all enterprise development. Targets for amount invested would be based on threshold investments needed above baseline for to achieve the number of stakeholders (SMFE members) with a level of capacity needed to achieve certification.
Result 1b. Cooperatives have capacity for sustainable production of certified products.	IR-3: SMFEs improve their competitiveness in local and international markets. Obj 3: Build market linkages and long-term commercial sourcing relationships between SMFEs and the private sector.	3.1. Number of SMFEs with increased organizational capacity and improved business tools. 3.2. Number of SMFEs with access to business and financial services.	Standard Indicator 4.8.2.26: Number of stakeholders with increased capacity to adapt to the impacts of climate change as a result of USG assistance.	Number and level of capacity of stakeholders (SMFE members). For GCC, this indicator would be specific to increased capacity for climate change adaptation. Indicator could include stakeholders with the level of capacity needed to implement the climate adaption and mitigation elements of SAN and FSC standards. Targets for numbers and level of capacity could be based on the thresholds needed above baseline to achieve needed hectares of certified area and carbon stock.
Result 1c. Certification of products/farms	IR-2): Forest, biodiversity and carbon conservation are encouraged through SFM and PES mechanisms. Obj 2: Help communities and SMFEs meet sustainability standards for land-based carbon mitigation projects, as well as legality verification and forest certification.	2.1. Hectares under improved management (in process of certification following a stepwise approach). 2.2. Hectares achieving certification to the SAN or FSC-FM standard (timber products and NTFPs). 2.3. Hectares in areas of biological significance under improved management riparian areas, HCV forests, strict reserves).	Standard Indicator 4.8.1-26: Number of hectares of biological significance and/or natural resources under improved natural resources management as a result of USG assistance.	Number of hectares under improved management. For GCC, the indicator would be specific to management of carbon stock. A target for the number of hectares would be based on the threshold needed above baseline for achievement of overall results (below) related to having sufficient carbon plots to sell carbon credits and improve livelihoods as a means to reduce deforestation and degradation.

Key Result	FCCA IR and Objective	FCCA PMP Indicator	Potentially Applicable GCC and/or Biodiversity Indicators	Recommendations for Indicators
Interventions to develop REDD+ project				
Result 2a. Communities understand and supports REDD+ project.		No PMP indicator.	Standard Indicator 4.8.2-27: Number of days of USG-funded technical assistance in climate change provided to counterparts or stakeholders. Standard Indicator 4.8.2-29: Number of person hours of training completed in climate change as a result of USG assistance.	Level of community understanding and support. Target for level of understanding and support would be based on thresholds needed above baseline to achieve overall results (below) related to management of forests for REDD+ and improved livelihoods as a means to reduce deforestation and degradation.
Result 2b. Local governance is in place to protect and manage forests.		No PMP indicator, but RA has "auto diagnostic" tool.	Standard Indicator 4.8.2-29: Number of person hours of training completed in climate change as a result of USG assistance. Standard Indicator 4.8.2-14: Number of institutions with improved capacity to address climate change issues as a result of USG assistance.	Level of governance capacity. Target for capacity would be based on threshold needed above baseline to achieve the management of the forest for REDD+ and other overall results below.
Result 2c. Communities protect and manage forests to enhance carbon benefits.		2.4 Hectares included in forest carbon plots/projects facilitated and ready for market.		Hectares included in forest carbon plots/project. Targets for number of hectares would be based on thresholds needed to achieve needed level of investment to generate benefits to cooperatives.
Result 2d. Carbon benefits serve as REDD+ pilot project.				
Result 2e. Certified areas provide carbon stock.		No PMP indicator.		

Key result	FCCA IR and Objective	FCCA PMP Indicator	Potentially Applicable GCC and/or Biodiversity Indicators	Recommendations for Indicators
Interventions to develop national REDD+ readiness				
Result 2f. Investment in forest carbon credits.		1.3. Value of PES project facilitated and ready for the market.		Investment in forest carbon credits. Targets could be established based on threshold level of investment need above baseline to provide sufficient benefits to cooperatives.
Result 2g. Community management improves the extent and condition of forests		No PMP indicator.		
Result 3a. REDD+ national dialogue seeks input from local actors.		No PMP indicator.		
Result 3b. National policies for REDD+ based on field-level realities.		No PMP indicator.	Standard Indicator 4.8.2-28: Number of laws, policies, actions, plans, agreements, or regulations addressing climate change (mitigation or adaptation) and/or biodiversity conservation officially proposed, adopted, or implemented as a result of USG assistance.	Laws, policies, actions, plans, agreements, or regulations in place, based on specific elements (baseline, R-PP, PDD) needed for REDD+ readiness.
Reduced pressures that lead to deforestation and degradation				
Result 4a. Increased benefits for cooperatives from the production and sale of certified products and carbon credits.	Intermediate Result 1 (IR-1): SFM generates economic benefits and PES for communities. Obj 1: Enhance the role that PES can play in sustainable forest management, particularly in the dynamic and expanding sector of forest carbon finance.	1.1 Value of timber and NTFPs sold as certified to SAN or FSC-FM standard. 1.2. Value of timber and non-timber products sold from areas that are engaged in a stepwise approach toward SAN and FSC-FM certification and thereby considered "in process." 1.3. Value of PES project facilitated and market-ready.	Standard Indicator 4.8.1-6: Number of people with increased economic benefits derived from sustainable natural resource management and conservation as a result of USG assistance.	Number of people and their level of economic benefits. Target could be based on thresholds needed to decrease motives for activities that result in deforestation and degradation.

Key result	FCCA IR and Objective	FCCA PMP Indicator	Potentially Applicable GCC and/or Biodiversity Indicators	Recommendations for Indicators
Result 4b. Decrease motives for activities that result in deforestation and degradation.		No PMP indicator.		
Result 4c. Deforestation and degradation is avoided or reduced.		2.3 Hectares in areas of biological significance under improved management (riparian areas, HCV forests, strict reserves).	Standard Indicator 4.8.1-26 Number of hectares of biological significance and/or natural resources under improved natural resources management as a result of USG assistance.	Hectares deforested and/or degraded. Target could be based on threshold rates needed above baseline to achieve desired forest extent and condition.
Ultimate purposes				
Purpose 5a. Forest extent and conditions are maintained or improved.		No PMP indicator; however, these were FCCA purpose of Rainforest Alliance, and important environmental and social co-benefits of the REDD+ project.	Standard Indicator 4.8.1-1 Number of hectares of biological significance and/or natural resources showing improved biophysical conditions as a result of USG assistance.	Number of hectares of biological significance and/or natural resources showing changed biophysical conditions as a measure of the results of improved forest management, reduced deforestation, and enhancement and restoration of forest. Specific indicators for improved biophysical "conditions" related to forest extent and condition would need to be defined, and a baseline established at the beginning of the project to attribute changes as a result of the project.
Purpose 5b. Decrease loss of biodiversity.				

Key result	FCCA IR and Objective	FCCA PMP Indicator	Potentially Applicable GCC and/or Biodiversity Indicators	Recommendations for Indicators
Purpose 5c. Local livelihoods improved.			The following are some examples of standard USAID performance indicators measuring an aspect of life quality: **4.6.3-2** Number of persons receiving new employment or better employment (incl. better self-employment) as a result of participation in USG-funded workforce development programs. **4.7.4-5** Number of households that have obtained documented property rights as result of USG assistance. **4.8.1-6** Number of people with increased economic benefits derived from sustainable NRM and conservation as a result of USG assistance. **Custom**: Livelihoods; % change in household income generated from climate-resilient livelihood activities as a result of USG assistance.	Number of persons/households and level of change in livelihoods (e.g., change in employment, economic benefits, income). Number of people with documented property rights. Specific indicators for change in livelihoods and documented property rights would need to be defined, and baselines for these improvements and numbers or beneficiaries/persons established at the beginning of the project to attribute changes as a result of the project.
Purpose 5d. Global climate change mitigated.		No PMP indicator.	**4.8-7** GHG emissions, estimated in metric tons of CO_2, reduced, sequestered, and/or avoided as a result of USG assistance.	GHG emissions, estimated in metric tons of CO_2, reduced, sequestered, and/or avoided.

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Erik Streed, former FCCA Contracting Officer's Representative, USAID, interviewed on March 2013

Benjamin Hodgdon, Senior Technical Manager, TREES Program, Rainforest Alliance, interviewed on October 2013.

Greg Minnick, Former Manager, TREES Program, Rainforest Alliance, interviewed on October 2013

Will Crosse, Project Monitoring and Evaluation Advisor and David Hughell: Geospatial Systems Analyst, Rainforest Alliance, interviewed on September 2013.

Jeff Hayward, Director Climate Program, Rainforest Alliance, interviewed October 2013.

Eva Garen, Former AAAS Fellow, USAID FAB office, interviewed on October 2013.

David McNally RA's TREES Program team (former) interviewed June 2013

Atsu Titiati RA's TREES Program team (former) interviewed June 2013

José Román Carrera, TREES Program Senior Manager, Central and South America interviewed October 2013

Ana Fortín, National Coordinator, TREES Program, Honduras; Rainforest Alliance interviewed October 2013

Kate Faulhuber, Monitoring and Evaluation Advisor, USAID Office of Global Climate Change interviewed October 2013

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