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EVALUATION OF THE LIBERIA SUSTAINABLE TREE CROPS PROGRAM (STCP)

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ACRONYMS

ACDI/VOCA	Agricultural Cooperative Development International/Volunteers in Overseas Cooperative Assistance
CARI	Central Agricultural Research Institute
CGIAR	Consultative Group on International Agricultural Research
CRIG	Cocoa Research Institute of Ghana
FED	Food and Economic Development Project
FFS	Farmer Field School
FGD	Focus Group Discussion
FLG	Farmer Learning Group
FtF	Farmer to Farmer
FO	Farmers' Organization
GDP	Gross Domestic Product
HQ	Headquarters
ICPM	Integrated Crop and Pest Management
IITA	International Institute of Tropical Agriculture
LD	Liberian Dollar
LEAP	Local Enterprise Assistance Program
LIFE	Livelihood Improvement for Farming Enterprises
LSP	Local Service Provider
M&E	Monitoring and Evaluation
MIS	Marketing Information System
NCE	No Cost Extension
NGO	Non-Governmental Organization
PMP	Performance Management Plan
PRD	Planting, Replanting and Diversification
RFP	Request for Proposal
SOCODEVI	Société de Coopération pour le Développement International
STCP	Sustainable Tree Crops Program
UK	United Kingdom
USAID	United States Agency for International Development
USDA	United States Department of Agriculture
VVC	Video Viewing Club

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EXECUTIVE SUMMARY

Tree crops have long been an integral part of Liberia's economy. The primary cash crops in this sector have included cocoa, coffee, oil palm and rubber. Before the outbreak of the Liberian Civil Wars (1989-1996 and 1999-2003), an estimated 72,700 acres (28,000 ha) were devoted to cocoa cultivation alone.[1] The conflict devastated both the export and subsistence-oriented sectors and displaced many farmers from their land. The abandoned farms and plantations degenerated into forest, and their associated support structures were damaged or destroyed.

Since the end of hostilities, USAID has been assisting with the rebuilding of the post-conflict agriculture sector. One component of this broad effort was the introduction into Liberia of the Sustainable Tree Crops Program (STCP), a public-private alliance launched in May 2000 to facilitate the improvement of smallholder agricultural systems based on tree crops in West and Central Africa. STCP is funded by a number of donors, including USAID, the US Department of Agriculture, the World Bank and the Danish International Development Agency. In 2005, USAID/Liberia invested in the STCP mechanism through an award to the Consultative Group on International Agricultural Research/World Bank Project (CGIAR). This took the form of a Grant Agreement[2] in the amount of $9,314,000 between USAID/Liberia and the International Institute of Tropical Agriculture (IITA), one of 16 member organizations in CGIAR. This grant was implemented using largely World Bank procedures. IITA entered into a consulting agreement with the Canadian NGO SOCODEVI to build capacity for marketing access and income generation, and subgranted to Winrock International the oil palm processing subactivity.

The goal of STCP is to improve the economic and social well being of smallholders and the environmental sustainability of tree crop farms. The program was focused on:

- Training farmers in integrated crop and pest management (ICPM), quality management, post-harvest processing, and planting, replanting and diversification using Farmer Field School methodologies;
- Strengthening farmers' organizations to better interface with markets;
- Improving vertical integration of farming activities through increased quality and added-value processing;
- Improving the marketing chain, access to finance for production, processing and marketing; and,
- Enhancing the capability of farmers' groups and the local private sector to provide services to tree crop farmers and local entrepreneurs.

USAID/Liberia contracted Social Impact, Inc. to conduct a programmatic and results-based evaluation of STCP, and to make recommendations for performance improvement before the current funding period ends in December 2011. This evaluation covers only the USAID-funded portion of STCP.

The primary findings of the evaluation team were the following:

- Liberia STCP management is weak at the national level but strong in the field.
- Curricula have been developed for the Farmers' Field Schools (FFS) and Family Livelihoods Groups (FLG) for teaching Integrated Crop and Pest Management (ICPM). Trainings have functioned effectively in several communities. The trainings were found to contribute

[1] Liberian Ministry of Agriculture
[2] Grant Agreement No. EEM-G-00-04-00013-00

significantly towards increases in cocoa and oil palm production and growth in household income.

- There are no mechanisms to expand the FFSs and FLGs to other communities. The capacity of the Ministry of Agriculture has not been augmented to ensure the sustainability of support to farmers and school expansion.
- Video Viewing Club (VVC) curricula were developed but have not been used by FFSs or FLGs.
- STCP is supporting the Central Agricultural Research Institute's (CARI) work in developing a seed garden to produce improved hybrid cocoa seeds for farmers. No such seed garden is being established for the production of improved hybrid oil palm seeds.
- STCP is importing improved hybrid cocoa seeds from Ghana and hybrid oil palm seeds from Cameroon. However, no mechanisms are available to ensure post-phase out supply.
- Farmers' Cooperatives are weak and do not promote production of quality cocoa. Modern Farmer Organizations have not been established.
- The Marketing Information System (MIS) for cocoa has not been established. Farmers do not know the farm gate price, and buyers use information asymmetries to take advantage of them.
- While Winrock International has trained blacksmiths to make palm oil extraction machines called *Freedom Mills*, it did not develop a market as planned, jeopardizing post-phase out sustainability.
- IITA supported the signing of an agreement between the governments of Liberia and Ghana to continue supplying Ghanaian hybrid cocoa seeds to Liberian farmers.
- IITA supported the Government of Liberia in developing a master plan for rubber. The development of master plans for cocoa and oil palm are incomplete.

In response to findings, the evaluation team recommends the following:

- Liberia STCP should be allowed to end in December 2011.
- USAID should seriously consider not participating in the Phase II Liberia STCP.
- Both the cocoa and oil palm production and post-harvest value chain programs should receive high priority as part of the new Liberia Food and Economic Development (FED) program.
- VVC trainings should start in both FFS (cocoa) and FLG (oil palm).
- Community facilitators of the FFSs and FLGs should receive support to expand the schools to nearby communities, with beneficiary farmers providing modest payments to finance the school.
- Local service providers should be introduced into the nursery business to import hybrid cocoa and oil palm seeds from Ghana and Cameroon, respectively.
- Ministry of Agriculture extension officers should receive training on supporting cocoa and oil palm farmers.
- STCP should strengthen cooperatives and establish Farmer Organizations to promote cocoa marketing.
- STCP should collaborate with the government and telecommunication companies to establish MIS for cocoa and oil palm.

I. INTRODUCTION

Tree crops have long been an integral part of Liberia's social fabric and economy. Primary cash crops in this sector have included cocoa, coffee, oil palm and rubber. With the outbreak of the Liberian Civil Wars of 1989-1996 and 1999-2003, both the export and subsistence-oriented tree crop sectors were devastated and many farmers were displaced from their land. The abandoned farms and plantations degenerated into forest and their associated support structures were either damaged or destroyed. The Liberia Ministry of Agriculture estimated that 72,700 acres were devoted to cocoa production in 1989, contributing about 10 percent to Liberia's GDP. By 2000, this number had reduced to 0.5 percent of GDP. Rehabilitation and growth in the agricultural sector would do much to increase farmers' incomes, improve local and national economies, and contribute towards consolidating peace. It is estimated that improved cocoa production alone would benefit 30,000 farm families, or 150,000 of Liberia's estimated population of 3.1 million people.

Since the end of hostilities in 2003, USAID has been assisting with the rebuilding of the post-conflict agriculture sector. One component of this broad effort was the introduction into Liberia of the Sustainable Tree Crops Program (STCP), a public-private alliance launched in May 2000 to facilitate the improvement of smallholder agricultural systems based on tree crops in West and Central Africa. STCP is funded by a number of donors, including USAID, the US Department of Agriculture, the World Bank and the Danish International Development Agency. In 2005, USAID/Liberia invested in the STCP mechanism through an award to the Consultative Group on International Agricultural Research/World Bank Project (CGIAR). This took the form of a Grant Agreement[3] in the amount of $9,314,000 between USAID/Liberia and the International Institute of Tropical Agriculture (IITA), one of 16 member organizations in CGIAR. This grant was implemented using largely World Bank procedures. IITA entered into a consulting agreement with the Canadian NGO SOCODEVI to build capacity for marketing access and income generation, and subgranted to Winrock International the oil palm processing subactivity.

STCP's objective was to improve the economic and social well-being of smallholders and the environmental sustainability of tree crop farms, focusing on three upcountry counties: Nimba, Bong and Lofa.

Specific Liberia STCP objectives included:

- *Enhancing productivity of cocoa farms through intensification* by establishing Farmer Field Schools (FFS); training farmers on Integrated Crop and Pest Management (ICPM); improving germplasm and planting material availability; regenerating cocoa farms and planting cocoa on deforested land; and implementing new institutional arrangements for improved production support services.
- *Enhancing marketing efficiency in the cocoa sector* by establishing competitive markets through developing a Market Information System (MIS) and promoting group marketing of cocoa; promoting adoption of quality control systems in order to produce good quality cocoa; and establishing Farmers' Organizations (FOs) and strengthening existing cooperatives.
- *Introducing income alternatives in cocoa farming communities and agro-ecologies for equitable growth* through promoting diversification in cocoa farms, with plantain as a temporal shade and food crop and timber as a permanent shade crop.
- *Improving the policy environment to facilitate transformation in cocoa communities and agro-ecologies* by conducting research, promoting forums to debate public investment priorities and policy findings, as well as developing Liberia-specific plans for cocoa belt transformation.

Under the Grant Agreement, IITA had similar interventions planned for oil palm, small ruminants and rural financing. Based on reports, USAID/Liberia recommended that IITA close the small ruminants and rural financing components due to limited comparative advantage and transfer

[3] Grant Agreement No. EEM-G-00-04-00013-00

unspent funds to budget line items for activities under the cocoa program. Additionally, USAID/Liberia proposed that IITA make a sub-grant for the oil palm component to Winrock International while IITA handled the oil palm production phase.

Since IITA had limited experience in developing marketing cooperatives, ITTA entered into a consulting arrangement with SOCODEVI, a Canadian NGO, to develop curricula for training of cooperatives and FOs. Under the agreement, SOCODEVI was also to train an IITA staff member to manage the cooperatives and FO component of the program. SOCODEVI did not have direct contact with the cooperatives and farmer organizations, nor was it responsible for supervising the IITA staff.

II. PURPOSE OF THE EVALUATION

EVALUATION SCOPE

The Evaluation Team covered the USAID/Liberia-funded portion of the IITA - STCP program, including Winrock International's sub-grant, and technical support from SOCODEVI to IITA on development of cooperatives and FOs. The specific interventions covered by this evaluation were:

- Farmer Field School (FFS) and Farmer Learning Group (FLG) training programs in best practices in Integrated Crop and Pest Management (ICPM) and Video Viewing Clubs (VVCs) for both cocoa and oil palm farmers;
- Improved planting material supplies for farmers and training in application of nursery techniques;
- Supply of agricultural inputs by FOs, cooperatives and the local private sector;
- Improved institutional capacity of local organizations to deliver FFS programming, planting materials supply, and other production inputs and marketing;
- Rehabilitation and expansion of small cocoa and oil palm farms;
- Post-harvest marketing and the dissemination of price information among farmers;
- Value-added local processing opportunities, especially in the local oil palm industry; and
- Policy support to tree crop stakeholders.

The evaluation covers activities financed by (1) the Grant Agreement between USAID's Central Economic Growth and Development Bureau and the CGAIR consortium for IITA to implement the Liberia STCP activity, and (2) the IITA subgrants and subcontracts to organizations to carry out these activities. The evaluation includes support to policy makers and stakeholder in the rubber sectors, the Winrock grant for oil palm processing and the technical assistance to the project by SOCODEVI.

This evaluation does not cover program activities financed by other sources. It excludes the cocoa related activities implemented under the Livelihood Improvement for Farming Enterprises (LIFE), because this was financed by USDA. As ACDI/VOCA's involvement in STCP was financed by USDA, the evaluation team did not need to analyze the effectiveness of the program's partnership with the organization. This evaluation does not cover the implementation of the activities financed by other US Government Programs affecting the tree crops subsectors. These activities may have influenced and contributed to various aspects of the USAID grant implemented by IITA, but were not examined.

The evaluation covers the USAID funded STCP grant since the program revision in 2006, as modified by the 2008 No-Cost Extension. The No-Cost Extension had a very tight and detailed implementation plan, which was extended until December 2011.

EVALUATION OBJECTIVES

The evaluation's main objectives were to:

- Determine the extent of progress toward achieving the objectives of the program.
- Assess strengths and weaknesses of the implementation process, including targeting.
- Assess internal and external factors that influenced program implementation, including technical, managerial, organizational, institutional, socio-economic and political factors.
- Determine the prospects for the program's post-phase out sustainability and recommend which interventions may need to be added or emphasized to build sustainability.
- Assess the effectiveness of the program partnership with Winrock International and SOCODEVI.
- Determine the effectiveness of FFS in the different communities in which they were being used.

- Document lessons learned over the period studied, and provide recommendations for improving the implementation and/or design of the program to ensure achievement of the objectives and benefit sustainability.

EVALUATION QUESTIONS

The key evaluation questions include:[4]

- To what extent has the program achieved its planned objectives?
- In what ways, and to what extent, has the program had impact on the lives of project beneficiaries in the communities where the program is being implemented?
- Which of the program components was most effectively implemented and why? Which of the program components was least effectively implemented and why?
- What were the most significant constraints and/or difficulties in implementing the program, and where appropriate, how did the program overcome them? What lessons have been learned that may have implications for future programs?
- Were best practices identified over the course of the program implementation as well as monitoring and evaluation? If so, were they effectively applied?
- What are the prospects for the program's post-phase out sustainability and which interventions need to be added or emphasized to enhance the prospects of sustainability?
- What is the perception of farmers on FFS/FLG methodology vis-à-vis farming practices? What are the learning outcomes of FFS/FLG participants, and have they been met?
- To what extent were the needs of the project participants served effectively? Are FFS/FLG curriculum and classroom materials relevant to and easily understood by participants?
- What is the value of the program, in terms of cost in obtaining results? How valuable are results of the program to date?

[4] Details of master questions are attached as Appendix C.

III. EVALUATION METHODOLOGY

The evaluation team explored various options to obtain accurate primary and secondary information in evaluating the STCP Program. Some of the approaches included: a document review of secondary information, informed selection of locations and groups for data collection, interviewing of key stakeholders involved in implementing or sustaining the project, and interviewing farmers and managers of Farmer Organizations/Cooperatives for relevant information on the progress of the program as well as internal /external factors influencing the achievement of results.

The evaluation team used a tailored set of questions for each category of interview subjects. Categories were defined by the relation of the individual or group of individuals to the implementation of the project. Using these sets of questions as a guide, the evaluation team conducted semi-structured interviews.

DOCUMENT REVIEW

The evaluation started with reviewing various documents to guide site selection, stakeholder interviews, cooperative visits and farmer interviews.

The main document upon which the evaluation was based was the No Cost Extension (NCE) signed between USAID and STCP in 2008. Several other documents were developed for implementation of the Liberia STCP, including various training curricula and manuals, a Winrock International oil palm processing grant, a master plan for rubber and a project implementation report. The team reviewed as many of these documents as possible given the evaluation timeframe.

The evaluation team also examined documents from cooperatives as evidence of their operations. Some of these included certificates of registration, constitutions, minutes of various meetings, membership records and financial records. As the evaluation progressed, additional cooperative documentation provided leads for supplementary questions.

SITE SELECTION

The evaluation team selected the Liberia STCP Communities and their Farmer Organizations for interviewing based on the level of activities in each county. Relatively more cocoa growing communities were selected for evaluation from among the older, more established communities. Three of the seven cocoa growing communities were located in Nimba County, with two each in Bong and Lofa counties. As STCP's oil palm activities were limited in comparison to its cocoa activities, three oil palm growing communities were selected for interviews, two from Bong and one from Nimba counties.

STCP is currently supporting eight oil palm processing cooperatives in Liberia with USAID support. These include six in Nimba, one in Bong and one in Lofa. The sole cooperative in Bong (Ala-Afama) and two others in Nimba were selected for evaluation. The two cooperatives from Nimba include Gbeh-Facos, which is supported by STCP through USAID funding and by SOCODEVI under the CLP project, and the Zodo Farmers' Cooperative supported only by STCP through USAID support. A comparison of these two cooperatives in the same county gives a very good idea of how effective the STCP is in providing support to the cooperatives. Two Freedom Mill oil palm processors out of the total of five were also interviewed. Both of these were located in Bong County.

The sites were chosen in close consultation with the Liberia STCP Extension Services Specialist and the Monitoring and Evaluation specialist based in Gbargna, as they had intimate knowledge of the project and relative accessibility of communities. The USAID Economic Growth office also provided valuable inputs.

STAKEHOLDER INTERVIEWS

Several key stakeholders from governmental, parastatal and nongovernmental organizations collaborated in implementing STCP. To gain a better understanding of planning, policy support and sustainability, the evaluation team interviewed several key stakeholders. The team conducted a follow-up conference call with the Deputy Minister in charge of planning. Most interviews were conducted with individual stakeholders.

The evaluation team held other key stakeholder interviews with the USAID/Liberia staff responsible for Liberia STCP project supervision, the Bong County Agricultural Coordinator, the former Liberia STCP Country Director, the Acting Country Director for STCP Liberia, the Regional Farmer Organization Consultant for SOCODEVI, the Extension Services Specialist, the Monitoring and Evaluation Specialist for STCP Liberia, and a former Project Officer for Winrock International.

FARMER INTERVIEWS

Three main approaches were used to interview farmers in various communities: focus group discussions (FGD), buzz group discussions[5] and individual interviews. The blend of these approaches enabled farmers who may be introverted, or intimidated by the presence of opinion leaders, to discuss their views with the evaluation team without any fear. The team conducted some site visits to observe and confirm information provided by farmers.

The evaluation team conducted seven focus group discussions with cocoa farmers. These included two in Bong (Kpayah and Kpayan), three in Nimba (Kpairplay, Lowlay and Marbor) and two in Lofa (Gonwugruluiwu, and Dorzenilor) counties. Six buzz group discussions were held in these communities along with four field visits. The team interviewed 177 farmers in cocoa communities through these approaches, including 28 farmers in Bong, 99 in Nimba and 50 in Lofa.

The team interviewed farmers from three oil palm communities, two (Palala and Galar) of which were in Bong County and one (Marbor) in Nimba County. A total of 39 oil palm farmers were interviewed in Bong and one in Nimba. Four oil palm farms were also visited.

INTERVIEWS WITH COOPERATIVE MEMBERS

The evaluation team interviewed three (3) cooperatives in two counties. These included Ala-Afama in Bong county and Gbeh Facos and Zodo Farmers' Cooperatives in Nimba. A total of 61 cooperative members were interviewed, 45 of them in Nimba and 16 in Bong.

Interviews with cooperatives took a slightly different approach from the interviews conducted with Farmer Organizations. Cooperatives were separated into three groups; 1) Board Members, 2) Staff and 3) Cooperative Members. This was done as some staff and members might be reluctant to express conflicting opinions in the presence of Board Members. The team inspected the cooperative offices and documents to ensure that information elicited by these interviews was accurate.

Additionally, a commercial businessman and a businesswoman who buy cocoa from farmers and sell to the cooperatives were also interviewed on quality, pricing and market information.

INTERVIEWING WITH FREEDOM MILL MANUFACTURERS

Two of the five (5) freedom mill manufacturers trained by Winrock were interviewed in Bong County. These were the United Blacksmith Shop and Moonlight Metal Works.

[5] A discussion with a group of two farmers, usually a direct beneficiary and an indirect beneficiary.

IV. EVALUATION FINDINGS [6]

The evaluation team examined the management and implementation of the Liberia STCP project from the national and field office levels, the achievements and challenges in the cocoa subsector, the achievement and challenges in the oil palm subsector and the project's support to tree crop stakeholders on policy formulation.

PROJECT IMPLEMENTATION AND MANAGEMENT

Project Management

The management of the project at the STCP Headquarters (HQ) in Monrovia acknowledged that it had little knowledge of reality on the ground. The Acting Country Manager thought that a "form of" marketing information system existed to keep farmers aware of farmgate prices. The evaluation team did not find any evidence of its existence. She did not know if a baseline study had been conducted. She also gave the impression that FOs were established and some were ready to merge together to form a cooperative. However, the FOs visited by the evaluation team exist in name only, as none were found to be functioning. She was unaware of the current state of the VVC curricula. She did not examine any field officer reports before or after filling out the annual reports. The Acting Country Manager has held various positions with the Liberia STCP since the beginning of the no-cost extension in 2008. As such, there are sufficient grounds for her to have been aware of the status of activities at the community level. HQ supervision of the field office was also poor and most of the information available at the field level was not known at HQ.

Filing and documentation at HQ was also found to be highly ineffective. The evaluation team requested at least five annual reports and five semi-annual reports from Liberia STCP HQ, but after waiting nearly a week only one annual report and three semi-annual reports were received. The project management did not produce any document on their partnership with Winrock International or contract with SOCODEVI. Liberia STCP either could not or would not furnish these reports for review.

The Field Office serving the three project counties, however, had very good knowledge of what was going on in the communities. Much of the information at the Bong field office was found to be accurate at the community (output) level. Supervision from the field office to the communities was also found to be very effective and cordial. At the field office, the entire set of documents required for this evaluation, including training curricula for the various components, manuals and handouts, video recordings, etc., were all retrieved within a few minutes of the request.

Collaboration among Stakeholders

STCP collaboration between the implementing partners at the national level was quite effective. All the partners working on the project collaborated with the government. The Ministry of Agriculture was aware of IITA, Winrock and SOCODEVI's role in the STCP program.

However, based on interviews with former Winrock staff and the oil palm FLGs, the STCP implementing partners did not collaborate effectively among themselves. While Winrock was handling the post-harvest oil palm processing component for the FLG, not all of the FLGs visited by the evaluation team had heard of Winrock. Evidence exists, however, that Winrock operated at both the national and community level. This means Winrock was working with groups outside of the Liberia STCP project. SOCODEVI, which specialized in post-harvest cooperative development, also did not work with Winrock in developing oil palm processing cooperatives.

[6] Please note that the World Bank has issued a Project Information Document for Phase II of the Liberia STCP.

STCP's coordination with the Ministry of Agriculture at the county level was also weak due to the severe lack of senior personnel. While the Ministry of Agriculture Delegate was aware of STCP's presence, she was not up to date on current activities, since the Acting Country Representative did not send someone from STCP headquarters to the most recent review meetings.

Project Monitoring and Evaluation

STCP has a Monitoring and Evaluation (M&E) Specialist, who does not have any support staff. The specialist has developed various collection tools that are used for data collection and reporting.

The M&E Unit does not have an M&E protocol and procedure document to guide the operations of the Unit. The unit does not have a central database but uses various community level Excel databases to collate, store and analyze field data. No comprehensive analysis could be made from the collected data.

The Unit limited itself to collecting data on output indicators such as number of seedlings distributed, rather than following up on how these seedlings were doing and the challenges that farmers were facing (outcome indicators). Most of the collected data had not been analyzed, and it was very difficult to trace certain data. The specialist did not have sufficient knowledge about the challenges facing farmers in the communities, and thus could not give management information on how to support farmers' needs to address implementation challenges. The Liberia STCP did not have follow up monitoring of the communities trained in FTS and FLG methodology to establish the program's impact on beneficiaries.

The M&E Unit also did not conduct a baseline survey before the beginning the program or shortly thereafter. In effect, this restricts a future impact evaluation to anecdotal information. The program was unable to provide the evaluation team with a Performance Management Plan (PMP) or an M&E Framework upon which the program was based.

COCOA SUB SECTOR

Farmer Field Schools

A significant number of farmers[7] were trained by STCP staff on Integrated Crop and Pest Management (ICPM) at the FFS. About 59 FFS training sessions have been held to date, and it is likely that the STCP will reach its objective of 75 ICPM training sessions by the end of the current funding period in 2011. The ICPM curriculum has been developed and is currently used to train farmers. One objective of the program was the inclusion of at least 12 percent of women among the participants. Some training sessions were found to have a larger percentage of female attendees.

The schools are community based. A community member who owns a cocoa farm is trained as a facilitator of the school, and is responsible for providing guidance and support to farmers attending the school. This approach ensures that farmer support continues over the life of the school, as well as facilitating community ownership of the activity.

At the time of the evaluation, the FFS VVC activity had not started. It is not likely that the VVC activity target of 50 sessions would be reached by Liberia STCP by the end of the project. The videos have been produced in Ghana, using English and Akan. They are being translated into Liberian English, which is widely understood throughout Liberia.

The FFS also provided training in farm safety. This activity has been found to improve both knowledge and practices on participants' farms. The West Africa Regional STCP staff in Accra developed a manual entitled *Protect your Safety and Health on Cocoa Farms: A Guide for Farmers* to improve safety practices. The manual has drawings of activities and events to ensure that farmers

[7] Farmers were selected on the basis of multiple criteria, including farm size, experience, literacy, etc.

with limited reading ability can understand the messages through the pictures. A number of the illustrations, however, did not convey their intended messages accurately, since certain pictures misled most farmers. When fifteen drawings were selected and shown to farmers (with the labels covered for literate farmers), none could explain the meaning of two pictures accurately. Some of the pictures did not portray the local way of doing things because the publications were produced in a different cultural context. This is most likely because all of the curricula for the FFS (both ICPM & VVC) were developed at the West Africa regional level and were not tailored to the circumstances of cocoa farmers in Liberia. With differences in cultural practices across boundaries, some techniques taught in the FFS did not appear applicable to the Liberian cocoa farmer.

Almost all the farmers trained at FFS were found to be using sections of their training on their farms. When asked, many could explain how to carry out these practices. However, very few of these farmers are practicing the appropriate post-harvest management techniques. These techniques, including fermentation and improved drying, are hugely responsible for the production of quality cocoa. The failure of farmers to implement these techniques is directly leading to the production of poor quality cocoa beans, and thus a reduced farmgate price. The major reason for this failure seems to be economic: farmers feels pressured to sell their produce quickly; often there is little price advantage to compensate for the delay caused by processing the cocoa the full length of time (especially given the low volume of cocoa produced by smallholder farmers); the farmer might have to transport the product to a local market to sell and incur extra up-front costs (selection, packaging, transport, etc.); and s/he may be indebted to the buyer for prior loans against the product sale ("mortgaging" the crop).

Direct beneficiaries from the ICPM program have solid knowledge on how to produce quality cocoa. The same can however not be said about indirect (farmer to farmer) beneficiaries. While farmers know how to produce quality cocoa, they do not know the definition of quality cocoa grades. None of the farmers interviewed knew the right moisture content for quality cocoa grades. Many farmers could not define various grades for cocoa quality.

Even though the Africa 2000 Network was said to be training farmers and supporting FFS development in ICPM and VVC among farmers groups, the NGO was not known as such inside the STCP. Some key staff on the project were unaware the Local Service Provider (LSP) had this responsibility. In addition, the farmers were not aware of the organization. Consequently, support to farmers trained as FFS is not sustainable and seems to end immediately after the school.

Though the program is popular and has been demonstrated to be successful, the FFS design does not have room for expansion. Each community can benefit once from the school and each school can take up to 30 farmers. Some community members who wanted to participate in the school could not do so, and almost all non-beneficiaries interviewed indicated their desire to participate in the activity.

Improved Planting Materials and Nursery Techniques

STCP works with the [Liberia] Central Agricultural Research Institute (CARI) to establish a seed garden, or a collection of representative varieties used to creating hybrids. This process is proceeding smoothly, but these seedlings will not be ready for distribution until 2016. CARI is developing its capacity to manage cocoa seed gardens. About 9,000 cloned cocoa seedlings are ready to be transplanted to village cocoa seedling nurseries for hybrid cocoa. STCP is bringing in experts from the Cocoa Research Institute of Ghana (CRIG) and University of Reading (UK) who will provide training and technical directives. STCP also imported both the male and female cocoa seedlings from Ghana and the UK for cross breeding and grafting.

Figure 1: Improved hybrid cocoa seedlings under cultivation
Photo: J. Limange

In the early stages of the project, STCP bought these planting materials from Cote d'Ivoire and transported them by road. However, this approach was hindered by insecurity in Cote d'Ivoire, as project staff were arrested in rebel held territories. Ultimately, the release of both staff members and cocoa pods was negotiated. Since these pods should be planted within 48 hours after production, the delayed arrival of the seeds resulted in a germination rate of only about 12 percent.

The project then turned to CRIG for airlifting the improved hybrid pods to Liberia for nursing. Since cocoa is the backbone of Ghana's agricultural sector, a bilateral agreement was needed to ensure that the improved cocoa pods were actually exported to Liberia. With the support of the Liberia STCP, the Government of Liberia negotiated an agreement with the Government of Ghana for continued supply of these planting materials. STCP can now purchase these planting materials for its farmers based on this agreement. Results from the 2009 FFS communities indicate a much higher germination rate of about 50 percent. This is still unsatisfactory, as comparable projects have germination rates of 80 percent.

CARI will start distributing planting materials to Liberian farmers in 2016. A gap will occur between the end of the Liberia STCP in December 2011 and 2016, since only Liberia STCP is purchasing, transporting and distributing these planting materials to farmers in Liberia.

Only the farmers who benefited from the FFS received hybrid cocoa pods. Other farmers were automatically disqualified. Communities had only one chance to obtain the hybrid cocoa pods and lost out if seeds did not germinate properly. With the inadequate availability of hybrid cocoa due to the low germination rates, most farmers turned their attention to the local breed for seedlings and replanting. Other farmers indicated that they intended to wait and harvest the improved hybrid cocoa and nurse that for replanting. These farmers were not aware that harvesting the improved cocoa hybrids and nursing the seeds would not be a reliable source of plants similar to the original hybrid. Farmers who benefited from the ICPM training through the FFS also received training on nursery establishment. All direct beneficiary farmers indicated very sound knowledge on nursery establishment. Most of them had to face challenges in implementing cocoa nurseries, which resulted in large numbers of improved hybrid seedlings after transplanting. These challenges included:

- *Scorching Sun*: Farmers received training on planting temporary and permanent shade crops for the seedlings to prevent them from dying from exposure to direct sun. Some farmers in Lofa County living close to a game reserve lost seedlings, when warthogs fed on plantain and cassava suckers thus exposing the seedlings to more sunlight.

- *Termites:* Many farmers reported that seedlings were destroyed by termites they referred to as 'bocobod'. Even though farmers received training on how to treat termites on their farms, training seems to have focused on permanent destruction of the termitarium (termite mound or bocobod hill). Farmers indicated that the 'bocobod' does not build a termitarium, and instead has a subterranean colony, making it hard to treat.

> "We the Board members are very good and everything is going on alright. There is no need for election"
>
> -Cooperative Board Member

The Liberia STCP anticipated that CARI would build capacity for participation in germplasm development, but this has not yet happened. CARI has limited capacity and the research organization will need further institutional development to carry out germplasm development.

Contrary to the original plan, no local service provider has been trained to deliver improved planting materials to farmers once the project ends. The sustainability of planting materials supply to farmers is therefore in danger as these farmers cannot travel to Ghana for planting materials.

Small Holder Cocoa Rehabilitation and Expansion

Many Liberian cocoa farms were abandoned during the civil wars. Without cultivation, they degenerated into forest. One of the modules in the ICPM courses taught at the FFS directly addressed this with training in regenerating old cocoa farms. Many of these farms were regenerated using the knowledge and techniques acquired at the FFS: using underbrush removal, pruning, chupon (sucker shoot) removal and reducing excess shade. A good number of farmers had replanted additional cocoa in their old cocoa farms; however, as they could not obtain access to improved hybrid cocoa seeds, they had to rely on local varieties.

> "I use to harvests less than 100kg (of cocoa) each season. When I applied what I leaned, my production increased to over 300kg this season. I have been able to buy roofing sheets and build a new house out of these proceeds. The FFS is the best thing that has ever happened to me"
>
> -ICPM Beneficiary

Each FFS received a set of training materials as part of the ICPM training. These materials were kept and owned by the facilitators. The 2008 FFS class had to use knowledge acquired from the ICPM activity for rehabilitating their old farms. The Planting, Replanting and Diversification (PRD) curriculum, although explicitly required by the No Cost Extension, was not ready at the time of the evaluation. The No Cost Extension required planting of complementary crops, primarily to provide shade, but most were not transplanted in time to provide adequate shade and/or for sale in the "thin" local markets. Contrary to plans, individual farmers did not receive training materials. Facilitators were recruited from the villages and continued to live there during the activity.

Beneficiary farmers found that the smallholder cocoa rehabilitation and expansion activities were very effective and helpful. Almost all farmers who applied the methods taught in the field schools more than doubled their production the following year. Similar situations were recorded in almost all of the communities visited, even though a large proportion of farmers did not implement all of the techniques that they were taught.

Most farmers are elderly and rely on hired labor. With every farmer concentrating on his/her farm, it became even more difficult to obtain labor even if money is available, so farmers often do not rehabilitate the entire farm.

Women farmers have a more serious problem with obtaining hired laborers. A woman farmer who attended the Dorzinolor FFS in 2009 complained about her difficulties in obtaining labor for underbrushing. She said, "I have only rehabilitated part of my old cocoa farm because I can't get labor. Farming in this community is by '*kuu*'[8] and the men are not agreeing for women to join because they think we can't farm as fast as they do. I have only had the '*kuu'* once since last year and the part that was underbrushed by the '*kuu'* is the only part I have been able to rehabilitate."

Farmers in Liberia generally do not use insecticides and fungicides on cocoa farms. Among the farmers contacted, only one woman had used insecticide to spray termites in her farm. In addition, farmers do not use fertilizers in rehabilitating their cocoa farms. While STCP discourages farmers from using fungicides and artificial fertilizers to promote organic cocoa, most farmers said they don't purchase these inputs because they cannot afford the expensive chemicals. When asked where she had obtained money for purchasing insecticide, the previously mentioned woman responded, "my son in the city bought it for me." It is therefore clear that the use of agrochemicals and fertilizers is not a high priority for farmers in Liberia.

STCP has not trained local service providers to support farmers in facilitating planting, replanting and diversification. Each community does have a facilitator trained to provide support in the planting, replanting and diversification component.

Farmer Organization and MARKET Cooperative Strengthening

The team visited three old line cooperatives: Ala-Afama, Gbeh Facos, and Zodo. Liberia STCP provides support to Ala-Afama and Zodo, while Gbeh Facos receives help from both Liberia STCP and SOCODEVI's Community Marketing Service.

Farmer Organizations

None of the six FOs was found to provide services for marketing cocoa as intended. None of the organizations are registered, and none of them have a constitution. In some FFS communities, STCP Liberia trained a community member to act as a facilitator and representative on FO concepts. These representatives have not taken any action aside from attending training sessions. The idea of FOs seems not to be understood or appreciated by FFS communities. Contrary to the objectives of the FOs, all cocoa farmers in the FFS communities sell their cocoa as individual farmers and do not engage in group selling. Farmers sell their cocoa to any available middlemen, who tell farmers the market price, since the farmers are not aware of the farmgate price for cocoa. Standard farmgate prices do not exist in Liberia, making it harder for farmers to negotiate.

Comparison of Cooperatives

Two of the three cooperatives visited by the evaluation team are registered. Ala-Afama is not. All three had very poor record keeping and filing systems, with Gbeh-Facos being the only one possessing an office (which was locked up due to the illness of a board member). The other cooperatives had no office from which they could operate. Gbeh-Facos also uses the Board Member as staff, losing the functional differentiation between staff and board.

Gbeh-Facos is also the only cooperative that has an independent bank account. In the other two cooperatives, individuals with no experience in financial record keeping hold the funds. None of the three issue receipts to members upon registration, and members purchasing shares do not get either a certificate or a receipt. Even though all three cooperatives have existed for five to ten years, none has ever held a general annual meeting. Current Board Members have occupied these positions for several years, making it hard for members to challenge decisions. Additionally, members believe that

[8] Kuu is a cultural system of farming where a group of farmers move to a member's farm for farming activities and to another member's farm the next day until the whole cycle is complete. Even though not restricted, a single *kuu* often ranges from 20 to 30 farmers.

Board Members benefit personally from the cooperatives. The cooperatives have not paid dividends to members or shareholders.

Only Gbeh-Facos assesses cocoa quality before selling it to cocoa buyers. This cooperative does not reward good quality but uses penalties to discourage poor quality. There are no fixed market prices for cocoa grades. In any case, under current market conditions farmers are generally able to find buyers for their cocoa, even though the beans may be humid, flat, broken or slaty (slate or grey colored). The buyers feel that if they do not buy cocoa today, somebody else will.

A wide range of prices was found for cocoa across the three cooperatives. While Ala-Afama gets $110LD/kg for poor quality cocoa, Zodo pays about 10 percent less for good quality cocoa.[9] Gbeh-Facos, which judges quality by industrial standards, pays less than half of Ala-Afama's price for the best quality cocoa. The price is even lower in Lofa County, with farmers near the town of Zorzor indicating that their cocoa is bought at about $40LD/kg. Because of limited time and exceedingly poor roads, the evaluation team was not able to interview the only STCP-supported cooperative to discuss pricing practices and impact in neighboring cocoa production areas.

The large differences in farmgate prices have discouraged farmers from implementing the techniques and knowledge they learned from the trainings to cultivate high-quality cocoa. According to a Farmer-to-Farmer (FtF) beneficiary,[10] "we are taught to ferment our cocoa for six to seven days but nobody in this community ferments it for that long. We all ferment our cocoa for two to three days." A direct beneficiary added that, "the buyers are even willing to buy cocoa wet. Why should I ferment cocoa for 6-7 days when the children are dying of hunger?"

Farmers do not see the point of following what they were taught in the FFS. The FtF beneficiary noted in the above paragraph, whose spouse is also a direct beneficiary, continues, "the moisture content does not matter. Whatever you do to your cocoa, it would be purchased as a low grade and one cannot carry his/her small amount of cocoa from here to the city to sell. What we need is to know how to read the scale. The buyers cheat us because we cannot read the scale. They tell us the price, the quality and the quantity. Since they come with the scale to weigh before buying, we can challenge them on the quantity if we could read the scale. I know they cheat me whenever they buy my cocoa because I can't read the scale."

Several farmers at Gbedh-Facos mentioned concrete interest in producing other crops. Private buyers are already purchasing plantains/bananas for sale in Monrovia.

It is clear that Gbeh-Facos, the cooperative supported by both IITA and SOCODEVI, performs better than the others. The approach used to help the cooperatives and FOs, whereby SOCODEVI provides assistance to STCP staff to conduct downstream training and cooperative supervision, seems to have failed. It would be more effective if SOCODEVI supported the cooperatives directly. The Monrovia-based advisor of SOCODEVI indicated that this NGO had formally proposed assuming the implementation of farmer organization and cooperative management development training, but this was not accepted by STCP.

Marketing Information System

At the time of writing, the Marketing Information System (MIS) component of Liberia STCP has not been implemented. Officials at the national level have a completely different understanding of the cocoa marketing situation than farmers. Most officials explained the existence of a form of MIS by which farm gate prices are circulated to key points in the communities for further dissemination to farmers.

[9] Defined by their own subjective standard

[10] FtF is a method of extending project benefits by having FFS participants train other farmers.

The communities, however, had a very different view of the situation. Most of the cocoa farmers interviewed did not know the farm gate price of cocoa. When asked how they could discover the current price, many explained that the only way was to ask the buyer.[11] In one community, two people presented their experience. One farmer sent his cocoa to sell at the market and was told by the buyer the cocoa was of the best quality. The buyer offered to pay $90LD/kg. The second person took a buyer to his farm where he had fermented the cocoa for 7 days and dried for 5 days. The second buyer examined the cocoa and said it was of the best quality and therefore he would buy it for $40LD/kg. The buyer told the farmer the market price was $30LD but he was offering $40LD because of its high quality. Both of these farmers were deliberately misinformed, considering that others were selling poor quality cocoa for $110LD/kg. Due to misinformation on the part of buyers, most farmers in Lofa County think the price of cocoa is about $30 - $35LD.

Most telecom companies operating in Liberia have reach into all of these rural areas. In all the communities visited by the evaluation team, Lonestar Telecom and Cellcom users had network connections. Most of these farmers use mobile phones, even on their farms. Exploiting this opportunity could scale a cocoa price MIS countrywide at no cost to farmers or producer organizations (FO or cooperative).

Governmental support provides a very good opportunity for establishing a MIS for cocoa farmers. The Deputy Minister for Agriculture in charge of Planning and Human Resource Development affirmed government commitment to establish such a MIS for the cocoa sector. The government is also willing to facilitate the promotion of this activity with the telecom companies.

OIL PALM SUBSECTOR

Farmer Learning Groups

The communities that benefited from the Liberia STCP oil palm component established FLGs, with a methodology very similar to the FFSs. FLG members received training on nursery establishment, transplanting, removal of underbrush, pruning, and other techniques. Communities that implemented this component were found to have a very good understanding of how to establish and rehabilitate oil palm farms.

Similar to the FFSs, Liberia STCP trained a Facilitator in each community to provide information and technical assistance to farmers during the school session. The Liberia STCP developed a FLG curriculum in English; these curricula are owned and used by the Facilitators. A community member who wants any further clarification must contact the Facilitator directly.

Unlike FFS, there was no evidence of pictorial educational materials that would enable illiterate oil palm farmers to review what they were taught during implementation. The project has not developed any expansion mechanism for the FLGs to increase coverage. Consequently, as the STCP concludes, there will be no further extension of the FLGs.

Even though no VVC curriculum or videos were produced for the oil palm component, the farmers interviewed had very good knowledge of agronomic practices. While farmers applied most of the knowledge they acquired from the FLGs, most are not spraying their farms as they were taught. They complained about the cost of agrochemicals and stated that the lack of cash was the main reason for not spraying. Farmers were not given tools for establishing their farms.

Farmers also received training on how to manufacture organic fertilizer on their farms, so as to avoid the use of high-cost inorganic fertilizers. Most farmers displayed solid knowledge of this process. Some farmers complained about the absence of cow dung in their communities, making it difficult for them to duplicate the compost mixture. Almost all of them do manufacture some compost for their nurseries and consider this practice a success.

[11] Even though they believe the buyers cheat them.

Improved Planting Materials and Nursery Techniques

STCP imported improved hybrid oil palm seeds from Cameroon for beneficiary farmers. This process went smoothly, since hybrid oil palm seeds can survive for several days before planting. Furthermore, planting materials (oil palm seeds, wheelbarrows, shovels, etc.) imported into Liberia were distributed to farmers to establish nurseries. The improved hybrid oil palm seedlings grew faster and became difficult to transport after three months. The schedule was adjusted to distribute seedlings earlier, while their size was still manageable.

All farmers who took part in FLGs received some seedlings, although many complained about not receiving the quantities they wanted. These seedlings had a high survival rate, partly because participating farmers had been trained in good nursery techniques through STCP.

The main pest facing Liberian oil palm farmers is the *grass cutter* (giant pouched rat). *Grass cutters* primarily destroy young seedlings, however the FLG training did not address how to prevent the animals from destroying seedlings. Farmers have traditionally relied on traps, which have not been effective in scaring off *grass cutters*.

Figure 2: Oil palm nursery at Mapor
Photo: J. Limange

The first distribution of oil palm seed to farmers occurred in 2009. These seeds were nursed and transplanted into oil palm farms in June 2010. These oil palm farms were visited by the evaluation team and were found to have very high survival rates. Farmers acknowledged that the crop was growing rapidly. The second batch of farmers received their seeds in 2010. These seeds have been replanted in the nursery and are also growing very well; they are expected to be transplanted to fields in 2011. Most farmers were happy with the seedlings because of their high survival rate and rapid growth.

However, farmers are unsure how to obtain more seeds. Communities trained in the 2009 FLG are still looking for additional seeds but have no way to get them under STCP. As the seeds are imported from Cameroon, they are beyond the reach of Liberian smallholder farmers. STCP did not train any local service providers to furnish the improved hybrid oil palm seeds to farmers, or to furnish extension services to farmers after December 2011.

STCP's collaboration with CARI is limited to producing improved hybrid cocoa seedlings. There are no current plans to develop a future supply of improved hybrid oil palm seeds. Accordingly, farmers do not have any alternative to depending on local seeds. Most farmers are waiting to harvest the hybrid oil palm seeds and plant them in nurseries. When asked if they thought the offspring would

also be hybrid, a farmer responded, "we believe it would be hybrid because humans reproduce their own kind, plants also reproduce their own kind." Obviously these farmers have limited knowledge on what a hybrid is and need support to obtain improved hybrid seeds.

Smallholder Oil Palm Rehabilitation and Expansion

Most oil palm farms abandoned during the civil wars are in poor shape and require substantial rehabilitation. Several FLG beneficiaries have rehabilitated their oil palm farms, especially if the plantations were planted fairly recently. Oil palm rehabilitation has mainly involved pruning and removing underbrush, as the seed shortage has prevented new oil palm seedlings from being planted.

Farmers who did receive new seeds preferred to invest all of them in their new farms. A female oil palm farmer, who rehabilitated her old farm said, "It was not easy! As a woman, I needed help to underbrush my farm and to prune the entire farm. With all the men actively involved in the maintenance of their own farms, I had to do it on my own. Bit by bit I was able to rehabilitate a large portion of my old farm which I am currently depending on." Farmers stated that the training they received in the FLGs has led to improved yields. Some have decided to invest a large amount of their time into manufacturing compost for new and old oil palm farms.

Oil palm has an important impact on farmer household income. It is not as seasonal as cocoa, it is often sold in bulk, and it can be processed into crude cooking oil. The cash flow from on-farm processing lessens dependence on short-term loans and increases the farmers' bargaining power. The FLGs have a curriculum for rehabilitating old oil palm plantations. Facilitators maintain the curriculum. No service provider had yet been trained to continue support to farmers in rehabilitating old farms after Liberia STCP completes its present contract.

Post-Harvest Processing

Winrock International received a small two-year grant for improving post-harvest oil extrusion and processing. Winrock trained some manufactures in Bong, Nimba, Lofa and Montserrado counties on manufacturing the palm oil extraction machine dubbed the "*Freedom Mill*." The manufacturers of these machines are blacksmiths who already make various farming implements. Using the service of these artisans improves the local economy as well as increasing the probability of project sustainability, as production, sales and repairs of *Freedom Mills* are localized. A *Freedom Mill* can process 1400 kg of oil palm a day, yielding up to 84 gallons of oil a day, in lieu of 200 kg of oil palm yielding six gallons.

Winrock inspected every machine before it was certified for sale, but did not train a local service provider to continue this role. Accordingly, Winrock's departure from STCP in December 2010 marked the end of the external quality control measures kept in place by the project.

The market for the *Freedom Mill* was not actively developed. While IITA concentrated on the oil palm FLGs, Winrock focused on *Freedom Mill* production. The two organizations seem to not have worked together on localized demonstrations and a radio campaign. All the oil palm communities visited by the evaluation team had heard of the *Freedom Mill* but had not seen it. These oil palm farmers do not know much about the machine even though they are in communities trained by both STCP and Winrock.

The Winrock International grant did not transfer the technology to any organization to continue expansion and sustain production of the *Freedom Mills*. The Ministry of Agriculture is aware of Winrock's activities and appreciated its support. This ministry was not trained to sustain production of the *Freedom Mill* in conjunction with the local private sector and supported by STCP. With the departure of Winrock from the Liberia STCP, only the beneficiaries retain the *Freedom Mill* manufacturing technology. The evaluation team found that some manufacturers have advanced the technology further. While they were trained to make mills that can extract oil from hybrid oil palms,

some have improved upon the technology to make mills that can extract oil from both local and hybrid oil palm.

Most of these manufacturers face financial constraints. The Winrock grant contained plans to train financial counselors to provide technical support to all parties in the production chain. This training did not take place, and manufacturers were not able to build the quantities that they wished. The few machines that have been manufactured to date are not sold quickly enough for manufacturers to recover their returns for rapid reinvestment and promotional efforts.

Nonetheless, the manufacturers remain in business and are recruiting more apprentices for training. Of the two manufacturers interviewed, one had eight apprentices currently undergoing training for making the *Freedom Mill* and other farming implements. The machine shop operator has sold 25 *Freedom Mills* since he was trained in 2008. The second one has 17 apprentices undergoing training and has sold 162 *Freedom Mills* since training in 2008. He is able to produce this quantity because he got a loan of $10,000 from Ecobank at an interest rate of 5% per annum. This evidence provides support for the notion that if manufacturers obtain more funds, they can produce more mills.

Figure 3: Freedom mills under manufacturing
Photo: J. Limange

Both farmers and manufacturers stated that access to credit was their major challenge. Some farmers obtained loans from the Local Enterprise Assistance Program (LEAP), but were required to start repayment a week after obtaining the credit. This small enterprise funding program is inappropriate in the context of a farming system, even when other sources of prepayment were considered, such as processing and marketing existing production. Farmers wish that they were provided with the *Freedom Mill* (which costs US $800 - $1000) on credit, which they could pay back gradually. Some farmers are also willing to pool resources and purchase the *Freedom Mill* if they could obtain more information.

Market Information System

At the time of writing, no MIS has been developed for the oil palm sector. This does not present much of a challenge to oil palm farmers, since the crop has a large domestic market that dictates the price. Farmers were found to be abreast with the current price of oil palm at any given time. A farmer who does not know the price can obtain the information from another community member.

Most oil palm buyers are women, and they know farmers are aware of the market price and would not attempt to cheat them. Furthermore, oil palm is measured by volume and not weight. As a result, farmers do not need to understand how to read scales to ensure that they are not cheated. The lack of an MIS in the oil palm market does not hinder farmers much.

POLICY SUPPORT TO TREE CROP STAKEHOLDERS

Part of the scope of the STCP was the provision of support to the Government of Liberia in developing a Cocoa Sector Master Plan. While STCP and other development partners prepared a strategic plan for the Government, the government had concurrently developed its own plan. The Cocoa Strategic Group named by the government is tasked with merging the two and coming up with a comprehensive plan for the cocoa sector. At the time of writing, the Group had not yet submitted the final version.

In late 2008, STCP prepared a policy brief entitled "Reforming Cocoa and Coffee Marketing in Liberia". This report outlined nine recommendations for implementing liberal economic policies in pursuit of a competitive export sector. To date, these policies have yet to be implemented.

The government also received support from Winrock International on the development of a Master Plan for the oil palm sector. The initial plan has been completed, but has not yet been finalized. This process came to a halt in December 2010 as the two-year grant concluded. The Government still has not completed the process.

The Liberia STCP also provided support to key stakeholders in the rubber sector, and upon request from the Government, financed the development of a Master Plan for the rubber sector. The project's support to this sector ended with the development of the Master Plan, since the private sector dominates rubber cultivation in Liberia.

V. CONCLUSIONS

The conclusions are based on evaluation findings. The evaluation team has taken into account the fact that USAID/Liberia is undertaking the preparation of a new country strategic plan that will contain modifications of economic growth and agriculture objectives.

The conclusion of the evaluation team is that USAID should pursue assistance to tree crops as part of separate value chains under the forthcoming bilateral Liberia Food and Economic Development Program. Rebuilding the cocoa and oil palm subsectors will require substantial inflows of resources, and the Cocoa Alliance contains many necessary components.

Under CGIAR, IITA has not been successful or timely in developing the post-harvest cocoa marketing value chain. In addition, smallholder oil palm is primarily a local food crop produced mostly by men and marketed largely by women. Outside of the oil palm concessions granted to Sime-Darby[12] and others, a smallholder scheme can be very profitable in meeting large local demand. Subsequent conclusions follow for program management and implementation, the cocoa sub-sector, oil palm sub sector and policy support to stakeholders.

It is reported that the Ministry of Agriculture has not yet decided as to whether it should pursue a Phase II Liberia Tree Crops project.

PROJECT IMPLEMENTATION AND MANAGEMENT

Project Management

Disputes within the Liberia and West Africa STCP over organization may distract Liberia STCP headquarters from recent technical progress made in both cocoa and oil palm. Liberia STCP's performance has been much weaker on post-harvest value chains and MIS, with the exception of Winrock International's oil palm processing and the Master Plan for Rubber.

- Program management at the Liberia STCP headquarters level in Monrovia is not up to date on the state of implementation in the FFS/FLG communities. This is partly due to poor HQ supervision of the field office. Information received from field office is often not verified before submission to donors and dissemination to the general public.
- Field Office staff members are well informed regarding the state of the STCP at the County, District and Community levels. The production activities of master trainers and facilitators are well supervised at the community level.
- The headquarters filing system was very inadequate for reporting and decision-making, even making it very difficult for retrieval of key documents. The national office could not retrieve vital documents such as the grant agreement with Winrock International, the agreement with SOCODEVI, Performance Management Plans and Annual Reports from 2006 to 2010. Some documents could be missing due to poor filing or because of a recent change in headquarters location.

Collaboration with Stakeholders

- Collaboration between Liberia STCP and government stakeholders, including the Ministry of Agriculture, is strong and effective. Similar relationships exist between the other partners (i.e., Winrock International and SOCODEVI) and the government departments.
- Collaboration among implementing partners needs improvement. There is very little collaboration between IITA and Winrock International on the Liberia STCP program. SOCODEVI's collaboration with Winrock International on the STCP program is

[12] Some Darby is a large conglomerate with major investments in oil palm plantations, particularly in Malaysia and S.E. Asia. They recently signed an agreement for a 20,000 hectare industrial oil palm estate in Liberia.

nonexistent. ACDI/VOCA tends to confound gains in USDA-financed Food for Progress with the USAID/Liberia-financed STCP. Mercy Corps is reported to purchase *Freedom Mills* directly from the manufacturer, thus eliminating the machine's vendor network.

- The county level program coordination is also very weak. The County Agricultural Directorate knows relatively little about the program's activities though they are aware of the program's existence. The County could not take over Liberia STCP at program end because of the acute lack of mid-level staff with appropriate training.
- Some of the coordination problems can be attributed to frequent turnover in the Ministry of Agriculture due to low salaries. Some Ministry staff were hired away by NGO programs.

Program Monitoring and Evaluation

- The project has good monitoring tools/data collection forms.
- The program monitoring system is weak. It is without M&E protocols and procedures to guide operations. In addition, while some databases exist for data collation and storage, there is no centralized database storing aggregated data and allowing program-level analysis.
- The monitoring unit's capacity is inadequate. With only one officer staffing such a complex program, monitoring was reduced to collection, collation and storage of data. This does not permit the use of field report analysis to provide information for management decisions.

COCOA SUB SECTOR

With the selection process for contract awards under way for the Liberia food and agricultural development program, USAID cocoa and oil palm subsectors, full rehabilitation of the Liberian cocoa sector will require much greater resources than upgrading the West African cocoa sector.

Farmer Field Schools

- The FFS curriculum for ICPM has been developed and used to train farmers. The FFS approach is very effective. Farmers who received direct training from the school are able to display substantial knowledge on all aspects of cocoa farm rehabilitation and establishment, as well as management of new cocoa farms. Some indirect beneficiaries, however, did not have a good understanding of certain fundamental components of cocoa production. These included fermentation and drying. The curriculum for FFS is also not completely localized. Farmers were found to face challenges in dealing with certain types of pests that were not treated in the curriculum.
- The FFS curriculum for VVCs has been developed. This was, however, developed in Ghana and has yet to be translated into Liberian English, a language widely spoken by both literate and illiterate farmers alike. Accordingly, the VVC component of the FFS has not started. With the original plan of establishing and training 60 FFS through VVC, it is highly improbable that this target will be achieved by the end of the project.
- Pictures in training materials did not portray their intended messages accurately. Many farmers interviewed could not understand the message conveyed in the illustrations. These pictures were developed in different cultural settings and were not pre-tested in Liberia before production of the educational materials.
- The program design did not include any expansion mechanisms. Farmers in communities with FFSs, and who did not enroll the first time, did not get a second chance to attend the school. Farmers from non-FFS communities cannot benefit from the school even when they show their interest.
- The proposed selection and capacity development of local service providers to continue the FFS component did not occur. Consequently, no local service providers can lead new FFS trainings after IITA withdraws from the program.

Improved Planting Materials and Nursery Techniques

- STCP is working with CARI to establish a seed garden. The process is on track and improved hybrid seeds for farmers should be ready for the 2016 farming season.
- STCP currently supplies improved hybrid cocoa seeds to farmers. These seeds are imported from Ghana. Farmers do not receive adequate seed, but are compelled to accept the amount as they have no other means of obtaining the desired quantities.
- The survival rate of the first batch of improved hybrid cocoa seeds was very low. Most seeds did not germinate and most that germinated withered after transplanting. This was because Liberia STCP faced security challenges in importing the planting material from Cote d'Ivoire. This led to delays beyond the 48-hour limit that hybrid cocoa seeds can survive before being planted. Survival rates for subsequent batches (airlifted from Ghana) proved to be higher, but were still not satisfactory.[13]
- FFS-trained farmers had very good knowledge on how to establish nurseries and were able to establish their own nurseries for the seeds they received. Some farmers formed groups to establish a joint nursery, thereby sharing knowledge and responsibility.
- STCP facilitated a bilateral agreement between the Government of Liberia and the Government of Ghana on supplying improved hybrid cocoa seeds from the CRIG to Liberia cocoa farmers. This agreement was recently signed and should result in meeting planting material needs until the CARI seed garden starts producing improved hybrid pods.
- STCP did not train any local service providers to supply planting materials to farmers between now and 2016. This is when CARI is to start supplying planting materials to farmers. It would be hard for farmers to receive any planting materials through LSPs.

Smallholder Cocoa Rehabilitation and Expansion

- Farmers who attended the FFS Integrated Crop and Pest Management course have been very successful in rehabilitating their old cocoa farms. Most were able to rehabilitate at least a part of their farms, and have had much greater yields, significantly increasing their income.
- The development of the PRD curriculum was delayed. Farmers who completed the FFS in 2008 did not benefit from it, but most applied components of their ICPM training to practice PRD.
- Most farmers were not able to implement everything that they were taught in the school. This has prevented some farmers from rehabilitating their entire farm. As the rehabilitation process is labor intensive, it is a particular challenge to women, since they had difficulty in obtaining enough labor.
- Farmers generally do not use fungicides and fertilizers because of their high cost. The inability of farmers to secure loans precludes most from purchasing these inputs.
- The greatly-improved agronomic practices and emphasis on post-harvest processing have allowed farmers to greatly increase their production.

Farmer Organization and Cooperative Strengthening

- Cooperatives were found to be generally weak and do not function well as business organizations. Some do not have bank accounts. None of the cooperatives visited by the evaluation team have had their accounts audited in the past 5-10 years, have annual general meetings, nor possess detailed information on members.
- Cooperatives supported directly by SOCODEVI are more effective than those supported by IITA, even though IITA received training from SOCODEVI.

[13] The standard expectation of tree crop agronomists is that an 80 percent germination rate is normal. The airlifted seeds had a 50 percent germination rate.

- Most cooperative staff are not trained, but some board members have been trained. Board membership has remained unchanged since the cooperatives were established. Members have refused to organize elections in accordance with cooperative constitution.
- Cooperative members generally do not take into account quality of produce. Some cooperatives sell any cocoa regardless of quality, t. None of the cooperatives have fixed prices for each grade of cocoa, and the farmgate price is highly subjective.
- Cooperatives are able to take advantage of farmers when purchasing cocoa, since farmers do not know cocoa prices (both at freight on board and at farm gate). While some cooperatives sell poor quality cocoa for $100LD/kg, others purchase high quality cocoa from farmers for as little as $30LD/kg. The low prices offered to farmers are more profound in Lofa County given the proximity with Guinea.
- Some cooperatives provide services to their members by making low interest loans or by supplying production inputs (machetes, wellington boots, raincoats, etc.)
- Members and shareholders do not benefit from cooperative profits, as cooperatives do not issue dividends. Shareholders believe that board members and staff embezzle funds. In some cases, all the board members were simultaneously staff members.
- While individuals from FFS communities were trained to set up FOs, at the time of writing none have been established except in name. All farmers in FFS communities still sell their cocoa as individuals.
- FFS community farmers (both direct and indirect beneficiaries) have limited understanding of the cocoa grading system. None of those interviewed could tell evaluation team members the moisture content of a well dried cocoa bean, and none could provide definitions of cocoa grades when asked. While FFS beneficiaries know how to produce good quality cocoa, they lack understanding of what constitutes a high grade product.

Market Information Systems

- The MIS for cocoa has not yet been established. Farmers must depend on the buyer for the farm gate price. Buyers have been found to take advantage of asymmetric information to cheat farmers.
- No organization or local service provider has received training to set up a MIS. This program component has been absent from project implementation until now.
- The government is highly interested in developing MISs and is willing to support and collaborate with all stakeholders, including development partners and telecom companies.

OIL PALM SUB SECTOR

The prospects for the smallholder oil palm sector in Bong and Nimba Counties are excellent. Oil palm is often produced and sold in local markets by women. Quick growing and high yielding hybrids, when combined with small batch processors such as the *Freedom Mill*, produce very high returns over short time periods. Some palm oil is used in households while surpluses are marketed. Plantation-grown oils (including those produced by outgrowers) are graded differently than undifferentiated "artisanal" oils used in households and sold locally. These should probably be regarded as a different product. The evaluation team believes that both smallholder oil palm producers and industrial sized plantations can co-exist.

Farmer Learning Groups

- Oil palm farmers have received training in the FLGs. The trainings were very effective and the farmers are well equipped to develop new plantations and rehabilitate old plantations. These farmers received training using the FLG/ICPM curriculum.
- No FLG/VVC curriculum was developed for oil palm farmers. In addition, the program did not prepare an instruction manual or students' guide with pictorial description for illiterate farmers to review and reference.

- Farmers received training on how to manufacture their own organic fertilizer for application on oil palm farms. Some are using the techniques, but others have difficulty obtaining raw material such as cow dung.

- The program design does not include a mechanism to continue beyond its December 2011 completion date. As communities have only one chance to implement FLGs, many cannot benefit due to the limited number of trainings. Farmers from non-FLG communities have no other way to obtain access to the required knowledge.
- No local service provider was trained to take over and continue this laudable project. The Ministry of Agriculture's extension officers are spread very thinly and have not received training to support the project. The withdrawal of STCP will mean the end of support to farmers in the FLGs unless there is substantial institutional support in the near future.

Improved Planting Materials and Nursery Techniques

- Beneficiary farmers were supplied with improved hybrid oil palm seeds from Cameroon for cultivation. However, farmers did not get the quantities they needed.
- The hybrid oil palm seeds were found to have very high germination rates. The survival rate after transplanting was also very high. Most farms involved in this activity are doing very well and the hybrid seedlings are growing quickly.
- The project design did not have room for a sustainable supply of planting materials. Since only Liberia STCP imported these materials, ending the STCP program would mean terminating the seed supply to beneficiary farmers. Non-beneficiary farmers have never had access to these materials and are not likely to obtain them after the program ends.
- STCP Liberia and CARI have not worked together on establishing a seed garden for oil palm. Plans do not exist for providing farmers with a sustainable supply of seeds.
- Farmers have excellent knowledge on how to establish and manage oil palm nurseries. Some seeds thought by STCP staff to be of too poor a quality to germinate, were nursed by trained farmers are growing.

Smallholder Oil Palm Rehabilitation and Expansion

- Liberia STCP developed a curriculum for training farmers on the rehabilitation and expansion of oil palm farms. This curriculum was developed late, and certain challenges facing oil palm farmers in Liberia were also not addressed.
- Almost all trained farmers have been able to rehabilitate at least part of their old oil palm farms and are harvesting palm nuts from these farms. Most have not been able to rehabilitate their entire oil palm farms since the process is labor intensive and expensive.

Post-Harvest Processing

- Winrock International was responsible for implementing the post-harvest phase of the oil palm component. Winrock trained some blacksmiths to manufacture an oil extraction machine called *Freedom Mill*. The artisans are doing an excellent job in producing the mill. Though they received training on building the *Freedom Mill* to extract oil from hybrid oil palm only, they have improved the technology to extract oil from local palm fruits as well. Winrock did not transfer this technology to the Ministry of Agriculture before the sub-grant ended in December 2010.
- Winrock monitored the *Freedom Mill* manufacturers to ensure that all mills were of high quality before being released for sale. The monitoring process was not transferred to any organization, and the Ministry cannot fill this gap effectively because of its limited technical knowledge.
- Winrock did not develop the market for the *Freedom Mills* as planned. All FLG communities visited by the evaluation team had very little knowledge of the mill and had not seen it

before. This highlights the weak coordination between IITA's oil palm production and Winrock's post-harvest phase.

- Winrock held discussions with some banks to encourage them to make loans to farmers. However, nobody trained credit counselors on how to help farmers obtain access to these loans. All the stakeholders in the palm oil supply chain including the farmers, *Freedom Mill* manufacturers, vendors and distributors are constrained by the lack of access to credit. Currently available loans are not desirable due to their high interest rates and short repayment periods.

Marketing Information System

No MIS has been designed for oil palm farmers. This is not problematic because there is a huge local market for oil palm and the price is driven by market forces. Farmers cannot be cheated easily, because they have good knowledge of prices and oil palm is sold by volume.

POLICY SUPPORT TO TREE CROP STAKEHOLDERS

- Development of a Cocoa Master Plan has started but has not yet been completed. Liberia STCP took an active role in the process. The Government of Liberia has not yet developed a pricing policy for cocoa.
- A draft of the master plan was completed for oil palm. Winrock International provided financial and technical support to the Ministry of Agriculture on small scale oil palm processing.
- Upon the Government's request, the Liberia STCP provided support to the Government of Liberia by financing the rubber sector Master Plan. The STCP is not involved in its implementation, because the private sector controls the rubber sector.

VI. RECOMMENDATIONS

The Liberia STCP should be allowed to end in December 2011.

USAID/Liberia should give very serious consideration to NOT participating in the Phase II Liberia STCP, as presented in the recent Project Information Document.

Both the cocoa and oil palm production and post harvest value-chain programs should receive high priority as part of the new Liberia Food and Economic Development (FED) program (proposals were due on January 7, 2011). The rice value-chain was the only one selected among four chains in the RFP, and the core counties are Nimba, Bong, Lofa and Grand Bassa. If possible, both subsectors should be rehabilitated. The oil palm sector does not present the challenges that the cocoa sector does, due to its reliance on hybrid seed for success. Oil palm would offer very useful supplements to household income, as oil palm is consumed domestically and sold in local markets.

PROJECT IMPLEMENTATION AND MANAGEMENT

The administrative reorganization of the STCP should proceed.

Project Management

- The STCP headquarters should improve program monitoring and supervision at the county and community levels. Management needs to keep current on implementation status to ensure that necessary support and leadership are provided to technical teams.
- The Field Office should continue its effective supervision of community level activities. These include the supervision of master trainers and facilitators. This office should continue to maintain proper record-keeping keeping and ensure access to all vital document at all times.
- STCP should improve the headquarters filing system. All documents that management could not trace for the evaluation should be located and filed appropriately. These documents include the agreement with Winrock International, the contractual agreement with SOCODEVI, the Performance Management Plan for the project, agreements with USAID and all annual and semi-annual reports since the program's start in 2006.

Collaboration with Stakeholders

- STCP's management should continue effective collaboration with the government. Other implementing partners (including Winrock International, even though their contract has ended) and SOCODEVI should continue to work closely together and provide support to the government in their areas of expertise.
- STCP Liberia should fill the gap left by Winrock International's departure by linking manufacturers of *Freedom Mills* to FLG communities, and by increasing community-level farmer awareness.
- SOCODEVI should provide support in training oil palm cooperatives or producer groups.
- The Field Office should improve collaboration with the Government representatives. The County Agriculture Directorates should be kept fully aware of STCP activities and kept involved in project implementation so that they can take increased responsibility as the program ends. Coordination with District Agriculture directorates should be strengthened.

Project Monitoring and Evaluation

- USAID requests that the Liberia STCP complete the M&E protocols and procedures that guide Monitoring and Evaluation Unit operations. This should be consistent with USAID's new integrated M&E program.

- The M&E Specialist should receive additional training to manage the database effectively. Some staff, including an assistant to the M&E Specialist and a data entry clerk, should be hired and trained to support the M&E specialist and ensure effective program monitoring.
- If a future tree crops program is approved for Liberia, M&E should be assigned to more experienced staff.

COCOA SUB SECTOR

Farmer Field School

- The FFS methodology is very effective and its use should be encouraged. The curricula for the school should be pre-tested in Liberia and edited to better fit the local context. Areas that would need attention may include how to treat pests such as termites.
- The curricula for the FFS should include how to read scales to prevent cheating of farmers.
- The FFS should emphasize the importance of cocoa quality grades, as quality determines price. Farmers need to understand why they should produce quality cocoa and be able to determine grade by the moisture content of dried cocoa beans.
- Accelerate translation of the VVC curriculum into Liberian English so that VVC training can start. The curriculum should be pretested and adjusted to the Liberian context.
- The Liberia STCP should provide continuous monitoring of the communities that have already received FFS training. Monitoring should cover likely difficulties that these communities might face. Farmers who received hybrid cocoa seeds late and had low germination and survival rates should receive additional seeds and technical support.
- Liberia STCP manuals and guides produced for instructing farmers with pictorial descriptions of activities should be pretested before production to ensure that they clearly convey their meaning.
- STCP should consider financing another round of training in beneficiary and nearby communities. Community members who observed FFS members acknowledged that due to yield increases obtained by beneficiary, other farmers may be willing to pay a modest fee to attend the schools.
- FED should train Ministry of Agriculture's extension officers as Master Trainers so they can provide support to facilitators and establish new schools in new communities. A high priority should be given to this activity since training takes time.

Improved Planting Materials and Nursery Techniques

- STCP should continue working with CARI to ensure establishment of the seed garden by 2016. When STCP ends, USAID should provide technical support to CARI to ensure that the effort is completed.
- Agricultural extension officers at the district level should be trained to establish nurseries for improved hybrid cocoa seeds so they can provide technical support to farmers upon completion of STCP.
- STCP should identify private, local service providers (LSPs) and train them to (1) import hybrid cocoa seeds from Ghana and (2) establish nurseries to support the supply of hybrid cocoa seeds. STCP should also introduce these LSPs to the CRIG so that LSPs can get permission to purchase hybrid cocoa for export to Liberia. STCP should also introduce the LSPs to farmers so that they are confident that the seeds are improved hybrids. The government may need to negotiate rates with the LSPs that factor in costs and a modest profit.

Smallholder Cocoa Rehabilitation and Expansion

The technology for rehabilitating cocoa farms needs reconsideration. The present rehabilitation and maintenance system of a cocoa farm is labor intensive and expensive. In any subsequent program, attention should be given to providing microcredit facilities to farmers. Farmers may also need

training on how to obtain medium term loans linked to financial institutions, while the financial institutions will need training on risk assessment.

Farmer Organizations and Cooperatives Strengthening

- Cooperatives should be strengthened to ensure they function as true cooperatives. Capacity building would emphasize that cooperatives possess bank accounts, keep good financial records and audit accounts annually. The cooperatives need to set up annual general meetings to present financial statements to members. Cooperatives would need to declare dividends when they make a profit, and these should be distributed in accordance with the shareholders' investments.
- Since SOCODEVI specializes in developing marketing cooperatives, support to cooperatives should be sub-granted to the Canadian NGO to ensure effective supervision.
- Training for cooperative Board and staff members should be differentiated according to responsibilities.
- Through group selling of cocoa, the cooperatives should strengthen their bargaining position and demand higher prices for quality cocoa grades, thus encouraging farmers to produce more cocoa for which the farmers obtain better prices. Cooperatives should be trained to know and apply the standards for buying and selling good quality cocoa. They should encourage selling quality cocoa to the chocolate industry as compared to the low return to labor of selling poor quality cocoa to the cosmetics industry as is done now.
- The government should start work with other participants in cocoa marketing to establish parameters for farmgate pricing for cocoa. Cocoa grades should be developed and applied in accordance with international standards, allowing for transport cost differentials and appropriate allowance for profit. Pricing information should be circulated through a marketing information system to ensure that farmers are not cheated by buyers.
- All Cooperatives should be encouraged to provide auxiliary services to farmers.
- Boards of Directors should receive support for operating in accordance with the cooperatives' constitutions. This includes organizing regular elections as their constitutions stipulate. Board members must not fill staff positions in the cooperatives. Boards should be supported to correct the impression that they only they share dividends from cooperative profit.
- SOCODEVI should help FOs in building capacity and developing them into organizations. Some FOs may be combined to establish cooperatives as STCP intended to do. They should receive assistance to start group sales of cocoa and ensure that member farmers profit from their labor.

Marketing Information System

- The cocoa sector should establish a simple MIS. The Government is willing to provide support to Liberia STCP to do so. A MIS might consist of a short code developed with the cellphone service providers, which would be programmed with an automatic response. The cellphone owner could send a short message to the telecommunication operators and receive an automatic response with the farm gate prices of cocoa for each grade. These prices would need to be adjusted at regular intervals in accordance with the cocoa pricing policy and world market prices. The telecommunication organizations would automatically manage and sustain the system as they make their money from text messaging.
- A pricing policy should be developed for the MIS to work effectively. STCP, in supporting policy formation, should urge the Government to develop a cocoa pricing policy to help determine farm gate prices.

OIL PALM SUB SECTOR

Farmer Learning Groups

- The FLG/ICPM curriculum should be pretested and revised to reflect local conditions. For instance, oil palm farmers face problems such as destruction of seedlings by rodents and other pests. The curriculum should take note of materials available to FLG communities that can serve as substitutes in making organic fertilizer.
- The oil palm component of the FLG/VVC curriculum should be developed to facilitate training of more farmers in the FLG communities. STCP should also develop a manual/guide for oil palm farmers with pictorial descriptions. This guide should be pre-tested in Liberia to ensure that Liberian farmers have an accurate understanding of the pictures.
- As with FFSs, STCP should introduce some mechanisms into the FLG for facilitators to organize the school for community members who could not take part as well as nearby communities that wished to benefit from the school but were not selected. Each interested farmer could contribute a small sum to motivate the facilitator to continue the FLG program.
- The District extension officers of the Ministry of Agriculture should be trained to continue supporting FLG communities and expand the program into other communities that may be interested in ensuring a sustainable supply of technical assistance to farmers.

Improve Planting Materials and Nursery Techniques

- Private local service providers should receive training and be introduced to the commercial business of importing hybrid oil palm seedlings from Cameroon. This would also require STCP to introduce these LSP to the Cameroonian planting materials as well as Liberian farmers. Support of the LSP should also include some price controls to ensure that they do not take undue advantage of the farmers.
- The project should start to collaborate and support CARI in establishing an oil palm seed garden for producing hybrid oil palm seedlings.
- The Ministry of Agriculture at the County and District levels should receive support to continue providing technical support to oil palm farmers, especially in nursery techniques for improved hybrid seedlings imported from Cameroon.

Smallholder Oil Palm Rehabilitation and Expansion

- The oil palm Planting, Rehabilitation and Diversification curriculum should be pre-tested and localized to ensure that content reflects local conditions and addresses the needs of the local farmers. Improved technology is needed to reduce the cost of oil palm production.
- The Liberia STCP should introduce the *Freedom Mill* to farmers in FLG communities that have started harvesting yields from rehabilitated farms. Manufactures and venders should also be linked with farmers so they can negotiate for flexible payment.

Post-Harvest Processing

- The Liberia STCP should provide support to the Ministry of Agriculture for learning and managing the *Freedom Mill* technology. The ministry should also be empowered to continue monitoring *Freedom Mill* manufacturers to ensure the production of high quality mills.
- In any future program, more attention should be given to providing credit to manufacturers, vendors and farmers to ensure that farmers can purchase the implements and practice the new techniques acquired in their training sessions.

Marketing Information System

Developing a marketing information system for oil palm is not as urgent as it is for cocoa. Information on oil palm can also be programmed into the cocoa MIS to ensure that the needs of all farmers will be met. Additionally, this would serve to broaden the market for the telecom companies that may are engaged in the MIS system.

POLICY SUPPORT TO TREE CROP STAKEHOLDERS

Liberia STCP should continue to provide support to ensure that the master plan for cocoa is completed. The program should facilitate completion of the master plan for oil palm and the development of a pricing policy for cocoa to guide the marketing information system.

APPENDIX A: SCOPE OF WORK

Scope of Work to Conduct a Programmatic Evaluation of the Sustainable Tree Crops Program (STCP)/Liberia

I. INTRODUCTION

USAID/Liberia seeks the services of a team of multi-disciplinary consultants to conduct a programmatic and results-focused evaluation of the Sustainable Tree Crops Program. The program is implemented by the International Institute of Tropical Agriculture (IITA). Though the program has been in implementation for over three years, and ends in December 2011, an evaluation is required to assess progress toward programmatic outcomes and to inform programming decisions now in order to ensure that results are achieved over the remaining life of the program. The evaluation will be carried out by a selected team of consultants in Liberia over a period of approximately one month.

II. BACKGROUND

Before the commencement of the Liberian civil crisis, tree crops, particularly cocoa, coffee, oil palm and rubber, were major commercial and poverty reduction crops in Liberia. The Ministry of Agriculture estimated that 72,700 acres (28,000 ha) were devoted to cocoa in 1987, 73% of which was productive. Because of the war, agriculture was profoundly affected, with both the export and subsistence-oriented sectors of the economy devastated. Plantations/farms were abandoned and their associated support structures damaged or destroyed. Following the end of hostilities, USAID has been assisting with the post-conflict rehabilitation of the agricultural sector, focusing on community-based food crop production, animal husbandry, rehabilitation, and restocking of community fishponds, community-based micro-projects, rural income generation and transfer of improved, appropriate technologies.

Within this context, USAID/Liberia decided in 2005 to buy into the Washington-based Sustainable Tree Crops Program (STCP) mechanism #: EEM-G-00-04-00013-00. The award was made through the Consultative Group on International Agricultural Research/World Bank Project. The STCP is a public-private alliance that was launched in May 2000 to facilitate the improvement of smallholder agricultural systems based on tree crops in West and Central Africa. It is funded by a number of donors including USAID, the US Department of Agriculture, the World Bank and the Danish International Development Agency. The Alliance is managed through the International Institute of Tropical Agriculture (IITA) in Nigeria.

The goal of STCP is to improve the economic and social well-being of smallholders and the environmental sustainability of tree crop farms of West and Central Africa. To achieve this goal, the STCP alliance addresses three common concerns, including:

Promoting the production and marketing of quality cocoa;
Improving market access and income for small-scale producers;
Creating systems that are environmentally friendly, socially responsible, and economically sustainable.

In line with these concerns, STCP/Liberia's activities have focused, through a farmers' field school (FFS) methodology, on developing technical packages to raise farmers' productivity and product quality; strengthening farmers and community groups, as well as organizations to better interface with markets and enhance democracy; developing community-based enterprises around tree crop production systems; and developing efficient marketing options associated with relevant information systems, among others. Initially, the program was implemented in Nimba County because of its relative stability at the time of project inception.

An underlying premise of this integrated approach is that any one element alone is not adequate to raise the incomes and social circumstances of rural communities, households and workers, but needs to address production, institutional and market issues. The initial effort can then be expanded into

other counties, building on the grassroots experiences in Nimba County and the established public-private partnerships.

Consequently, in 2006, a major program and budget modification to STCP was completed to allow STCP to expand its operations into Lofa and Bong Counties, as well as to diversify program activities to include small ruminants, rural financing and oil palm sectors rehabilitation. The expected results, which were to improve the economic and social well-being of smallholders and the environmental sustainability of tree crop farms in Liberia, supported the Mission's Economic Growth Assistance Objective, "Sustained Economic Growth for Poverty Reduction".

The expanded program's focus was on rehabilitation, replanting, strengthening farmers' organizations, vertical integration of activities through improved quality and added-value processing, improving the marketing chain, access to finance for production, processing and marketing, and enhancing the capability of farmers' groups and the local private sector to provide services to tree crop farmers and local entrepreneurs. The program was also meant to provide better breeding stock of small ruminants (sheep and goats) for multiplication and distribution to program beneficiaries, and to provide policy and institutional support to ensure that the tree crops sector would function within a conducive environment.

Anticipated results included but were not limited to: 1) Training programs (approach, methods) set up and local capacity built to train smallholder farmers in best practices in cocoa, rubber, and oil palm production and quality management; 2) Improved planting material and nursery techniques made available, including the institutional framework set-up to ensure future supply through farmer organizations and the local private sector; 3) Improved breeding stock of small ruminants made available, including the institutional framework set-up to ensure future supply through farmer organizations and the local private sector; 4) Smallholder cocoa, rubber, and oil palm farms rehabilitated and expanded; 5) Farmer organizations strengthened in program areas to engage effectively in marketing products, the provision of production inputs, and the training of their members in best-management practices; 6) Price information on cocoa, rubber, and oil palm made available to farmers and their organizations; 7) Value-added local processing opportunities developed particularly for oil palm; 8) Access to finances for production, processing and marketing by smallholder farmers and their organizations, and small entrepreneurs ensured in program areas; and 9) Support provided to tree crop stakeholders, including government, to ensure a supportive policy and institutional environment for the tree crops sector.

Given IITA's limited comparative advantage in the areas of small ruminants and rural financing, USAID/Liberia advised IITA to close up these two activities and transfer unspent funds under budget line items for these activities to the cocoa program, where IITA has done extensive research and has a wealth of knowledge and experience. Similarly, USAID/Liberia took a major decision to allow the IITA to sub-grant the oil palm component of the STCP program to Winrock International. These decisions were made to improve program effectiveness and subsequently improve overall program quality.

III. SCOPE OF WORK

The purpose of this consultancy is to conduct a programmatic and results-based evaluation of the Sustainable Tree Crops Program, including the oil palm sub-activity that is sub-granted to Winrock International. This task will be accomplished in close collaboration with the Ministry of Agriculture and USAID, as well as other stakeholders, including ACDI/VOCA and Winrock International.

A. Evaluation Objectives and Key Questions

The findings of this evaluation will be used to inform programming decisions now to help ensure success over the remaining life of the program. This evaluation will determine the level of STCP success to date by assessing progress toward the achievement of STCP goals and concerns referred to above.

The evaluation's main objectives are to:
Determine the extent of progress made toward the achievement of the objectives of the program.
Assess the strengths and weaknesses of the implementation process of the program, including targeting.
Assess the internal and external factors that have influenced the program's implementation, including technical, managerial, organizational, institutional, socio-economic, and political.
Determine the prospects for the program's post phase-out sustainability and recommend which interventions may need to be added or emphasized to build sustainability.
Assess the effectiveness of the program partnership with ACDI/VOCA and Winrock International.
Determine the effectiveness of FFS in the different communities in which it is being used.
Document lessons learned in the period and provide recommendations for improving the implementation and/or design of the program to ensure achievement of the objectives and sustainability.

Several key questions need to be answered in order to fully review the STCP's performance. The questions below should form the bulk of the review. However, it is likely that additional questions will arise as a result of the review process. The review team should include these additional questions – and their answers – in the review report:
To what extent has the program achieved its planned objectives?
In what ways and to what extent has the program had impact on the lives of project beneficiaries in communities where the program is being implemented?
Which of the program components were most effectively implemented and why? Which components were least effectively implemented and why?
What were the most significant constraints and/or difficulties in implementing the program and where appropriate, how did the program overcome them? What have been the lessons learned that may have implications for future programs?
Were best practices identified in the course of program implementation and M&E? If so, were they effectively applied?
What are the prospects for the program's post phase-out sustainability and which interventions need to be added or emphasized to enhance sustainability?
Implementation status of program objectives – what is the perception of farmers on FFS methodology vis-à-vis farmers' practices? What are the learning outcomes of FFS participants?
Relevance and acceptability level of farmer field school – to what extent were the needs of project participants effectively served? Are FFS curriculum/classroom materials relevant and easily understood by participants?
Value of the program in terms of cost vis-à-vis results (impact) – relative to the cost of the program, how valuable are the results of the program to date?

The assessment tools to be employed will be proposed in a draft implementation plan by the consultant before arrival in country. A variety of methods will be used to ensure a thorough external and internal review of the program, service, or organization, including: review of relevant documents (e.g. project proposals, reports, etc.), site visits to farmers' field schools and communities, farmers' focus groups, and personal interviews (project and non-project farmers). A final plan for the evaluation, including assessment tools, selection of sites to visit, itineraries, etc., will be presented to and finalized in collaboration with the USAID/Liberia Economic Growth Team.

B. Information Sources

Sources of information can include, but are not limited to:
STCP program description and reporting
FFS curriculum/classroom materials
FFS
FFS communities
IITA audit report
Field trip reports

STCP database
ACDI/VOCA
USAID staff
Ministry of Agriculture: decentralized offices in project sites (e.g., Bong, Nimba and Lofa Counties)
Winrock International

C. Illustrative Work Plan and Deliverables

The consultant is expected to begin work immediately after contract award with the coordination of Contracting Officer Technical Representative (COTR) for a total number of 28 work days as is outlined below:

Activity	Consultant Work Days	Location of Work
- Review of relevant documents. - Conference call with EG Team Leader. - Deliverable 1: Draft Implementation Plan with proposed assessment tools/methodologies to be used. To be submitted to USAID and discussed before departure for Liberia.	3	United States
- In-briefing with USAID (first day in Liberia). - Deliverable 2: Final Implementation Plan. To be submitted by day 3 in country. - Meetings with partners and site visits.	10	Monrovia
- Site visits and data collection.	7	upcountry
- Further meetings in Monrovia. - Deliverable 3: Draft Final Report. To be submitted one day before USAID debrief. - Debrief with USAID before departure.	3	Monrovia
- Completion of final report. - Deliverable 4: Final Report. To be submitted within 15 days after departure.	5	United States
	28	

Note: The table will be updated based upon the successful offeror's proposal.

The Evaluation Team will share joint responsibility for completing and submitting the following deliverables:
Draft Implementation Plan - with proposed assessment tools and methodologies to be used; to be submitted to the EG team before departure for Liberia.
Final Implementation Plan - incorporating feedback from the EG Team; to be submitted to EG team for approval within two days after arrival in Liberia.
Draft Final Report - addressing the review questions and main objectives described above; to be submitted to the EG Team one day prior to the debrief with USAID before departure from Liberia.
Final Report - incorporating feedback from USAID/Liberia; to be submitted to the EG Team for approval within 15 days after departure from Liberia.

D. Reporting Requirements

The evaluation team will conduct an initial in-briefing with members of the EG Team and Program Office at USAID/Liberia to discuss the evaluation implementation plan and will keep USAID/Liberia abreast of progress throughout their work. At the end of the consultancy, the team will produce a final report that includes technical and administrative recommendations.

A draft of the final report with outcomes from the evaluation will be submitted to USAID/Liberia one day prior to the debriefing, which will be held before departure from Liberia. The final report will be submitted electronically (in Word) within 15 days after the completion of the in-country

evaluation and should be no more than 30 pages. Other documents, which the Team may consider relevant, should be attached as annexes. In accordance with requirements of the statement of work, the evaluation report will include:
Brief description of the assessment completed;
Findings on the key implementation status of the program's objectives, including but not limited to the key issues indicated in Section A (Objectives) above; and
Technical and administrative recommendations to inform programming decisions now in order to help ensure success over the remaining life of the program.

The USAID/Liberia EG Team Leader, Michael Boyd, and staff shall provide technical direction and general guidance during the performance of this evaluation.

E. Evaluation Team Composition and Position Descriptions

For the purpose of this task order, the following shall constitute Personnel and Estimated Work Days. The Evaluation Team shall include the following:

Program Management Specialist – 28 work days
Economist – 28 work days
National Consultant – 20 workdays

Consultants composing the Evaluation Team shall meet the minimum requirements outlined in the position descriptions below:

Program Management Specialist/Team Leader
Education: Master's degree in Public Administration/Development Economics/Social Science or a related field.
Work Experience: Must have at least 10 years of senior level work experience relevant to the Task Order subject matter. At least 2 of the 10 years of experience must be in Africa, and with post-conflict rebuilding emphasis. Knowledge of regional agriculture initiatives (particularly sustainable tree crops program), institutions and systems is also desirable.
Position Description: As the Program Management Specialist, he/she will provide administrative and technical assistance to the task order. In addition to Section A (objectives) above, he/she will be responsible to assess/evaluate STCP in terms of organizational structure and impact on overall program performance.
As the Team Leader (TL), he/she is expected to have team leadership and administrative experience. He/she shall be responsible to administer and manage the Task Order. The responsibilities may include: technical leadership for and supervision of consultant staff; quality control and timeliness of all deliverables; preparation and submission of final report. The TL should have demonstrated broad management and team building experience, preferably in Africa, and with post-conflict rebuilding emphasis.
Supervisory and Management Experience: Must have senior level supervisory and/or management work experience including: (i) direct supervision of professional staff, and (ii) quality evaluation of program, including staff performance and deliverables.
Skills: Excellent English communication and writing skills, analytic skills, interpersonal skills, team management skills, and computer skills.

Economist
Education: Master's degree in Economics/Agricultural Economy with emphasis on Resource Management or a related field.
Work Experience: Must have at least 7 years of work experience in the administration, implementation and/or evaluation of agriculture programs, particularly tree crops, in developing countries - preferably in post-conflict environments. The Expert should demonstrate multi-disciplinary credentials and an understanding of stakeholder involvement in programs. Knowledge of

Regional agriculture initiatives, institutions and systems is also desirable. Preference will be given to candidates who have expertise and field experience in doing cost/benefit analysis of projects.
Position Description: The Economist will provide technical assistance to the task order. He/she will conduct a cost/benefit analysis of the program, in addition to Section A (objectives) above.
Supervisory and Management Experience: Must have senior level supervisory and/or management work experience including: (i) direct supervision of professional and support staff, and (ii) quality evaluation of staff performance and deliverables.
Skills: Excellent English communication and writing skills, analytic skills, interpersonal skills, team management skills, and computer skills.

National Consultant
Education: Bachelor's degree in Agriculture/Agronomy or a related field.
Work Experience: Must have at least 3 years of work experience in the implementation of agricultural projects and/or evaluation of agriculture programs in Liberia. Preference will be given to candidates who understand and speak the local language(s) in county where the assessment will be conducted.
Position Description: The National Consultant will provide technical assistance to the Program Management Specialist and Economist to support them in discharge of their in-country activities.
Supervisory and Management Experience: Not applicable.
Skills: Excellent English communication and writing skills, analytic skills, interpersonal skills, team management skills, and computer skills, as well as ability to speak and interpret the local language(s) in county where the assessment will be conducted.

APPENDIX B: PERSONS CONTACTED

No	Name	Position	Organization
1	Michael Boyd	Team Leader, Economic Growth Office	USAID/Liberia
2	William Massaquoi	COTR, Agricultural Development	USAID/Liberia
3	Hon. James Logan	Deputy Minister of Agric (Planning and Manpower Development	Ministry of Agriculture
4	Macarthur Pay-Bayee	Former Country Manager	IITA/STCP Liberia
6	Martha Lukens	Acting Country Manager	IITA/STCP Liberia
7	Jonathan Boiboi	Former Extension Services Specialist	IITA/STCP Liberia
8	Mario Boivin	Regional Farmer Organization Specialist	SOCODEVI
9	Duke Yeanue	M&E Specialist	IITA/STCP Liberia
10	Monica Honoree	Bong County Coordinator	Ministry of Agriculture

BONG COUNTY

Kpayan FFS	Kpayah FFS	Galar FLG	Palala FLG	Ala Afama CO-OP.
STEPHEN DUDU	BEN K. KOLLIE	JAMES TAGBAH	OLANDO KPANAH	BEN K. KOLLIE
JANNIX FLOMO	EMMETT B.MULBAH	ALEXANDER CLARTE	JUSTIN KARMUE	EMMETT B.MULBAH
OLIVER PAYE	JAMES B. DUAH	SAM TORWELEG	JOSEPH FLOMO	JAMES B. DUAH
JASMEER TOGBAH	PETER M.MOYE	ANDREW TOGBAH	JAMES TOGBAH	PETER M.MOYE
SUMO JOHNSON	PETERSON S.KOLLIE	SUMO TOGBAH	RICHARD C.CARTER	PETERSON S.KOLLIE
MULBAH KOLLIE	DAMUEL QUEMINE	MOSES KERKULAH	MOSES KOLIQNEYAH	DAMUEL QUEMINE
AUNTHAN P.MULBAH	WREMORGA VAH	JACKSON SULONTEH	MOSES TOLWELEE	WREMORGA VAH
MORRIS S.G.GEORGE	MASSA BILLY ROBERT	JACKSON YARKPAWOLO	HARRISON SALEMINEE	MASSA BILLY ROBERT
LAPO DUDU	TOMBA DAVID	RICHARD GBAYAN	ECEEKARIE BOULON	TOMBA DAVID FLOMA
	FLOMA OLDMA	MOSES DUMORE		OLDMA NOWAI
	NOWAI PARTRICK	KERMUE GAYAN		KEMMA VAH JOHED
	O.TOMMIE KEMMA VAH	LORPU DENNIS JOSEPH		H.MONAFEUI DAMUEL
	JOHED H.MONAFEUI	TOGBAH SENGBAH		C.BAIKEY JR. MAMIE MOMO
	DAMUEL C.BAIKEY JR.	KOLLIEMEN SARRAH		KEMAH BROWN
		PAYGUE MOSES		SAMUEL K.GNEWIMIEE
		WHAMAH JAMES TOGBAH		ROBERT TAMBA
		MEATTA TOGBATEI		

		REBECCA TORWELEE JEFF KOLLIEMEN AMOS KOLLIEMEN YEALEKAI KOLLIEMEN OSUMA CLARKE ALBERTO KOLLIEMEN MICHEAL TOO YARKPAWOLO DOETIRI FLOMO JOE JOSEPH CHARILIE PAPA CASSALF JACKSON TORWELEE		BUYERS SANAMIE MASSAQUOI PARTRICK O.TOMMIE

NIMBA COUNTY

MABOR FFS	LOWLAY FFS	KPAIRPLAY FFS	ZODO CO-OP	GBEH FACOS CO-OP
ANTHONY	JAMES	DAHN GBAH	DAHN GBAH	MR.ERUSTU
BOUH	BALLAH	CARRAIGTON	CARRAIGTON	BORKUAH
MARY	DAVID	SANGAR	SANGAR	MR.MOSES
SANGAR	GONPUE	SAM PORGUAH	SAM	KARKER
GEORGE	MARTIN	WISTON	PORGUAH	MR.MARK
DIAH	SLAWHY	KAUNAH	WISTON	DORWAYKPOR
JOSEPH	MARY	ALANSO	KAUNAH	MISS.MARY
ZEAGBAN	KPAKPA	KAUNAH	ALANSO	QUEMIE
EMMANUEL	TOKEN	SAMUEL	KAUNAH	MR.JOHN
GONKORTEE	WONKEH	GBARLEAH	SAMUEL	GBAGBAG
FREMAN	RICHARD	JOSEPH TEAH	GBARLEAH	MR.SEKUO
TORNAH	WEH	BARGUE	JOSEPH TEAH	TEAH
JOSEPH BOAH	KARVIN	SANGAR	BARGUE	MR.OMACOS
JOHNSON	KARPOLEH	KARNTUA	SANGAR	KARKOR
YOUHN	JAMES	SEHWAA	KARNTUA	
JOSEPH	ZEAGE	CAROLINE	SEHWAA	
KPEKANAH	PETER GAYE	JOHNSON	CAROLINE	
ANTHONY	SAMUEL	PARTRICIAL	JOHNSON	
DIAH	GAYE	SANGAR	PARTRICIAL	
MOSES	DAVID	JUNIOR GBAH	SANGAR	
MONLOO	LEASIAH	LUEG GBLAH	JUNIOR GBAH	
TORPKOR	AMELIA	ESTHER	LUEG GBLAH	
BOAH	SANGAR	ZEALEAH	ESTHER	
ANSTON	THOMPSON	FELECIAL	ZEALEAH	
ZORKPOR	SANGAR	WORTUAH	FELECIAL	
FREEMAN	EMMANUEL	READY GRAGAI	WORTUAH	
ZAWOH	MONTOE	PRTER ZONIE	READY	
LEAH	BARGUE	RUTH ZONIE	GRAGAI	
MONKLE	SANGAR	DORRIS GAYE	PRTER ZONIE	
DUKE	ANTHONY	MARY BOKUAH	RUTH ZONIE	

YORMEE	WEH	ESTHER BOUAH	DORRIS GAYE	
JAMES NUAH	JOHN	ALBERTHA	MARY	
JOSEPH	SEHWEAH	WORPOE	BOKUAH	
LEEMA	AUSTINE	MARTHA MOOR	ESTHER	
JONATHAN	GONTEM	OLEVIA	BOUAH	
BOIBOI	BENEDICT	WORPOE	ALBERTHA	
PETA M.	WONGREH	COOPER KRUAH	WORPOE	
ZANGAR	JUNIOR BUU	PHILIP NUAH	MARTHA	
GONKANAE	HARRIA	MONICA	MOOR	
KERMIAH	MARTIN	COOPER	OLEVIA	
WONTAA	PRINCESS	NALEAH	WORPOE	
LOMBAYE	LEASIA	KORDOLA	BEATRICE	
COOPER DIAH	MARTHA	PRINCESS	TEAH	
JAMES GBORH	KORDOLA	WISANGAR	ANNIE ZUO	
BOAMAN JOE	MENH	BEATRICE TEAH	COOPER	
DIAH	MARKPAH	ANNIE ZUO	KRUAH	
GEADEAH	JONATHAN	COOPER	PHILIP NUAH	
SERTAA	ZEAYE	GONGBAY	MONICA	
JOHNSON		MOSES SEHWAH	COOPER	
SERENA		ANTHONY WEH	NALEAH	
ZEAGBAN		MARTHA	KORDOLA	
KORLOGO		WORTUAH	PRINCESS	
TOMAH		PETER NUAH	WISANGAR	
ESTHER		MOSES	COOPER	
ZARGAR		QUEYAKER	GONGBAY	
JOHN		MOSES KOLEA	MOSES	
KARWAGEA		VICTORIO	SEHWAH	
		BARLEA	ANTHONY	
		TONWONGBAG	WEH	
		FLOMO	MARTHA	
		JAMES YOUHN	WORTUAH	
		KAWRENCE	PETER NUAH	
		WONAPOE	MOSES	
		FLOMA YOUHN	QUEYAKER	
		MOWATA	MOSES KOLEA	
		YOUHN	VICTORIO	
		MARWA YOUHN	BARLEA	
		COOPER BUU		
		OLPHELIA BUU		
		MERCY JUNIOR		

LOFA COUNTY

DOZINOLOR FFS	GONGULIUWOR FFS
TARNUE Z. MULBAH	TARNUE NYANQUOI
MORRIS MEZZEH	GUGU ZAWU
KOKULO WOYEAH	KORPOE TUKPAPO
PRINCE MULBAH	JAMES P. WEEDOR
KRUBO SAMAH	DAVID F. WEEDOR
RICHARD L. FORKPA	NYAMAH KOWAH
YARKPOWOLO BIGBOY	THOMAS BEYAN
GAYFLOR SOMAH	GAYDUA YAN
J.FORKPA KPADEH	KORPOE BELEWU
LARWUO SANIEL	JACOB ZAZA
MAMA KEBBEH	MULBAH WOLIAH
PEULEE ZARWUU	LORPU BEYAN

LARWUO HARRIS	LAWUO SUMO
FORKPA WUUEH	JAMES KORBOI
KORBOI KPADEH	FORKPA TARNUE
DAVIID KORKPA	GBORLU KOKULO
FLOMO YANQUOI	GAMEI WEEDOR
DORIS TARNUE	JOHN FORKPA
FORKPA KORBOI	
LOUPU KOLUBAH	
KOKULO SAMAH	
TARNUE WOYEAH	
DANIEL MEZZEH	
YOURGBO WOLLIE	
SANIEL SAMAH	
FLOMO ZAZA	
PAPAY S. WOYEAH	
KORTO GAYFLOR	
FORKPA GBOLEE	

APPENDIX C: MASTER INTERVIEW QUESTIONS

MASTER QUESTIONS FOR STCP STAFF (BOTH CURRENT & FORMER)

Enhanced Production of Cocoas through Intensification

Integrated Crop, Pest and quality Management

Q1. How effective were STCP able to train farmers in ICPM through the FFS

Q2. How effective were STCP able to train farmers in ICPM through VVC

Q3. Was STCP able to train the planned numbers in ICPM through both FFS and VVC

Q4. Were STCP able to build the institutional capacities of Local Service Providers to provide training and support the development of FFS and VVC among farmer groups?

Q5. Who are some of these LSPs?

Q6. What were the challenges encounter?

Q7. What could you have done better?

Q8. What were the strengths?

Q9. What else would you like to improve?

Improved germplasm and planting material available

Q1. Were you able to train CARI in seed garden establishment?

Q2. Is CARI able to produce the desired quantities to meet the target?

Q3. Were you able to build the capacity of some LSPs to provide nursery training and support the development of nursery enterprises among farmers?

Q4. Who are these LSPs?

Q5. What challenges did you face?

Q6. What did not go well?

Q7. What went extremely well?

Q8. What would you prefer is done another way the next time and how would you prefer it to be done. ?

Regeneration and Planting of Cocoa on already Deforested Land.

Q1. Were STCP able to trained the desired numbers in planting and regeneration?

Q2. Were training materials distributed to the farmers trained?

Q3. What are some of these training materials?

Q4. Was a LSP trained in facilitating PRD?

Q5. Who is this LSP?

Q6. Is there a curriculum and extension tools for PRD?

New Institutional Arrangement for Production Support Services

Q1. How is the quality of production support services?

Q2. Why do you say so?

Q3. How many production support services are provided to farmers?

Q4. What are they?

Enhance Marketing Efficiency in the Cocoa Sector

Competitive Markets

Q1. Have collective group marketing policies and procedures been developed?

Q2. How many farmer groups have implemented this?

Q3. What prevents the others from implementing this?

Q4. How many LPSs have been trained to support marketing of Cocoa?

Q5. Who are these?

Q6. Has a Market Information System been developed?

Q7. How does it work?

Q8. How effective has it been?

Q9. What are the challenges?

Q10. When was it established?

Q11. Do you think it would be sustained?

Quality and Value Added

Q1. Are there tools and procedures for assessing quality?

Q2. How many marketing groups have these tools?

Q3. Are farmer marketing groups keeping track of buying/selling of cocoa?

Q4. Have personnel of these marketing groups been trained to access cocoa quality standards?
Q5. Have some private sector agents been trained in contractual procedures and quality norms?
Q6. How many of them?
Q7. How many LSPs have been trained to develop capacity of farmer marketing groups?
New Institutional Arrangements for Marketing Support Services
Q1. Are there curriculum and extension tools on the systematic strengthening of farmer marketing groups?
Q2. How many of these marketing groups have been strengthening in the principles of collective group sales and governance?
Q3. Have LSP been strengthened to provide technical support to marketing groups?
Q4. What were the challenges?
Q5. What went well?
Q6. What would you prefer is done differently?
Income Alternatives in Cocoa Farming and Communities and Agro-Ecologies for Equitable Growth
Cocoa Agroforestry Systems
Q1. Have farmers been trained in the integration of other crops into cocoa?
Q2. Have farmers been trained in accessing seed and managing nurseries?
Q3. Are there curriculum and tools for diversification?
Q4. Have a LSP been strengthened to continue providing this support to farmers?
Q5. Who is this LSP?
Q6. What challenges this you face?
Q7. What went extremely well?
Q8. What would you wish is done differently?
Improved Policy Environment to enable rural transformation in Cocoa Communities and Agro-Ecologies
Impact Analysis of Innovation, Investment and Government Regulation in Cocoa Production and Marketing
Q1. Were some Impact assessment s carried out?
Q2. Is there 'Costs, returns and productivity impacts of intensified cocoa production systems'
Q3. Is there 'cost , returns and productivity impacts of market efficiency investments in cocoa sector'
Q4. Is there 'cost, returns and productivity impacts of food crop – cocoa systems'
Q5. Have the capacity of 2 Cadres been developed to analyze policy and assess impact ?
Q6. Who are these 2 Cadres?
Q7. Have they been linked to Regional Policy Networks?
Q8. Which Networks?
Policy and Regulatory Reforms and Pulbic Investment s in line with NEPAD/CAADP productivity objectives, formulated, debated, prioritized and promulgated for cocoa belt/cocoa sector
Q1. Is there a Country ex-ante assessment of income growth policies developed?
Q2. Is there a policy option for increasing the competitiveness and efficiency of cocoa and food markets?
Q3. Is there a Country Analytical report of plans for agricultural transformation and growth?
Oil Palm
Conduct Baseline Research:
Q1. Was a baseline study conducted?
Q2. How many farmer groups were consulted in the baseline?
Q3. How many CBOs were consulted?
Q4. How many LNGOs were consulted?
Q5. How many 'current' projects were consulted?
Q6. What were some of the aspiration of the oil palm sector that were identified by community members for the oil palm sector?

Rehabilitation of Smallholder Oil Palm Plantations:
Q1. How many LNGOs were trained by the project to access the number of acres of oil palm in need of rehabilitation?
Q2. Who are they?
Q3. How many acres were found to be in need of rehabilitation during the exercise by the LNGOs?
Q4. How many were willing to participate?
Q5. What implements were provided by the project to farmers for the rehabilitation?
Q6. What trainings were given to stakeholders on the rehabilitation (underbrushing, ring weeding, and pruning?)?
Increase Small Holder Access to High Yielding Hybrid Seedlings
Q1. Did you identify and prioritize high potential areas for hybrid oil palm?
Q2. Which areas did you identify?
Q3. Which of these areas did you prioritize?
Q4. Was there a campaign to increase interest in oil palm production?
Q5. How was this campaign conducted?
Q6. Any evidence of these campaigns?
Q7. What was the result of the campaign?
Q8. Who are the farmers who expressed interest in hybrid oil palm production after the campaign?
Q9. Did you find individuals/groups expressing interest in producing and selling oil palm tree seedlings?
Q10. How many of these were trained in oil palm nursery establishment and management?
Q11. What were some of the areas covered in this training (preparation of the soil and enclosure, water supply, pest control, seasonal cycles, marketing of seedlings, out planting and care of seedlings?)?
Q12. Any evidence of these trainings?
Q13. Have you linked these new commercial nursery operators to suppliers of the pre-germinated seeds?
Q14. What training were given to nursery operators (proper site selection for seedlings, out-planting techniques, planting densities, weed and pest control, intercropping with other species, water and nutrition supply and pruning?)?
Q15. Did you gather information about prices and conditions at destination markets?
Q16. Were these information made available to the farmers?
Q17. How were these information made available?
Production
Q1. Has policies and produces been develop to improve the production of oil palm?
Q2. Is there a curriculum for the training of oil palm farmers?
Q3. Have oil palm farmers been trained?
Q4. How many of these farmers have been trained?
Q5. What type of training was given to these farmers?
Q6. Are oil palm farmers provided with Improved hybrid seedlings by STCP?
Q7. Have some LSPs been trained to sustain the capacity building of the oil palm farmers?
Q7. What further support is given to oil palm farmers to improve production?
Q8. What is the challenges facing the development production in the oil palm sector?
Q9. How do you think these challenges can be resolved?
Sustainability
FFS/VVC Sustainability
Q1. How is the FFS to be sustained?
Q2. How would the farmers be getting improved hybrid cocoa pods and seedlings as the project comes to an end?
Q3. Who would be providing support to FFS?
Q4. Who would be providing support to Cooperatives?
Q5. Who would be providing support to Farmer Organizations?
Oil Palm
Q1. How would FFS for oil palm farmers be sustained?

Q2. How would oil palm farmers continue to get seedlings?
Q3. Who would inspect the manufacturers of the oil extraction machines to ensure quality?
Q4. How would the technology be expanded to cover more farmers?

MASTER QUESTIONS FOR GOVERNMENTAL AGENCIES (Ministry of Agric – National & County Levels)

Enhanced Production of Cocoas through Intensification

Increase Production

Q1. What is government doing to increase Cocoa production?
Q2. How effective is STCPs FFS in increasing cocoa production?
Q3. Do you think the FFS program can be sustained?
Q4. What do you think are some of the challenges of the FFS
Q5. What would you wish to see changed in the FFS
Q5. How would you have handled that?

Increase Quality

Q1. How would you assess the quality of Liberian Cocoa?
Q2. Why is this the situation?
Q3. What is government doing to improve the quality of Liberian CocoaQ4. What challenges are you facing?
Q5. Have any success been achieved so far?

Seed Production:

Q1. What is government doing to ensure that there are improved hybrid cocoa seeds and seedlings for farmers?
Q2. How is CARI performing in seed productionQ3. Are they able to meet the demand by Liberia?
Q4. What challenges are they facing in producing the desired quantities?
Q5. What are governments' plans for the defunct seed gardens?
Q6. What challenges is government facing in meeting these targets?
Q7. What are governments' plans to surmount these challenges?

Price/Income from Cocoa

Q1. What is government doing to ensure that farmers get the right prices for the cocoa?
Q2. Are there some challenges in accomplishing this?
Q3. Are there plans to make the marketing of cocoa a bit more convenient to farmers? Q4. What are available programs to support farmers get credit? Q5. What is the challenge in getting these financial issues resolved?
Q6. How is government tackling it or planning to tackle it?

Collaboration with Other Partners

International Institute for Tropical Agriculture/Sustainable Tree Crops Program (IITA/STCP)

Q1. What do you know about STCP?
Q2. How was their collaboration with government?
Q3. Do you think they were able to achieve their objectives?
Q4. What were their limitations?
Q5. What suggestions do you have to improve their performance?
Q5. What was STCP's role in the development of the Food & Agriculture Policy
Q6. What was their role in the oil palm sector?

Winrock International

Q1. What do you know about Winrock International
Q2. Are you aware of their role in the STCP project?
Q3. How best do you think they achieve these responsibilities?
Q4. What challenges did they face?
Q5. What recommendation would you give to them next time?

SOCODEVI

Q1. What do you know about SOCODEVI International
Q2. Are you aware of their role in the STCP project?
Q3. How best do you think they achieve these responsibilities?
Q4. What challenges did they face?

Q5. What recommendation would you give to them next time?

Sustainability

FFS/VVC Sustainability

Q1. How is the FFS to be sustained?

Q2. How would the farmers be getting improved hybrid cocoa pods and seedlings as the project comes to an end?

Q3. Who would be providing support to FFS?

Q4. Who would be providing support to Cooperatives?

Q5. Who would be providing support to Farmer Organizations?

Oil Palm

Q1. How would FFS for oil palm farmers be sustained?

Q2. How would oil palm farmers continue to get seedlings?

Q3. Who would inspect the manufacturers of the oil extraction machines to ensure quality?

Q4. How would the technology be expanded to cover more farmers?

MASTER QUESTIONS FOR WINROCK FORMER STAFF

Oil Palm

Promote the Manufacture of Palm Oil Extraction Equipment

Q1. Did Winrock prioritize a list of oil palm producing areas that have the potential for expeller commercial viability?

Q2. Do you have a list of local metal and machine shops capable of and interested in manufacturing and commercializing the Caltech expeller and other ancillary equipment?

Q3. Were manufacturers trained to manufacture the expeller?

Q4. How many?

Q5. Do you have a list of these manufacturers?

Q6. Did Winrock develop the market of expellers?

Q7. How was this done?

Improve access to Credit

Q1. Were local people trained to provide credit counseling to interested borrowers?

Q2. How many of such counselors were trained?

Q3. Were credit institutions familiarized with the targeted areas?

Q4. How was this done?

Q5. How many credit institutions joined and agreed to provide credit to farmers?

Q6. Were cooperative officers trained to enable them secure loans?

Q7. Were oil palm producers able to secure loans?

Q8. Were expeller manufacturers able to secure loans?

Q9. Were venders able to secure loans?

Q10. Which institutions were providing credit to farmers?

Q11. What were the challenges in securing loans for farmers?

Q12. How do you think this challenge can be resolved?

Q13 What other challenges did the project face?

Q14 How do you think they can be resolved?

MEETING WITH STCP FARMER FIELD SCHOOL COMMUNITIES (BOTH BENEFICIARIES AND NON BENEFICIARIES)

Please note that after the interview we would be visiting your farm to observe if your answers were true

Enhanced Production of Cocoas through Intensification

ICPM Training

Q1. Did you benefit from the FFS?

Q2. Were you a Direct or F2F beneficiary?

Q3. On what topics were you trained?

Q4. How many of these have you implemented in your farm?

Q5. Why have you not implemented the rest?

Q6. Were you given any training materials?

Q7. Can were have a look at some?
Q8. Were you given some farm implements/tools?
Q9. Is there any local organization that has been trained by STCP to follow up and support you?
Q10. What is the name of this organization?
Q11. Do they visit to support you?
Q12. What do you think about the training?
Q13. Is STCP is not there in future, who do you think would be supporting you?
Q13. What challenges did you encounter?
Q14. What do you think could have been done better about the training?

Improved planting material

Q1. How do you get your planting materials?
Q2. What material do you get (pods, seeds, seedlings)?
Q3. What type of material do you plant (improved hybrid or local)?
Q4. Did you get the material exactly when you needed it?
Q5. What quantity did you need?
Q6. What quantity did you get?
Q7. When you planted, how well did it geminate?
Q8. If STCP stop supporting you, how are you going to be getting the planting materials?
Q9. Do you have a nursery?
Q10. Were you trained on developing nursery?
Q11. Is there any local organization that has been supporting you to develop a nursery?
Q12. What is the name of this organization?
Q13. How effective is their support?
Q14. What challenges do you face in getting and planting the materials?
Q15. How do you think this challenge can be resolved?

Production

Q1. After receiving the training have you established any new farm?
Q2. How many farms have you established?
Q3. What is the total size of the farms?
Q4. How many of the techniques you leaned do you apply in your farm?
Q5. What are they?
Q6. Why are you not applying the other techniques?
Q7. Have you rehabilitated any of your previous plantations?
Q8. What is the total size that you have rehabilitated?
Q9. What is the total size you had?
Q10. Why have you not rehabilitated the rest?
Q11. What did you do to rehabilitate it?
Q12. Did you do each (Sanitation, Punning, Reduction of shade)?
Q13. Have you implemented PRD?

Input Application

Q1. Do you apply Fungicides?
Q2. What type of Fungicides do you apply?
Q3. When do you apply them?
Q4. Were you trained on how to apply fungicides?
Q5. Who trained you?
Q6. Do you have a training manual to follow when applying fungicides?
Q7. What is your farm size?
Q8. What quantity of fungicides do you apply at a time?
Q9. Why don't you apply fungicides (or apply to cover the entire farm)?
Q10. Do you apply fertilizers?
Q11. What type of fertilizers do you apply?
Q12. When do you apply each type?
Q13. Were you trained on how to apply fertilizers?
Q14. Who trained you?
Q15. Do you have a training manual on how to apply fertilizer?

Q16. What quantity of fertilizer did you apply on your farm?
Q17. Why did you not apply fertilizer (apply to cover the entire farm)?
Post Harvest Handling
2.1 Cocoa Quality
Q1. How do you understand fermentation?
Q2. What materials do you use for your fermentation (baskets, box sets etc)?
Q3. How do you ferment your cocoa?
Q4. How long do you observe it during fermentation (6-7days)?
Q5. How long do you think one is supposed to observe the cocoa during fermentation?
Q6. Why is fermentation important?
Q7. What do you understand by drying?
Q8. How do you dry your cocoa?
Q9. Do you use elevated platform solar dryer?
Q10. What is the standard moisture content desired (7.0 – 7.5%)?
Q11. How do you know if the cocoa is dried enough (ie moisture content is 7.0-7.5%)?
Q12. What do you do after drying to improve the quality further? (selection of foreign materials including moldy beans, slaty beans, insect damaged/germinated/flat beans) ?
Q13. How do you grade your?
Q14. How do you know if the cocoa is grade A, B, or C?
Q15. Do you do this (selection of foreign materials) ?
Q16. What was the quality of your cocoa the last time you sold?
Marketing
Q1. Who do you sell your cocoa to?
Q2. How do you measure the quantity before sales?
Q3. Do you measure the quality before sales?
Q4.How do you do this?
Q5. What is the farm gate price for grade A, B and C?
Q6. Do you think you get more money by improving the quality of your cocoa?
Q7. Do you sell your cocoa as an individual or as a group?
Q8. How do you transport your cocoa for sales?
Q9. What are the challenges in selling your cocoa?
Q10. What do you think can be done to resolve these challenges?
Q11. How do you get to know the price of cocoa today if you need to?
Quality and Value Added
Professionalizing Farmer Organization
Membership
Q1. How many are the members of this Farmer Organization?
Q2. How many were you in 2008, 2009, and 2010?
Q3. How many are women?
Q4. How many are the staff?
Q5. How many are the Board of Directors?
Professionalizing Farmer Organization
Q1. Have the staff received any training on management of Farmer Organization?
Q2. When did this training take place?
Q3. Have the Board of Directors received any training on their responsibilities?
Q4. When did this training take place?
Q5. How many Board members were trained?
Q6. How many of those trained were women?
Q7. Have the staff received any training on filing?
Q8. How often do you hold staff meetings?
Q9. Can we see the minutes of the various staff meetings?
Q10. How often does the Board meet?
Q11. Do you audit the accounts of the Farmer Organization?
Q12. Can we see the audited accounts for 2008, 2009, and 2010?
Q13. Do you organize a General Assembly meeting?
Q14. When did you organize it in 2008, 2009, and 2010?

Q15. Did you share the audited accounts with the members during the general assembly meeting?
Q15. Do you organize election for you Board of Directors?
Q16. When was the last time you organized elections for your Board of Directors?
Q17. Do you have a constitution?
Q18. Can we see a copy of your constitution?
Auxiliary Services
Q1. Have you been trained on providing auxiliary services?
Q2. Do you provide auxiliary services to your members?
Q3. What auxiliary services do you provide?
Q4. Are members accessing the services?
Q5. Do you have a record of members who have accessed these services?
Q6. Why are other members not accessing the services?
Q7. What challenges do you face in providing auxiliary services to your members?
Q8. How do you think this challenge can be resolved?
Materials and Observation
Q1. Observations and questions on farms
Q2. Observations and questions on educational materials

QUESTIONS FOR OIL PALM COMMUNITIES

Rehabilitation
1.1 Rehabilitation of Smallholder Oil Palm Plantations:
Q1. Is there any LNGO supporting you in production practices? Yes STCP provided us with seedlings, trained us on how to manage the palm and how to get good harvest.
Q2. Who are they? STCP
Q3. How many acres of old plantation have you rehabilitated? No one rehabilitated an old farm. All started with planting of new seedlings.
Q5. Were you provided with any implements for the rehabilitation?
Q6. What implements were you provided with?
Q6. What training were you given for the rehabilitation (underbrushing, ring weeding, and pruning?)?
1.2 Increase Small Holder Access to High Yielding Hybrid Seedlings
Q1. How did you get to join the project? 25 people planted new seedlings. Each person was provided with 210 seedlings.
Q5. Was there any community campaigns? Oil palm was helping before the wars and that made him join the group.
Q3. Were you given any training to enable you establish and manage the new farm? Yes,
Q11. What training were you given (preparation of the soil and enclosure, water supply, pest control, seasonal cycles, marketing of seedlings, out planting and care of seedlings?
Q12. Were you given any training materials?
Q13. When you need more hybrid seeds where would you get them?
Q14. Were you given any training to enable you operate the nurseries? What trainings? (proper site selection for seedlings, out-planting techniques, planting densities, weed and pest control, intercropping with other species, water and nutrition supply and pruning?)?
Q16. How do you get to know the current price of oil palm or palm oil when you want to sell your produce?
Production
Q1. Do you have any policies and produces document that you follow to improve you oil palm production?
Q3. Were you trained on how to increase production?
Q4. On what specific topics were you trained?
Q6.Were you provided with Improved hybrid seedlings by STCP?
Q7. Is there any LNGO that provide support to you?
Q7. What further support is given to you to enable you improve production?

Q8. What is the challenges facing the development of production in the oil palm sector?
Q9. How do you think these challenges can be resolved?
Sustainability
FFS/VVC Sustainability
Q1. How is the FFS to be sustained?
Q2. How would you be getting improved hybrid cocoa pods and seedlings as the project comes to an end?
Q3. Who would be providing support to you?
Oil Palm processing
Promote the Manufacture of Palm Oil Extraction Equipment
Q1. Do you have a freedoms mill?
Q2. How much did you buy it? And where did you get money?
Q2Why don't you have it? How do you process your oil palm?
Q5.Does the freedom mill work well by you?
Q6. What would you like to see changed on the freedom mill?
Q7. How would you expect it to be?
Improve access to Credit
Q1. Were you given any training to enable you access credit?
Q2. Who gave you such training?
Q3. Were you linked to any credit providers? Q4. Who are they and how was this done?
Q5. Have you received credit from any institution?
Q6. Which institution did you receive the credit from?
Q11. What more challenge do you face?
Q12. How do you think this challenge can be resolved?

DISCUSSION WITH COOPERATIVES

Professionalizing Cooperatives
Membership
Q1. How many are the members of this Cooperative?
Q2. How many were you in 2008, 2009, and 2010?
Q3. How many are women?
Q4. How many are the staff?
Q5. How many are the Board of Directors?
Professionalizing Cooperatives
Q1. Has the staff received any training on management of Cooperatives?
Q2. When did this training take place?
Q3. Have the Board of Directors received any training on their responsibilities?
Q4. When did this training take place?
Q5. How many Board members were trained?
Q6. How many of those trained were women?
Q7. Has the staff received any training on filing?
Q8. How often do you hold staff meetings?
Q9. Can we see the minutes of the various staff meetings?
Q10. How often does the Board meet?
Q11. Do you audit the accounts of the Cooperative?
Q12. Can we see the audited accounts for 2008, 2009, and 2010?
Q13. Do you organize a General Assembly meeting?
Q14. When did you organize it in 2008, 2009, and 2010?
Q15. Did you share the audited accounts with the members during the general assembly meeting?
Q15. Do you organize election for you Board of Directors?
Q16. When was the last time you organized elections for your Board of Directors?
Q17. Do you have a constitution?
Q18. Can we see a copy of your constitution?
Group Marketing of Cocoa

Q1. Have you been trained on group marketing of cocoa?
Q2. Who trained you?
Q3. Do you assess the quality of cocoa from members before buying?
Q4. Have you been trained on accessing the quality of cocoa?
Q5. Do you have records on the quality of cocoa by members as you assess?
Q6. How does you members get to know the price of cocoa?
Auxiliary Services
Q1. Have you been trained on providing auxiliary services?
Q2. Do you provide auxiliary services to your members?
Q3. What auxiliary services do you provide?
Q4. Are members accessing the services?
Q5. Do you have a record of members who have accessed these services?
Q6. Why are other members not accessing the services?
Q7. What challenges do you face in providing auxiliary services to your members?
Q8. How do you think this challenge can be resolved?

APPENDIX D. LIST OF SITE VISITS

Date of Visit	County	Community/Group	Type of Grouping
^March 1	Bong	1) Kpanyah	farmer field school – cocoa
^March 1	Bong	2) Kpayah	farmer field school – cocoa
^March 2	Bong	3) Gbarlorkpallah	Alg-Afama co-operative
^March 2	Bong	4) Palala	farmers learning group – oil palm
^March 3	Bong	5) Galai	farmers learning group – oil palm
^March 4	Nimba	6) Karnplay	Gbeh Facos co-operative
^March 4	Nimba	7) Kpairplay	Zodo co-operative
^March 4	Nimba		farmer field school – cocoa
^March 4	Nimba	8) Lowlay	farmer field school – cocoa
^March 5	Nimba	9) Marbor	farmer field school – cocoa
^March 5	Nimba		farmers learning group – oil palm
^March 7	Lofa	10) Gongouluwu	farmer field school – cocoa
^March 8	Lofa	11) Dorzinalor	farmer field school -- cocoa

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