



World Cocoa
Foundation



Cocoa Livelihoods Program II 2018 Annual Report

February 27, 2019

*A World Cocoa Foundation and Bill and Melinda Gates Foundation Partnership
2014 - 2019*

EXECUTIVE SUMMARY

The second phase of the World Cocoa Foundation (WCF) Cocoa Livelihoods Program (CLP), known as CLP II, began on February 1, 2014. The six-year program leverages the cocoa and chocolate private sector to engage and support cocoa and food crop productivity and marketing through ten matching grants to WCF company members. Known as matching grant partners (MGPs), these WCF company members are operating in three primary cocoa producing countries of West Africa, namely Côte d'Ivoire, Ghana, and Nigeria. Activities have also been supported in Cameroon although there are no operational matching grants in that country. This annual report covers the period from January 1st, 2018 to December 31st, 2018 of the CLP II.

CLP II Matching Grant Partners (MGPs)

Côte d'Ivoire

Barry Callebaut

Cargill

ECOM Côte d'Ivoire

Mars/ICRAF

Nestlé/Olam Cocoa

Ghana

Hershey/ECOM Ghana

Kokoo Pa

Mondelēz

Touton

Nigeria

ECOM Nigeria (Tulip Cocoa)

The CLP matching grant mechanism utilized an incentive payment structure to motivate and incentivize private sector companies, all members of the World Cocoa Foundation. This incentive payment structure aimed to ensure long-term investments from companies to approximately 210,000 smallholder farmers supplying their cocoa. In 2017, WCF carried out a midline incentive evaluation to track outcomes against the 2015 baseline, and to track and measure MGPs performance towards achieving set CLP II targets. There are three incentive indicators in CLP II used to measure performance: 1) the adoption of sanitary pruning on cocoa trees, 2) the access to improved planting material for food crops, and 3) the adoption of good agricultural practices for food crops.

The program is intended to end in 2019. The calendar year 2018 was the last full implementation year of the program. In this year, the program made a substantial push to wrap up a variety of outstanding activities in relation to the three main objectives of the program (listed below), and experienced high staff turnover through the departure of several key staff members. Despite these challenges, the program is on-track to complete the three objectives below:

- **Objective 1: Increase farm level cocoa productivity to 1000 kg/ha**
- **Objective 2: Improve service delivery efficiency with focus on long-term, farm-level cocoa productivity increase**
- **Objective 3: Improve farmer resilience**

We have seen several tangible results considering baseline data gathered in 2009, at the beginning of CLP Phase I. By the end of 2018, CLP II (started in 2014) managed to reach an estimated 96% of the projected cocoa farmers. Using data submitted by the companies, the program has covered a total of 196,437 farmers in Côte d'Ivoire, Ghana and Nigeria as compared to the target of 205,500 set for year 5. This impressive result is mainly due to the significant contribution of some MGPs in Côte d'Ivoire and Ghana, along with other companies who enrolled and registered more farmers in their sustainability activities than originally planned. However, nearly all matching grantees are on target to reach at least 80% of the planned farmer enrollment.

Incentive payments

As indicated earlier, WCF conducted a mid-line evaluation in 2017 in collaboration with its contractor IPSOS. This survey served to gauge company performance against the targets set for the outcome indicators listed above. The results of the midline survey were mixed with higher performance recorded for Ghana than for Côte d'Ivoire and Nigeria. All MGPs did well with improved/approved cassava and plantain varieties but performed poorly on sanitary pruning except one company that received the full payment and three MGPs got half payment. All MGPs have since December 2018 received their calculated incentive payments after negotiations.

2018 Steering Committee Meeting

WCF organized a Steering Committee in Abidjan, Côte d'Ivoire in November 2018 with a focus on reviewing 2018 achievements and planning activities for 2019, the final project year. Participants included CLP II company members and Garron Hansen of the BMGF. Each matching grantee presented their activities and highlighted lessons learned and key challenges to their work. The steering committee also reviewed the planned 2019 activities, with a special focus on knowledge management and the capturing of key lessons learned from the six-year program. They also reviewed the plans to conduct the endline survey, which will be used to determine final incentive payments for all matching grantees in 2019. The Steering Committee also discussed and approved motions to launch a cocoa data challenge in partnership with Kaggle, complete a service delivery model review, and conduct a study to review the effectiveness of gender interventions introduced during the life of the project.

Cocoa productivity

During the period under review, the project managed to provide farmers with inputs and services, especially farmer training and extensions services. However, program activities suffered a set-back in Côte d'Ivoire following the Government's ban of productivity-enhancing interventions, such as seedling and fertilizer distribution, announced in March 2018. The ban was a result of the rapid decline of cocoa prices that began in September 2017 and had serious impacts on fiscal revenue and the livelihood of nearly all small holder cocoa farmers in the region.

In Ghana, complementary work was completed and reported through a partnership with the African Fertilizer Agribusiness Partnership (AFAP), which trained 89 farmers and agro dealers in Cameroon and 200 in Ghana. In a similar fashion, earlier investments in ADVANS Microfinance continued to yield results for the cocoa sector through a deepening of the cocoa lending portfolio in Côte d'Ivoire and reasonable scale up in Ghana. They also developed a proof of concept and product testing in Cameroon.

As in prior years, CLP also helped to facilitate the consolidation of industry needs for planting material in Ghana and communicate these to the government. Based on the results in 2018, WCF requested total of 678,260 planting material from the Seed Production Division (SPD) of the Ghana Cocoa Board (COCOBOD) in Ghana and an estimated 615,550 (90%) was approved to be allocated and supplied to our member companies. The four CLP MGPs in Ghana received a total of 195,890 cocoa seed pods compared with the 232,213 pods requested.

Food crop productivity

Companies reported that their work on the three main food crops promoted by CLP II — plantain/banana, and cassava, were generally very successful. Companies reported a strong uptake of good agricultural practices and reasonably strong access to improved varieties of the staple crops. Partnerships with other actors in this space, including with the Ministry of Agriculture in Ghana, helped producer groups access technical assistance and training. WCF, in partnership with its member companies also conducted refresher trainings on food crop multiplication and propagation activities. In many cases, companies also reported developing and supporting village savings and loan activities that helped to provide small loans and savings products for producer groups with women forming a higher percentage of the participants.

Alignment with CocoaAction

The CLP program continues to benefit from strong alignment and strategic fit with the industry's signature sustainability platform, called CocoaAction. The platform included bold commitments to deliver both a package of productivity interventions and community level interventions. As WCF coordinates CocoaAction and its efforts to improve cocoa productivity and community development outcomes, the Program Management Unit (PMU) continues to explore areas of alignment between CocoaAction and CLP II.

Project partners

The CLP program would not be possible without the generous support of the following WCF member companies:

CLP II Private Sector Project Partners

Barry Callebaut *
Cargill*
ECOM *
ECOM Nigeria (Tulip Cocoa) *
Guittard Chocolate Co.
The Hershey Company *
Kokoo Pa *
Mars/ICRAF *
Meiji Holdings Co., Ltd.
Mondelēz *
Nestlé *
Olam Cocoa *
Touton *

** Matching Grant Partner*

SECTION 1: INTRODUCTION

1.1 Project Overview

World Cocoa Foundation's Cocoa Livelihoods Program II (CLP II) is a six-year program (2014-2019) funded by the Bill and Melinda Gates Foundation (BMGF), the Walmart Foundation (from 2015-2017) and WCF member companies with the goal of supporting smallholder farmers in Côte d'Ivoire, Ghana, Nigeria and Cameroun to increase farm-level cocoa and food crop productivity and marketing. The program utilizes matching grants to ten companies - matching grant partners (MGP) - to incentivize investment in the cocoa value chain and to foster innovation in service delivery. Over the course of the program, matching grant partners will provide technical assistance in cocoa and food crop production and other resources to approximately 200,000 farmers, with the goal of doubling the income of these farmers from cocoa and non-cocoa sources. To accomplish this ambitious goal, the project is working toward the following three interrelated objectives:

Objective 1: Increase farm level cocoa productivity to 1000 kg/ha: To meet global demand and increase household incomes, farmers need to increase cocoa productivity from the current 300-400 kg/ha on land, while protecting soils and environment. Previous work had found that farmers who receive a 'full package' of interventions, can more than double their cocoa yields after several years using improved planting material and the application of good agronomic practices. The "full CLP package" includes: 1) training on good agriculture practices (GAP) and farm management, 2) provision of cocoa inputs (agrochemicals and fertilizer), and 3) increasing access to improved planting materials. The hypothesis is that farmers who participate in CLP II activities in the first two years (~35% of the total number of farmers) can expect to see cocoa productivity increase reaching around 1,000kg/ha by the end of the six year program and that by the end of the project, given strong delivery efficiencies, all farmers, including those enrolled in years 3 through 6, would also realize this same magnitude of productivity gain.

Objective 2: Improve service delivery efficiency with focus on long-term, farm-level cocoa productivity increase: The aim of this objective is to work towards a long-term goal beyond the timeframe of Phase II, to increase cocoa productivity to 1,500 kg/ha. Long-term productivity gains will only be accomplished if farmers are able to rehabilitate their old and low-productive farms, included those affected by pests and disease, and access supportive services. However, access to improved cocoa planting material remains a challenge across all countries. Efforts have therefore been focused on developing complementary strategies designed to address specific bottlenecks such as increased access to quality inputs (planting material, fertilizers and pesticides), increase access to financial services and credit, and improve distribution systems for planting materials. Increasingly CLP companies are working to organize new services such as extension and credit alongside the actual delivery of inputs and products to farmers.

Objective 3: Improve farmer resilience: Activities under this objective aim to increase cocoa farming families' ability to maintain and improve their standard of living while working to minimize the effects of risks such as cocoa price fluctuation, climate change, and health and nutrition challenges. The objective focuses primarily on helping cocoa farming households diversify their production and farm activities through the introduction of key food crops: cassava and plantain, as well as small-scale gardening. Farmers are provided with training in GAP for food crops and the necessary inputs (fertilizer, agrochemicals) and improved seeds/planting materials to increase food crop productivity. Realizing the critical role that

women play in cocoa and food crop production and the resiliency of farming families, improved gender outreach has been incorporated in all CLP II activities through the complementary and separately funded work of a grant from the Walmart Foundation, which ended in 2017.

Matching Grantee Partners and focus crops

CLP II is implemented by 10 MGPs in West Africa working to achieve the objectives mentioned above. All MGP partners are WCF member companies which have their own sustainability programs and activities in these origin countries and are working with many partners, including government agencies and non-governmental organizations, to achieve desired outcomes based on agreed performance indicators around cocoa productivity, food crop agronomic practices and use of improved or approved varieties. The MGPs are focused exclusively in the three countries of Côte d’Ivoire, Ghana, and Nigeria and have been working with an approximately 200,000 farmers on CLP II. MGPs have a choice based on farmer preference to support either plantain and/or cassava production as their outcome incentive food crop. Even though the work of plantain, bananas, and cassava form the basis of their incentive targets, they provide support to other income generating activities including the growing and marketing of vegetables, *garri* (cassava flour) processing, beekeeping and rearing of small ruminants. Below in Table 1 is the outreach targets and cumulative actual achieved as at December 2018 according to company reported data. Farmers who are supported with training in GAPs, Good Environmental Practices, Good Social Practices, Farm Management and Coaching, provided with and supported to access inputs and finance, and are part of the VSLA and farmer groups, societies and cooperatives that received any kind of support are counted and included in the outreach numbers. All those receiving support on food crops are included.

Table 1: CLP II Outreach Performance per Country and MGP, excluding Cameroon

Outreach Performance as of December 31, 2018				
Country	Food Crop	Actual 2018	Target 2018	% met
Total Ghana	Cassava & Plantain	70,665	63,000	112%
Total Côte d’Ivoire	Cassava & Plantain	106,219	120,000	89%
Total Nigeria	Cassava	19,553	22,500	87%
Total All Country		196,437	205,500	96%

1.2 CLP partnerships

Partnerships are very important in the strengthening the capacity of CLP MGPs, leveraging resources including human capital and improving the quality and pace of the delivery of required outcomes. WCF/CLP and the 10 MGPs have over the past years continued to work with several partners in the public and private space in the cocoa and food crop sector. These partnerships have been formed and are thriving because of the collective effort by WCF/CLP and MGPs to work to achieve the objectives and targets of the program.

Government partners: MGPs worked closely with Ghana Cocoa Board (COCOBOD) and its various departments and units such as Seed Production Division (SPD) on sourcing cocoa planting material, Cocoa Health and Extension Division (CHED) on providing cocoa extension support, training and inputs to farmers and Quality Control and Marketing Company on post-harvest issues and marketing of cocoa. CHED Experts have been providing training on agronomic practices, spraying of pesticides and discussing with MGPs on how to improve

business operations, and farmer adoption of sustainability interventions. Also, in Ghana WCF has a Memorandum of Understanding (MOU) with the Ministry of Food and Agriculture (MoFA) on provision of extension training, sourcing of improved cassava and plantain varieties and links to other supporting units such as the Women in Agriculture Development (WIAD). Some MGPs work with the Department of Cooperatives and other national bodies to build the capacity of farmer societies and Unions.

In Côte d'Ivoire, the Conseil du Café-Cacao (CCC) and ANADER have been the main public institutions supporting CLP MGPs with public extension in cocoa agronomy and providing planting material. Until the recent ban (see section on Planting Material below for detailed explanation of the ban) in productivity activities by the new management at the CCC, all the MGPs sourced cocoa seed pods from the government for onward distribution to farmers for creation of cooperative and community cocoa nurseries.

In Nigeria, the CLP II MGP sources improved cocoa seedlings produced by the Cocoa Research Institute of Nigeria (CRIN) in the and receives extension technical support from the Federal Ministry of Agriculture in the Ondo State. They also sourced improved cassava varieties introduced by International Institute for Tropical Agriculture (IITA) and promoted by the Federal Ministry of Agriculture was used for demonstration plots and distributed to farmers.

NGOs, CSOs and Other Donor Projects - During the past year, MGPs in Ghana worked with several Non-Governmental Organizations (NGOs) and donor projects in the cocoa sector on improving cocoa productivity, rehabilitation of cocoa, soil testing, supporting and strengthening the capacity of women in IGA, training farmers in farm business skills, certification, non-formal education. Some of the NGOs include CARE international on Village Savings and Loans Associations (VSLAs), Solidaridad on cocoa rehabilitation, AgroEco on nursery management and support to farmers, World Vision, Right to Play, Institute of Democratic Governance, Child Rights International (child labor issues). Others are Nature Aid Ghana, Global Women Development Promoters, ABANTU International who are mainly focused on women's empowerment through income generation. In Côte d'Ivoire, one MGP works with Initiative Restore Cacao (IRC) and International Finance Corporation (IFC) to support skills development for field officers to coach farmers.

In Nigeria, the CLP MGP joined the IDH program on soil testing and a substantial number of farmers from all their active regions had their land examined and tested. The results are yet to be shared by IDH for distribution to the farmers.

Other CLP partners: WCF/CLP has been working directly with other financial entities such as ADVANS microfinance institution to support farmers with loans under the Growth Fund over the past few years.

In 2017, WCF/CLP contracted the African Fertilizer and Agribusiness Partnership (AFAP) to carry out several studies and conduct training for agro-chemical retailers and WCF company members. These trainings took place as planned and AFAP has since submitted all the reports to WCF including Agro-Input Dealer Directory for Ghana and Cameroon. GIZ has been a pillar in delivering training in Farm Business Skills and with RA/UTZ on certification, training and farm audits.

SECTION 2: INCREASED COCOA PRODUCTIVITY

2.1 Training in cocoa GAPs

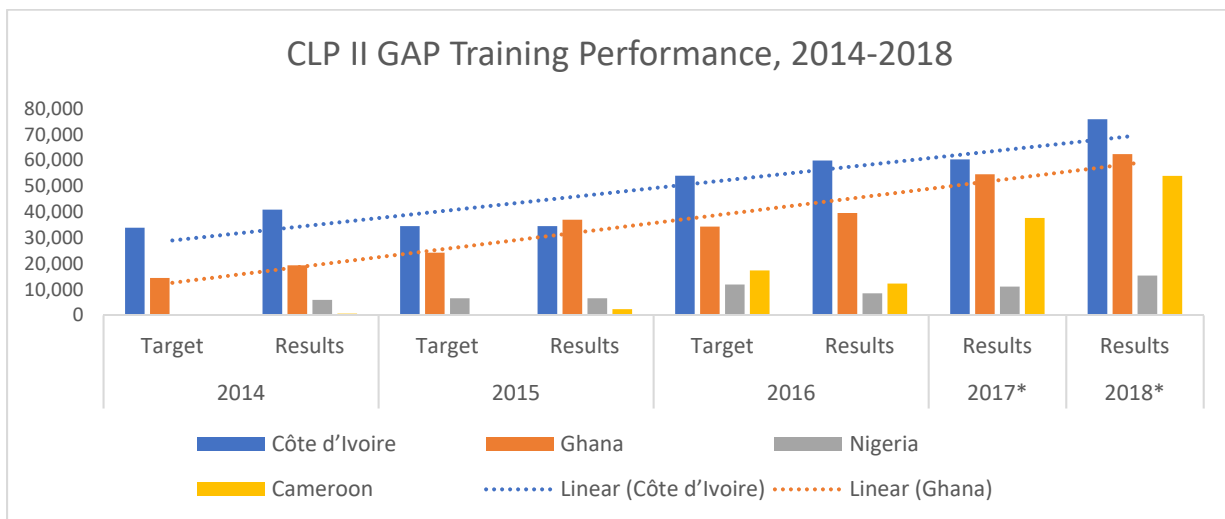
Knowledge acquisition in and adoption of Cocoa Good Agricultural Practices (GAPs), Good Environmental Practices (GEP) and Good Social Practices (GSPs) results from the training of farmers through Farmer Field Schools (FFS), Coaching using Farm Development Plans (FDP), and other models such as digital videos. During the reporting period, all 10 Matching Grantees conducted training for cocoa farmers in GAP, GEP and GSP using various approaches. Over 207,600 farmers received training under the CLP program in all four West African countries. From Table 2, the number of cocoa farmers trained increased by 14% to 62,430 in Ghana and by 39% between 2017 to 2018 in Nigeria. In Côte d'Ivoire, a higher than expected increase in the number of farmers trained in GAP, GSP and GEP by some MGPs resulted in a 26% increase in the number of farmers trained from 60,359 in 2017 to 75,875 in 2018. In Cameroon, the MGPs trained about 6,000 and 48,000 cocoa farmers respectively in cocoa good agricultural practices during the reporting period.

Table 2: Farmers trained in cocoa GAPs (Country aggregated data)

Number of farmers trained in Cocoa GAPs (per year)								
	2014		2015		2016		2017*	2018*
	Target	Results	Target	Results	Target	Results	Results	Results
Côte d'Ivoire	33,946	40,922	34,560	34,516	54,041	59,944	60,359	75,875
Ghana	14,500	19,357	24,260	36,983	34,355	39,625	54,585	62,430
Nigeria	NA	6,000	6,588	6,600	11,945	8,517	11,109	15,407
Cameroon	NA	693	NA	2,373	17,382	12,323	37,671	53,963
TOTAL	48,446	66,972	65,408	80,472	117,723	120,409	163,724	207,675

*We present only actual results for 2017 and 2018. Targets for 2017 and 2018 are not complete and comparison may be distorted

Fig 1: Farmers trained in cocoa GAPs



In Côte d'Ivoire, MGP used varied approaches and models in delivering training to 75,875 cocoa farmers in the past year. Some used participatory approach such as the farmers' field school (FFS) aimed at strengthening their knowledge on GAP and to improve adoption. The FFS is based on the learning by doing principle and generally build on visual training material and field practices to help farmers assimilate the practices they are trained on. Training in FFS is conducted bi-monthly by Cooperative Farmer Trainers, using a maximum participatory approach including pre and post-knowledge tests. Other topics covered include coaching techniques, planning, and living income. Others train farmers using FFS with coaching by visiting and coaching the farmer using a section of his/her farm plot. Cocoa farmers are coached in handling saws and pruning shears under the supervision of the coach. Once the pruning techniques are mastered, farmers are encouraged to extend the pruning activity on the whole farm.

In Ghana, over 62,400 cocoa farmers, of which 34% were women, received training in GAP during the past year. All four MGPs set up almost 440 cocoa demonstration plots and used similar approaches but worked with different entities in delivering agronomic training to farmers. All MGPs over the period procured either mechanized or manual pruners and trained selected pruning gangs to provide professional training for their farmers using selected plots for them to learn and extend to other parts of the cocoa farm.

Some MGPs farmers used COCOBOD's training manual and their own manual covering topics such as land selection, measurement, preparation, transplanting, fertilizer application, chemical application, nursery management and pruning. Others carried out refresher training on GAPs, UTZ code of conduct, and other modules for field offices. Training of Trainers (TOT) in GAP, GEP and GSP was organized for Field Trainers on certification modules, farm mapping, internal inspection and data collection benefiting women farmers. The application of the appropriate improved technology by farmers on their farms is essential for optimum plant yield. Farmers must adopt and use technologies disseminated through trainings on their farms to obtain the most efficient results.

In Nigeria, CLP MGP conducted annual training for field supervisors, officers and lead farmers over the past year emphasizing the innovative approaches in improving adoption of GAP, GEP and GSP based on training needs assessment at various major cocoa production communities. The company hired Subject Matter Consultants to support their internal Agronomists to cascade the knowledge to over 15,400 farmers, 20% of whom are women farmers, focusing on topics such as soil management in cocoa farming, integrated pests & disease management in cocoa, and the use of agrochemicals as well as proper soil management.

In Cameroon, training in cocoa GAP was provided to about 54,000 cocoa farmers in all assisted areas using the trusted CCE (Certification Capacity Enhancement) sustainability training tools and guides. Using about 12 general cocoa demonstration plots, 193 compost sites and 238 pruning demonstration sites, farmers received dedicated training from professional Agronomists and Cocoa Technicians. Farm Technicians then follow up and support farmers to evaluate and assess application and farm performance. Another partner used the Farmer Field School (FFS) model, demo plots and coaching.

2.2 Farm Management Training

Farmer Business Schools (FBS) have become popular with all the sustainability programs of WCF members since CLP1 where WCF worked with GIZ to prepare curriculum, develop booklets

and training materials for farmers to use. Skills developed have largely resulted in farmers producing cocoa as a business and diversifying their incomes sources. Evidence from field visits and company reports suggests that farmers have improved their record keeping records on the inflow and outflow of money and an increase in investments in other income generating activities. Total number of farmers trained in farm management reached 45,450 (41% female) during the reporting period using the FBS approach.

In Côte d'Ivoire, MGPs focused their attention on the FBS program which is a five-day intensive program to improve the farm management skills of 3,731 cocoa farmers. This has resulted in an increase in professional and business-minded farmers willing to diversify the income sources of the family household increase.

In Ghana, almost 19,000 farmers received trained in farm management skills over the past year with women forming about 36%. Improvements in farm management and business skills results in better record keeping, efficient allocation and application of agro-chemicals and fertilizers, expense and incomes tracking and general maintenance of the farm. MGPs in Ghana focused training on financial management skill, business planning, understanding cost of business enterprises, and farm business risk and marketing. The training on business skills enables farmers to become entrepreneurs with better management skills. Opportunities for securing additional income were topics that were also discussed at the training sessions.

Some companies have certified their project staff to provide trainings directly to the farmers in the communities. The 5-day FBS curriculum takes place early in the morning before the farmers go to their cocoa farms for their daily activities. The facilitator takes the farmers through the basics of cocoa farm activities planning, investment decision-making, profit and loss calculations and basics on nutrition and food crops production for food security and additional income. Basic management and financial literacy are key drivers of professionalization. These trainings will equip farmers with the needed skills to farm as a business considering investments (costs) and their profits (money-in & money-out). Additionally, nutrition modules and sensitization on food crops production (based on community's preferences) have been incorporated into the FBS curriculum. Because of these trainings, beneficiary farmers have improved their record keeping and able to manage their revenues efficiently. For some of the women, the bonus is that loans from the VSLAs are not wasted and they are able to make wise investments into value addition ventures and high-income yielding activities.

In Nigeria, the CLP II MGP incorporates FBS in the general farm productivity training. During the past year, the company trained over 15,400 cocoa farmers on topics such as farming is a business, record keeping and money in and money out. In Cameroon, the program trained close to 7, 300 farmers on the Farming as a Business (FAAB) model.

2.3 Cocoa planting material distribution

As in past years, the CLP PMU has continued its effort to help consolidate company needs for planting materials, presenting a unified request on behalf of all CocoaAction companies to COCOBOD and the CCC. However, since the productivity ban came into effect in March 2018 in Côte d'Ivoire, this effort was limited to Ghana. Cameroon and Nigeria also separately continued their work of accessing improved planting materials for cocoa.

The Government of Côte d'Ivoire through the CCC has placed an explicit ban on cocoa productivity enhancing activities in 2018 and this has reduced significantly activities around

planting material production and distribution in the country. The bulk of WCF activities in Côte d'Ivoire at the start of 2018 were centered around the propagation and scaling of Somatic Embryogenesis (SE), Orthotropic Shoots (OS) and grafting technologies to farmers, which the CCC validated in December 2017. WCF was aiming to cover a percentage of the estimated 50 million seedling annual unmet demand for planting material in the country with clonal planting materials developed under WCF/ACI. The use of clonal propagation business model was generally endorsed by WCF/CLP MGPs and plans were underway to work with the CCC on the best way to scale up their use through public and private actions and investments.

WCF had begun evaluating potential partners with the capacity to host seed and bud-wood gardens, hardening and nursery facilities that would support the production of clonal planting material at scale when on March 1, 2018¹ the government of Côte d'Ivoire suspended the distribution of all improved cocoa planting material to farmers for the 2018-19 cocoa season. The reason behind the suspension was in recognition that Côte d'Ivoire had largely achieved an aggregate level of national production. WCF has responded to this swift change by refocusing work in Côte d'Ivoire on developing heat and drought tolerant planting material using hybrids and participatory farmer evaluation methodologies to identify potential heat and drought tolerant material from farmers. At the same time, WCF has negotiated with the CCC to approve a limited number of pilot research activities for clonal and hybrids planting materials that would be implemented by CocoaAction companies as research trials during the period of the ban. These pilots called "CocoaAction expanded company pilots" aim to develop best practices and shared lessons learned on the integration of clones and hybrids with agroforestry practices and different fertilization pathways in collaboration with the International Fertilizer Development Center (IFDC).

In Ghana, WCF has been working with all company members especially those implementing CLP and CocoaAction to collectively source improved hybrid cocoa seed pods from COCOBOD's SPD over the past three years. This has significantly increased the quantity of seedlings produced by companies and distributed to cocoa farmers. Recently however, SPD has not been able to approve all the requested quantities due to a myriad of problems including lack of water at the stations due to excessive and prolonged drought, increased competition from other stakeholders and farmers and their own seedling production targets. For two consecutive seasons, SPD was not able to meet the demands of WCF Members for cocoa seed pods. In the 2016/17 cocoa season only 106,000 pods were allocated compared with the total request for over 430,000 pods. In 2017/18, SPD approved and allocated all the requested seed pods by companies (615,000) but was able to deliver only 370,000 based on beneficiary WCF company reports. In 2018/19, SPD approved about 615,000 seed pods which is expected to produce about 18 million seedlings in nurseries, but it remains to be seen whether the actual amounts approved will be allocated. Picking of cocoa seed pods and nursery establishment has been on-going albeit several challenges including distance to stations, availability of pods at designated SPD stations etc.

During the reporting period, all WCF company members operating in Ghana received cocoa seed pods from the SPD through the collective sourcing program. They raised seedlings either

¹ Message from Le Conseil to WCF: "In view of the increase in the world supply of cocoa and the fall in prices observed since the 2016-17 crop year, Le Conseil has decided to carry out a census of coffee and cocoa farms with a view to elaborating a strategy for the development of sustainable cocoa and coffee production. Pending the finalization of this census, we inform you of our decision to temporarily suspend any distribution of improved planting material (seeds, plants resulting from orthotropic shoots, somatic embryogenesis, grafts, etc.) for the 2018-19 season. We would be grateful if you could bring this information to all your members implementing sustainability activities in Côte d'Ivoire."

from their central nurseries or with the communities and distributed to the farmers to mostly rehabilitate old, diseased and moribund farms. Most of the seedlings raised in 2017 were distributed in 2018 and those raised in 2018 will be distributed to farmers over the 2019 season. Farmers are being closely monitored during farm visits to check on the survival rates of the seedlings they received and planted.

Some MGPs invested resources in conducting refresher training on nursery establishment and management for all field trainers. Women provide greater support at nursery sites and some MGPs provided them with training over the period. One important lesson from the use of larger polybags for nursing cocoa seeds is that it is more vigorous, firm and healthier than the ones distributed by the government. Post-transplanted seedlings from nurseries have thicker stem and better rooting structure as compared to what they have received and planted in the past. The field staff monitored the farms to ensure effective management of young transplanted cocoa seedlings and to ensure that shade trees are provided on the young transplanted cocoa.

In Nigeria, prolonged strike by CRIN staff had resulted in shortage of improved planting material that might be available for distribution to farmers. CLP II is working closely with USAID-funded WCF ACI phase II program to provide support to the CLP II MGP to establish private seed gardens that can produce high-quality seed pods for CLP II farmers. During the past year, the company supplied 44,887 cocoa seedlings to 932 farmers, which included 35 women cocoa farmers, from the nurseries established in the South East region for rehabilitation of old and diseased cocoa farms.

SECTION 3: ENHANCED INPUT DELIVERY SYSTEMS

3.1 CLP II MGP input service and supply models

Over the past five years, CLP II has implemented many innovative business and service delivery models to provide cocoa and food crop farmers with increased access to farm services and farm inputs, tools and techniques. At the recent Steering Committee meeting in Abidjan, MGPs presented some of these approaches and related service delivery models for discussion. WCF/CLP Program Management Unit (PMU) has put together some of the service delivery models implemented by MGPs over the period under review. These included among others approaches around planting material access – community nurseries, packaging, transportation of containerized seedlings; GAP training including Sanitary Pruning – Coaching based on Farm Development Plans, demonstration sites (cocoa and food crop), FFS, digital videos, pruning gangs, pruning tools (mechanized pruners, saws, shears); input shops, Rural Service Centers, and input loans.

3.2 Farmer access to fertilizer and agrochemical distribution

As in previous years, the project continued its effort to build the capacity of farmers and agro-dealer networks to deliver appropriate crop protection and soil fertility interventions to farmers.

In Côte d'Ivoire, about 5,459 farmers were supported with fertilizer during 2018 under various innovative schemes and service models. More than 5,875 farmers benefitted from Phyto sanitary products over the same period. MGPs in Cote d'Ivoire worked with several partners to supply farmers with inorganic fertilizers through various input loan schemes though some where

outright sales at a discount. Supercao, Nitrobor, and TSP were distributed and applied on cocoa plots including underplanting and full replanting. Key lessons learned from this season revolve around the need to make sure deliveries are done based on information shared with the farmers during the sensitization phase as well as providing timely coaching services to the farmers to ensure proper and timely application on their farms.

In Ghana, CLP II MGPs continued to provide 21,757 farmers with access to agro-chemical products through improved and enhanced input delivery approaches such as using premiums to pay for inputs, providing access at the Rural Service Centers, opening input shops, and in some cases, selling to farmers on credit.

The MGP in Nigeria, introduced and provided a total of 1,320 “Pelle Bongos” to farmers in the two regions. The Pelle Bongo is a pod harvesting, breaking and bean removal tool. It is very efficient and separates the placenta from the beans, thus improving the quality of cocoa beans. Trainings and demonstrations on use of the implement were organized for the farmers in the two regions, while the implement was made available for purchase by farmers at convenient locations.

3.3 Trichoderma trials with IFDC and MGPs

In 2017, WCF through the CLP II program and under CocoaAction contracted the International Fertilizer Development Center (IFDC) to promote the use of biofertilizer in raising cocoa seedlings to rehabilitate old farms. Specific tasks involve setting up field demonstrations with compost and biochar to assess their effect on seedling production and the performance of the seedlings, conduct another trial enriched with Trichoderma (TeB) to assess the effects of these amendments on seedling growth and vigor and provide a comprehensive assessment and business case for the use of Trichoderma in raising cocoa seedlings (at a nursery stage),

IFDC will also support training and capacity building of stakeholders in the production and use of compost and biochar. The TeB trials (enriched composts or biochar with Trichoderma) will be used in nurseries and mature cocoa plantations and facilitate participatory evaluation of the effect of compost, biochar and TeB on seedling production. and the results will help inform a Cost-benefit analysis of the different fertilization pathways (e.g. compost, biochar and TeB) and provide recommendations. The second objective of the trials is to promote the use of compost and biochar to improve soil health on mature cocoa plantations to increase organic matter in depleted soils.

IFDC and WCF team in Ghana are currently sourcing all the soil enhancing materials – compost, biochar and sawdust from the University of Ghana research station. Already 100g of Trichoderma has been procured from Cameroon. Cocoa seed pods were sourced from COCOBOD/SPD Stations and trials began in earnest with Barry Callebaut, Hershey, Kookoo Pa, Mondelēz, and Touton in Ghana, even though Barry Callebaut in Ghana is not a CLP Matching Grantee partner.

3.4 Collaboration with African fertilizer and agribusiness partnership

In Ghana, cocoa production supports the livelihood of more than an estimated 800,000 smallholder farmers in the forest agro-ecological zones. Ghana’s cocoa marketable yield and productivity have picked up in recent times, however, it remains low and this has been attributed to pests and diseases infestations, low soil fertility, low access to appropriate planting

materials and agro-inputs and poor extension support. Appropriate and timely delivery of agro-inputs is a major obstacle to improved yields and incomes for farmers.

Realizing the importance of this challenge, the WCF awarded a contract to African Fertilizer and Agribusiness Partnership (AFAP) to implement several activities that will enhance smallholder cocoa farmers' access to fertilizers, build capacity in pesticide management, improve the rationale use of chemicals and application of appropriate fertilizer recommendation. All these activities aim to increase farm-level cocoa productivity to 1000 kg/ha; improve input service delivery efficiency; and farmer resilience through food crops diversification.

AFAP was able to successfully map over 2,400 retail sale points in the cocoa growing regions of Ghana. WCF believes that the mapping of agro-input dealer sale points and assessment of the landscape will allow investors to identify areas where farmers are underserved and open sale points that would enhance smallholder access to decent quality fertilizer on time and to apply the recommended dosage at the right time based on crop physiology. WCF believes this georeferenced database and agro-input directory will be beneficial to CLP matching grantees and the chocolate industry in Ghana, Ghana Cocoa Board and partners in the cocoa sector. With high mobile telephony penetration in Ghana, the development of the agro-input directory will help farmers identify agro-input dealers and will help WCF design more targeted productivity enhancing interventions. AFAP initially collected data from 216 households in 2017 and assessed cocoa farm characteristics in more than 24 communities conducting Last Mile delivery studies on cocoa fertilizer in Ghana.

AFAP trained over 200 agro-input dealers in the cocoa growing regions to provide advisory service on appropriate recommendation and timing of fertilization application, safe handling, use and application of agro-chemicals and business management. Under CLP, WCF and its matching grantees (companies implementing the program and matching funds with Gates Foundation), seek to develop and pilot innovative input delivery systems and advisory services that will generate a vibrant, transformative change within the cocoa sector of Ghana with positive impacts on the income and the quality of life of cocoa-growing communities.

3.5 Growth fund mechanism by ADVANS

The CLP Growth Fund was initiated in partnership with TechnoServe in 2012 for Ghana and Côte d'Ivoire. The model was developed to put in place a guarantee scheme which would guarantee the procurement of phytosanitary products and fertilizers for farmers through a credit scheme by spreading the risk of non-repayment across multiple actors in the supply chain. In 2014, ADVANS expressed interest and readiness to invest in the model and was supported with \$400,000 guarantee fund as well as \$180,000 grant to manage lending operations in phytosanitary products and fertilizer use in Côte d'Ivoire. The initial program was later expanded at no cost to the CLP II program to two additional pilot programs in Ghana and Cameroon. These efforts were also linked with the ongoing fertilizer initiative supported by CocoaAction and IDH in Côte d'Ivoire in collaboration with CCC, professionals in the fertilizer industry, and private sector chocolate and cocoa companies.

Since 2012, 16.16 million USD worth of credit has been disbursed with repayment rate of 99% including a total of 5.11 million Euros (5.83 million USD) in 2018. As at 31st December 2018, over 20,300 farmers have received loans and 94 cooperatives have been assisted by ADVANS. ADVANS provides loans through several innovative products including cocoa input, cocoa truck, cocoa savings, cocoa digital school, life insurance, cocoa working capital, and warehouse

receipts.

During the reporting period, ADVANS Cameroon decided to focus on rural loans recovery instead of advancing more credit due to high non-repayment rate of the previous year. In Ghana, ADVANS launched cocoa input loan schemes for farmers linked to Barry Callebaut's "Nyonkopa" buying company. Over 650 loans have been disbursed for farmers linked to "Nyonkopa" with over 3000 farmers directly benefitting. ADVANS, in partnership with Cocoa Abrabopa, is in negotiations to provide access to input loans to farmers and the pilot project is expected to start in April 2019. ADVANS has been working to train staff of Touton and Produce Buying Company (PBC) to learn how to collect savings from cocoa farmers and deposit them into farmers' ADVANS savings accounts using the e-wallet to account digital transfer. By June 2018, over 145 transactions had been recorded. In Côte d'Ivoire, ADVANS opened five (5) branches in major cocoa growing areas - Gagnoa, Duékoué, Divo, San Pedro and Yamoussoukro. ADVANS has succeeded in making sure cooperatives can directly go to the closest branch for their transactions, carry out loan applications and instead of going to Abidjan. The integration of the cocoa activities in the branches increased client satisfaction over the period, and this is a strong factor to mitigate risk and increase productivity.

In August and September 2018, 1,118 digital school loans have been disbursed to the cocoa farmers for a total value of almost EUR 180,000. ADVANS diversified its product mix to include life insurance, working capital benefitting 24 Cooperatives and Village Savings and Loan schemes for 164 groups made up of 3,772 members (80% women).

Major challenges faced during the reporting period include political instability and price falls in Cameroon, logistical and communication issues in Ghana, difficulties in repayments and recovering loans from farmer cooperatives and groups. Additionally, the proximity of ADVANS loan officers to cooperatives and frequent visits by loan officers to all the cooperatives of their portfolio remains a challenge. The Agri loan officers are essential to support the cooperatives in the digitization of payments and the implementation of a savings policy. For ADVANS, the role of the cooperative is essential in the successful implementation of a savings and digitization policy.

3.6 Village Savings and Loans Associations (VSLA)

Village Savings and Loans Associations (VSLA) is growing in West Africa especially in Cocoa growing areas. In Côte d'Ivoire, NGOs such as CARE international have been working with WCF member companies to set up and implement VSLAs in many cocoa producing communities. The farmers contribute a minimum amount each week to a pooled savings. The amount saved by farmers' is tracked and recorded in the VSLA ledger and their personal passbook. The groups meet every two weeks to contribute and give medium term loans to support members seeking to venture into alternative businesses to supplement their cocoa farming. The benefits and impact are noteworthy, and several success stories have been written about them, especially the role they have on their female members. It encourages a savings culture among the farmers, promotes unity and bonding in the group, low interest rates paid on loans, easy process to acquire loans, and no collateral beyond social cohesion. WCF/CLP has been promoting VSLA in Côte d'Ivoire and Ghana and companies have recorded tremendous success.

Côte d'Ivoire: While some MGPs have established their own loan and credit schemes for farmer cooperatives advancing a total loan amount of 195 million CFA to over 33 cooperatives, others

focused on creating VSLAs with primarily women members for purposes of empowering women and providing them with the tools and means to save and invest for their future. Partnering with Vert + and CARE, additional 79 VSLAs were created including 84% women. In Ghana, a total of 416 VSLAs are in operation with one MGP collaborating with ADVANS Savings and Loans to support farmers. Some members maintain a small social fund which is used to support members in need of emergency support for various purposes including health bills. The emergency funds under the VSLAs also contribute to the farmer resilience objective of CLP II. Initial analysis and farmer feedback from one study indicated that approximately 50% of loans were used for educational needs and/or school fees, 30% for farm inputs and materials, while 20% invested it into their trade and other businesses.

SECTION 4: FARMER RESILIENCE

4.1 Food crop productivity

Cocoa farmers have been intercropping cocoa with food crops such as plantain and cassava since the introduction of cocoa to Ghana in 1879 and West Africa. Farmers largely depend on these food crops for subsistence when cocoa trees are juvenile. Women mostly take care of the maintenance of these crops and the sale of the surplus is used to meet other household needs. MGPs have limited themselves to only supporting farmers on plantain and cassava but have diversified into vegetables and others income generating activities to smooth incomes for their assisted farmers who have shown interest in these ventures. CLP II does not focus on measuring yields of these crops but on tracking training outreach, percent applying good agronomic practices, number of famers supported with improved varieties of plantain and cassava and demonstrations plots set up.

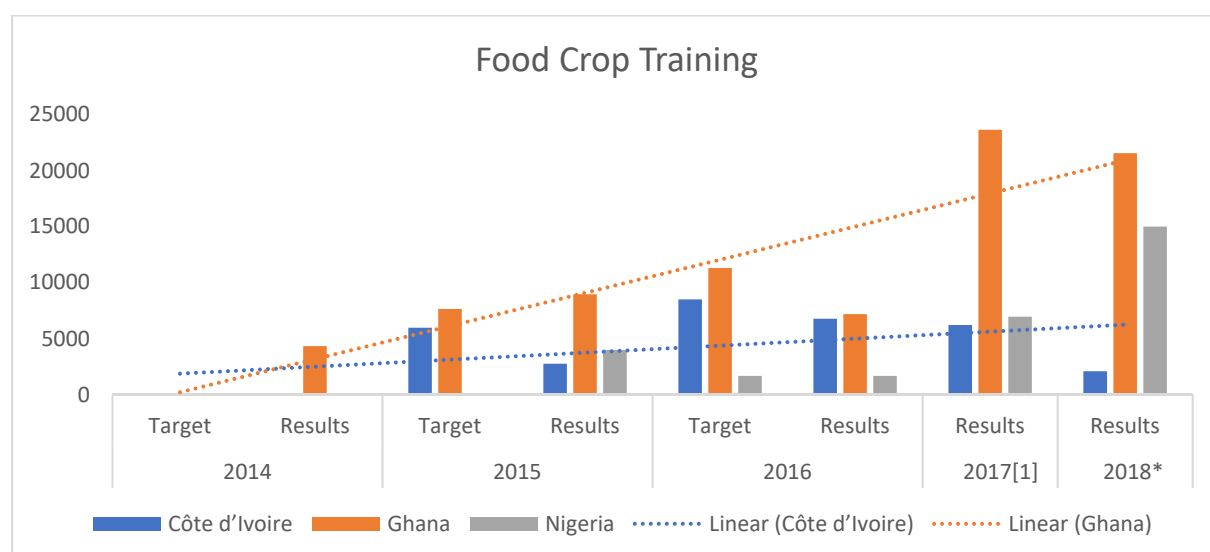
4.1.1 Food Crop GAP training per country and MGP

WCF/CLP has since February 2014, through the MGPs supported cocoa farmers with comprehensive training on plantain and cassava production techniques including plantain sucker multiplication using soilless medium, improved agronomic practices, sourcing for quality planting material etc. WCF/CLP II contracted consultants and linked MGPs to Agriculture faculties, Ministries of Agriculture and agencies in all the countries to provide technical training support. During the reporting the period, all 10 MGPs trained about 38,640 farmers on food crop GAPs through 174 demonstration plots and provided 9,661 farmers with improved planting materials – plantain suckers and cassava sticks/stems. The total number of cassava and plantain demonstration plots were 89 in Côte d’Ivoire, 72 in Ghana, and 13 in Nigeria. We present 2018 food crop performance output data below in Table 3:

Table 3: Number of farmers trained food crop GAP

Farmers trained in food crop GAP (<i>per year</i>)								
	2014		2015		2016		<u>2017[1]</u>	2018*
	Target	Results	Target	Results	Target	Results	Results	Results
Côte d'Ivoire	144	106	5,975	2,765	8,500	6,772	6,221	2,102
Ghana	0	4334	7650	8957	11300	7,186	23,624	21,541
Nigeria	NA	NA	NA	4,003	1,685	1,685	6,969	15,000
TOTAL	144	4,440	13,625	15,725	21,485	15,643	36,814	38,643

*We present only actual results for 2017 and 2018. Targets for 2017 and 2018 are not complete and comparison may be distorted. NA- data not available



In Côte d'Ivoire, MGPs continued to provide dedicated and focused training to farmers who were interested in producing plantain/banana and cassava in cocoa growing communities. Farmers were sensitized on the concept of producing food crops locally for a good nutrition of the family and a better management of cocoa revenues. Training covered intensive cropping system (cocoa tree associated with forest trees and food crops) to prevent new clearings, improve the structure and texture of the soil, provide a microclimate; guarantees a sustainable cocoa production. This practice allows households to benefit from additional income from the sale of food crops. The extended dry season impeded the progress of the food crop program for cassava and farmers had to adopt other food crops such as pepper and eggplant on smaller scale for one MGP. A few cassava demonstration sites were set up with community women on protein-enriched varieties.

In Ghana, there was a slight decline in the number of farmers trained in food crop GAP in 2018 compared with 2017. The total number of farmers trained was a little over 21,500 with females forming 32%. MGPs relied on agronomists from the Ministry of Food and Agriculture (MoFA) extension agents, Women in Agriculture and technical assistance from the University of Ghana

Research Station. Field Officers trained in 2016 and 2017 continued to impart knowledge in field practices to farmers. WCF in December 2018, organized refresher trainings on plantain and cassava agronomy for over 30 field officers so they can train farmers in their own localities. The aim of the training was to build the capacity of the field team to be able to cascade skills to the farmers in the CLP. Topics covered for the Food Crop (Plantain and Cassava) training included:

- Planting distance
- Weed management
- Pest & disease control
- Marketing
- Types of varieties

There was also refresher training on Plantain Sucker Multiplication (PSM) for the team using the split corm techniques. Field staff were also trained on the assessment format to be used for the outcome survey and how to properly assess farmer adoption of GAPs in the field. Field Trainers are ready to support the farmers with coaching and monitoring to increase adoption of GAPs. Some partners provided training for their field trainers and officers in cassava production as well as selected areas of water melon, yam, tomatoes and pepper cultivation and value addition options including *garri* processing.

The original targeted crops have been expanded by some MGPs to cover additional livelihood opportunities including production of vegetables, soya; income generating activities (IGA) such as beekeeping, animal husbandry, soap making and other value addition ventures.

4.1.2 Food crop planting material distribution

Improved food crop planting material availability especially plantain has been a challenge over the implementation period of CLP II. WCF/CLP worked to link MGPs to relevant sources for improved cassava varieties but had to seek the approval of Gates Foundation to recommend approved landraces for plantain because improved varieties were not popular with farmers because of taste preferences. During 2018, MGPs provided improved varieties to over 9,600 farmers. The number of farmers for Côte d'Ivoire, Ghana and Nigeria that benefitted were 1,204, 2,457 and 6,000 respectively. There was a significant reduction in the number of farmers who received improved food crop planting materials compared with 2017 in Côte d'Ivoire and Ghana but significantly increased in Nigeria.

4.1.3 Major challenges faced supporting food crops

Access to improved quality materials and preference: CLP MGPs have faced difficulties in sourcing quality food crop planting materials for interested farmers. Research into new cassava varieties have been better over the years because of the West Africa Agriculture Productivity Program (WAAPP) implemented across some West African countries. Before WAAPP, Ghana benefitted from the IFAD funded Roots and Tubers Improvement Program (RTIMP) with MoFA. In Nigeria, the National Roots and Tubers program and IITA have over the years researched and introduced farmers to newly improved cassava varieties. The biggest challenge has been the correct identification of improved cassava varieties by farmers. In most cassava growing communities, the local names have overshadowed the improved cassava nomenclature. Also, farmers have resorted to using sticks and stems from the neighbor's farm and this has reduced yield over the years. Improved plantain varieties have not been popular in all of Ghana

and Côte d'Ivoire because of issues to do with suitability – not preferred choice for the household, not easily marketable, and low profitability due to poor demand and the short shelf life. CLP PMU with approval from Gates Foundation is now promoting approved varieties which farmers grow and prefer, which has also resulted in many companies receiving their full incentive payment for access to food crop planting material.

Access to markets during glut: Cassava and plantain are seasonal crops and farmers mostly sell the excess in local markets. Markets have been characterized by low prices during the peak season because of glut as more farmers bring the same produce into the market. CLP PMU explored many avenues for expanding market for cassava by linking MGPs in Ghana to cassava processing companies in the brewery and starch industry. This linkage did not work as expected and the situation of glut remains except for small-scale processing opportunities such as *garri* processing and chips. WCF/CLP plans to hire marketing consultants in 2019 to conduct studies on value addition and marketing channels for cassava in Ghana and Côte d'Ivoire.

Outreach and adoption: The percent of farmers supported in food crops compared with those in cocoa has remained below 40% over the years. Except Nigeria, where almost all the cocoa farmers received cassava training in 2018, outreach has remained low. The percent of farmers receiving planting material to improve yields is even much lower and this has affected adoption of food crop GAPs across the cocoa supply chain of MGPs.

4.1.4 Solar Dryers

CLP collaborated with WIAD with funding from The Royal Tropical Institute of Netherlands (KIT) to support women farmers in four (4) selected communities in Ghana with Solar dryers constructed with fiberglass. Three of these have been constructed for MGPs and are in use. One is still outstanding and will be completed in 2019. The construction of the solar dryer by WCF through the CLP program has reportedly had a strong impact on the beneficiary households in the community through value addition and longer shelf life. With the provision of the solar dryer, these women are now able to dry their produce in a shorter period for processing, contamination has reduced significantly, additional income is raised from by charging other users and saved in the VSLA income account.

SECTION 5: CAPACITY BUILDING AND EXTENSION TECHNICAL SUPPORT

Over the five years of implementing the CLP program, the PMU has supported the provision of technical assistance to all Matching Grantees on cocoa and food crop GAPs and linked them to sources of planting material to enable them reach CLP targets. For instance, in 2016, over 40 Field Officers working with MGPs in Ghana received a comprehensive training at the University of Ghana Research Station at Kade on plantain sucker multiplication, cassava production techniques and cocoa GAPs including pruning. These trainings have improved knowledge and application of GAPs at the farmer level through the establishments of demonstration farms which are used as training grounds for farmers.

In 2018, due to staff turnover, the PMU was not able to follow up with company-level refresher trainings until November and December. The PMU in September 2018 developed a comprehensive plan to work with all MGPs based on their specific needs around technical assistance – additional and reinforcement training, training of trainers, training women to

support with GAPs and conduct qualitative assessments and interviews to better understand the success and failures over the implementation period.

To support the comprehensive refresher trainings, the CLP PMU hired three consultants and dedicated crop technicians who are experts in cocoa and food crop agronomy and they have embarked on an aggressive training program with all MGPs. First, selected field agronomists and officers from the MGPs are trained as trainees and tasked to prepare sensitization materials on pruning of cocoa farms and cassava/plantain GAPs. Second, a follow-up training is done on-farm for each MGP at two sites for lead farmers and community animators who are expected to pass on the knowledge and support farmers to adopt critical practices around sanitary pruning and food crop GAPs. Finally, the team of consultants, MGP representatives, and CLP PMU Systems Agronomists will embark on joint assessments visits to monitor and sensitize farmers on the need to prune farms and adopt all practices. This effort is increasingly focused on identifying and incentivizing the key practices that will be evaluated during the final, end line evaluation and survey, which will determine the basis for final incentive payments.

The CLP PMU discussed and received approval from COCOBOD to support MGP farmers during the nation-wide pruning program especially in Ghana. Over 30 field officers received training in December in Ghana. So far, more than 100 field officers have been trained and over 200 lead farmers are currently receiving practical field training across the three countries. Training was also conducted on Cocoa Sanitary Pruning. Topics included:

- Chupon removal
- Dead branches
- Dropping branches
- Removal of parasitic plants

The CLP team at WCF have collated and compiled various documents and materials including visual training aids, the paying of specific/special premiums to farm groups who reach the incentive levels of performance, and/or the procurement and donation/lending of pruning equipment and other related incentives. Companies are expected to develop their individual CLP workplans and identify areas where WCF and our new technical support can complement individual company plans.

SECTION 6: GENDER INCLUSION AND MAINSTREAMING

Women and other gender groups play very important roles in the cocoa value chain and food crop production and supporting them ultimately results in bigger impacts at the household level. Women empowerment has been at the top of the CLP agenda since 2014 culminating in the production of gender toolkit and focused training in farm management with supplementary funding from Walmart Foundation. WCF/CLP has been reviewing and realigning the MGPs strategy aimed at increasing women's participation in MGPs' business and service delivery models and providing dedicated training for women farmers. In 2018, MGPs continued to mainstream activities that impact on women in all CLP interventions to enable them report on sex-disaggregated data for reporting. Some of the specific women focused activities implemented include the Gender Action Learning System (GALS) training, the Women Extension Volunteer program, Gender Dialogue Platforms, Focused gender interventions in food crop – Soya and Cassava, Child Protection Committees, women only community -based nurseries. etc. In 2018, MGPs worked with 435 women groups with 351 of them in Ghana alone

in addition to training over 660 women leaders on various leadership topics including financial literacy and managing groups.

To better deliver programs that empower and increase opportunities for women while avoiding worsening the situation of women, we believe it is important to measure the results achieved from CLP interventions and understand the progress, challenges and lessons learned so that this learning can be integrated into all future programming. In 2019, WCF will contract an additional evaluation focused specifically on the role and impact of gender under CLP with deep dive assessment into women's empowerment using both quantitative and qualitative methods. This will be done with inputs from the MGPs, who wants the goal of the research to be clear and not duplicative of other gender studies that have already been conducted in this area. It will focus on what transformations happened within companies and within cooperatives in terms of gender over the course of CLP. Other areas will be on unique interventions that were championed by CLP and evaluate their effectiveness. Such topics might include gender representation in cooperative governance and/or how the price of cocoa has impacted women's empowerment.

SECTION 7: PERFORMANCE MONITORING AND EVALUATION

7.1 Routine performance monitoring and reporting

During 2018, WCF PMU continued to effectively implement the CLP Performance Monitoring Plan (PMP). The M&E system is designed to capture all data, track performance results, assess impact of the project and report accurately to WCF Management, Gates Foundation and Steering Committee. The team embarked on several joint monitoring visits to MGPs sites to monitor the utilization of cocoa seed pods - nursery establishments and transplanted seedlings, visited rehabilitated cocoa farmers and food crops farms in Ghana, Côte d'Ivoire and Nigeria. These visits afford the team to interact with beneficiary farmers, conduct spot checks and provide necessary advice to project implementation teams on the ground on adjustments and how to carry out corrective actions. Reported data and presentations at the Country Team Meeting are verified and validated by the team before the Steering Committee meetings.

Databases have been designed in spreadsheets to track, update, maintain and analyze indicator performance data and project results from MGPs. Over the period, WCF collated and validated all data collected, and analyzed them to provide feedback to Management and report data on indicators. Data results from the midline survey on was re-analyzed by the WCF M&E team and results presented to WCF leadership team that enabled negotiation for payments on the Performance Outcome Incentive Indicators. The activity was very critical in the process of payments to all MGPs based on their performance on three indicators – cocoa sanitary pruning, food crop GAPs and cultivation of improved/approved varieties.

Communication is a key activity for CLP and M&E is an integral part of this activity. To facilitate communication among all CLP Stakeholders, the M&E team provided M&E updates to MGPs and other stakeholders at the quarterly Country Team Meetings and bi-annual Steering Committee meetings. The updates included progress towards achieving set targets, variances, data collection problems and reasons for underperformance or over-achievements.

7.2 Final outcome incentive evaluation survey

One of the primary activities of the final year of CLP (2019) is to measure progress against the baseline and midline surveys, which were performed by IPSOS. In 2018, WCF published a competitive Request for Proposals (RFP) process to search for approaches that maximize value and utilize both quantitative and qualitative methods. The aims are to calculate the final incentive payments and provide a better understanding in the various success factors and challenges of the CLP Phase II program design. The survey methodology will use both qualitative and quantitative data collection methods to provide a holistic picture of the results of the second phase of the program.

The primary purpose of the survey will be to assess results against three common indicators: 1) farmer adoption of cocoa sanitary pruning practices; 2) growing improved varieties of plantain and cassava; and 3) adoption of plantain and cassava GAPs. Results against these indicators and a calculation of farmer outreach against original targets will be used to determine the final incentive payments to MGPs, which we anticipate being able to do in July 2019.

Four Evaluation firms responded to the RFP and sent proposals to WCF for review, evaluation and selection. A panel comprising WCF M&E team, Programs and Gates Foundation has since reviewed, evaluated and selected a successful vendor to carry out the Endline Performance Survey focused on the outcome incentive indicators. The survey will be conducted in Côte d'Ivoire, Ghana and Nigeria from March to May 2019.

7.3 Cocoa Data Challenge

The concept of WCF hosting a data competition came to fruition at the 2017 CLP steering committee meeting, with the consensus that much of the high-quality CLP data and other cocoa sector data is currently under-analyzed despite the time and resources dedicated to collecting it. The 2019 Data Challenge for the West African Cocoa Sector is an innovative solution for helping to close the existing gap in cocoa sector analytics. Through this program, WCF will make CLP datasets and those from relevant partner organizations like KIT available for competitors to analyze. Winners will receive prizes for novel insights and visualizations that have the potential to inform strategic sustainable cocoa sector investment in the future.

The CLP II steering committee approved a proposal to partner with Kaggle Data Science for Good in this venture, which would happen in 2019. Kaggle will curate the cocoa-focused datasets on their platform in partnership with WCF. WCF will select discrete research questions that will be posed to data scientists during the competition. Analysts work with the data using Kaggle “kernels” which are individual data analytics workspaces housed within the wider Kaggle platform. This allows Kaggle and WCF to track progress of data scientists throughout the competition. Kaggle’s staff review all the entries at the end of the competition and rank them on sophistication and creativity. They present WCF with a list for WCF’s judges’ panel to review all the applicants more efficiently and make final award decisions.

7.4 Steering Committee and dissemination workshops

CLP II held its 2018 Steering Committee on November 27th and 28th, 2018 in Abidjan, Côte d'Ivoire. The Committee holds two meetings per year to afford the PMU, senior members of its implementing partners, donors, and government representatives to meet and discuss progress

and take critical decisions for implementation in the ensuing periods. Some of the critical decision points taken at the November Steering Committee.

Topical Issue	Decision Point/Action	/Responsibility
Technical Training support and Resources	WCF/CLP to contract consultants to provide refresher training in December and January for all MGPs including ISFM.	CLP PMU- Edwin Afari
Sharing of information on Visual Aids and Digital Videos	CLP PMU to aggregate existing videos and visual aids for training and share with MGPs by mid-December to support training during the last stretch of the program.	CLP PMU- Edwin Afari
Gender Study	Draft a revised gender evaluation proposal and circulate amongst the steering committee for consideration	WCF - Paul Macek
Business/Service Delivery Models	WCF will submit a report analyzing the service delivery models carried out under CLP and lead in coordinating with IDH and/or New Foresight and work out an approach consistent with the discussion at the SC meeting. WCF will circulate a draft TOR for the study & solicit company input prior implementing the study.	WCF – Paul Macek
Incentive Payments and Premiums	MGPs to devise and implement approaches to incentivize staff and farmers to reach performance outcome targets.	MGPs
Cocoa Data Challenge	To be launched in March 2019 with submissions due at the end of May. CLP Steering Committee approved moving forward with the program and will nominate individuals to participate on the judge's panel.	WCF, MGPs
FY 2019 meetings and deadlines	<ul style="list-style-type: none"> • Farmer Lists due by Dec 7 • Data & report for 2018 due by Feb 8, 2019 • Country Team Meetings by March 2019 • Steering Committee meeting in July 2019 • Final CLP report in July 2019 • Endline Survey – March - May 	CLP PMU, MGPs, Survey Firm

SECTION 8: INNOVATIONS

During the year under review, CLP PMU and MGPs implemented several innovative approaches, developed tools and visual aids and introduced them to MGPs. Visual aids aimed at providing farmers information and knowledge on cocoa and food crop good agricultural practices (GAPs). Almost all CLP MGPs have deployed GIS technology and mapping of cocoa farms using GPS receivers. Farm mapping allows correct estimation of cocoa farm areas and yield estimations, enables traceability, makes smallholder units visible to buyers and for certification purposes.

CLP has promoted the use of Digital Videos, often referred to as ‘Digital Green’ methodology following the Indian firm that originally developed this approach and use of PICO projectors to screen cocoa and food crop GAPs videos to farmers in the comfort of their homes and at FFS

training sessions. The use of the digital green has increased women attendance for training/meetings and their participation. This is because the videos are shown in the evenings when women have finished their household chores.

Farmer coaching based on farm management development plans (FDPs) and farmer segmentation has been an innovative delivery approach for some MGPs in 2018. Some MGPs have developed web applications for economic tree registration and other applications for tracking farmer information.

Some MGPs introduced mobile payments through their cooperatives, farmer groups and societies over the period where electronic payments are done through transfers for Cocoa purchased from farmers. This digital financial service has greatly reduced theft, loss of money and improved the payment system.

In 2018, WCF commissioned CARE international to prepare a Gender Integration Guidance Note that assesses the situation of gender integration in cocoa regions in West Africa by looking at evidence-based business case for mainstreaming gender issues into company and WCF activities, define concepts and principles. CARE also prepared a WCF Gender Marker a self-assessment tool that measures the integration of gender into programming measured along the CARE Gender Continuum; from harmful to transformative. The Gender Marker enables CARE to track, improve and support more effective, gender equitable programming. WCF has been reviewing the guidance note to inform future gender analysis, activities and M&E at WCF

SECTION 9: CHALLENGES

9.1 Staff turnover and implications

The CLP II program experienced a high degree of staff turnover during the reporting period. The CLP Director, Ghana and Nigeria Coordinator and Program Associate all resigned and transitioned from the program between June and August 2018. As a result, the Vice President for Programs, Paul Macek, assumed overall leadership of the program in partnership with the M&E manager, Edwin Afari (now Senior Program Manager), who leads the field level coordination. Through a temporary reorganization of WCF responsibilities and an increased use of consultants, the project has experienced some temporary delays, but we believe this is a temporary setback since most of the activities are on-going at the MGP level, which was not affected by turnover. It should also be noted that high levels of turnover at the end of grants are not uncommon since people begin to look for continued employment beyond the life of the project. WCF has continued to emphasize the need for adequate handover and the sharing of responsibilities wherever feasible and practical to avoid minimal disruption.

9.2 Ban on Cocoa Productivity in Côte d'Ivoire

The Government of Côte d'Ivoire through the CCC has placed an explicit ban on cocoa productivity activities over the past year and this has reduced significantly activities around fertilizer use and planting material production and distribution in the country. On March 1, 2018^[1] the government of Côte d'Ivoire suspended the distribution of all improved cocoa planting material to farmers for the 2018-19 cocoa season. The reason behind the suspension was the recognition that Côte d'Ivoire had largely achieved an aggregate level of national production. This impacted greatly on planned results under planting material and chemical

fertilizer distribution and likely to affect the percentage of farmers who were able to rehabilitate their old, diseased and moribund cocoa in the country. WCF is continuing to engage the CCC to refocus work on areas of common agreement such as CSSV detection and control as well as activities such as farm training that do not directly affect productivity and are still allowable within the current policy framework.

9.3 Inadequate supply of cocoa seed pods

WCF has over the past three years worked closely with all MGPs and other CocoaAction companies to collectively source cocoa seed pods from the government agencies such as COCOBOD's Seed Production Unit (SPD) in Ghana, CCC in Côte d'Ivoire and from the CRIN in Nigeria. In Ghana, demand for cocoa seed pods has always outstripped supply from SPD though approved allocations has been increasing. For two consecutive seasons, SPD was not able to meet the demands of WCF Members for cocoa seed pods. In the 2016/17 cocoa season only 106,000 pods were allocated compared with the total request for over 430,000 pods. In 2017/18, SPD approved and allocated all the requested seed pods by companies (615,000) but was able to deliver only 370,000 based on beneficiary WCF company reports. In 2018/19, SPD has again approved and allocated all the request from WCF and picking is on-going albeit several challenges including distance to stations, extra transport cost to nursery, loss of pods, availability, viability of some seeds etc. In Nigeria, as in past years, CRIN staff were in extended collective action disputes with the government over salary and other proposed reforms to their working conditions.

9.4 Cocoa tree pruning and farmer behavior change

Cocoa tree pruning whether architectural and maintenance is proven to result in increased yields of pods as competition for nutrients is reduced from the removal of unwanted, dead, and drooping branches; improved sunlight and aeration allows photosynthesis to take place and plant food is concentrated in high-pod production branches and stems. Some MGPs have experimented with different approaches to support farmers in implementing these critical yield and income enhancing interventions from the use of pruning gangs (groups of semi-skills workers who specialize in pruning cocoa farms) and supply/financings of hand-held, manual and mechanical pruners. Nevertheless, adoption remains abysmally low. Research has revealed that farmers have an "emotional attachment" to their cocoa trees and find it difficult cutting even unwanted branches. The advanced age of many cocoa farmers makes the heavy labor of pruning difficult and sometimes impossible to regularly implement. The vagaries of the weather especially prolonged drought periods disable farmers from investing in pruning because of loss of photosynthetic parts and fear of killing the cocoa trees. Percent of farmers who prune their cocoa farms have remained below 40% in almost all the field assessments conducted. CocoaAction data suggests that pruning maybe lower than 10% across both Ghana and Côte d'Ivoire.

9.5 Effect of Cocoa Price and Living Income

The world price of cocoa has dropped from over \$3,000 per ton in 2016/17 to about \$2,300 in 2017/18. This nearly 30% retreat has affected the producer price in Ghana and Côte d'Ivoire and negatively impacted on farmers cocoa income and the balance sheets of the national governments which lost tax revenue and other sources of vital income from the sector. This has led to a renewed focus on sustainable livelihoods, cocoa prices, and launched a discussion

around living income in the cocoa sector. Recently, Sustainable Food Lab, WCF and ISEAL and other partners commissioned two studies on Living Income in Ghana and Côte d'Ivoire to better understand the issue. WCF has been working to define Sustainable Livelihoods in the context of cocoa and placing it as the overarching goal for work on prosperous farmers in line with our new strategic plan. This work builds on the important valuable learning around food crop diversification that CLP II has been championing.

9.6 Marketing of food crops and Value Addition

CLP II has supported a portion of the cocoa farmers and women in cocoa growing communities to become more resilient through training in food crop production and the provision of improved planting material. The MGPs mostly focused on plantain and cassava because most farmers in West Africa grow these two crops and use them as temporary shade for juvenile cocoa. Through this activity, farmers have produced more cassava and plantain over the years, but there is a growing concern about lack of market for the surplus products. When there is a glut in the market, farmers have few options to add value to the produce or to extend the produce's shelf life without needed equipment and training to process products, such as making cassava into cassava flour, or *garri*. Some MGPs have done their best to provide additional livelihood options through *garri* processing and cassava chips, but this has not been adequate to address the full volume of excess production. WCF/CLP intends to link MGPs with other programs involved in the processing and marketing of these crops. However, those efforts are limited given the amount of time remaining on the grant.

9.8 Insecurity in Cameroon

In the last three years, social unrest in English-speaking areas of Cameroon has resulted in sporadic violence. Cocoa farming in the southwest has been greatly affected because farmers are unable to access their farms, and overall production and farm management has suffered. The social unrest has also prevented company partners from providing planned support to farmers.

SECTION 10: LESSONS LEARNED

10.1 Understanding GAP adoption

MGPs have invested significant resources and time in training cocoa farmers but adoption rates for cocoa GAPs have not improved significantly. All sources point to a noticeable gap between training, knowledge acquired and field practice. For example, CocoaAction data suggests that some of the greatest yield-enhancing practices such as pruning are only adopted by one-quarter to one-third of the CocoaAction farmers in Ghana and Côte d'Ivoire. In a better effort to understand the multiple dimensions of behavior changes among cocoa farmers, WCF is currently conducting a study on behavioral economics to look at interventions that would encourage adoption. While this research is still a long way off, CLP has observed a demonstrable trend among its MGPs, who have increasingly modified their approach to training and advisory services to incorporate a new focus on individual farmer coaching based on farm development plans. According to the industry, there has been some initial success with this approach although there are concerns about how to best standardize the methodology, introduce appropriate incentives and reference points such as using farm development plans (FDPs), and also determine the optimal number and duration of coaching visits per farmer. In a related

manner, companies continue to review farmer typologies to determine whether certain attribute favor more successful and better farming and whether these can be isolated and applied at a landscape or supply chain level.

10.2 Sharing cost of planting materials and inputs

CLP company reports are replete with cost sharing approaches between them and farmers on planting materials and inputs. The cost of establishing and running community nurseries and accessing of services in centralized nurseries are often shared by companies and farmer associations. In some cases, farmers have been paying for the transportation of seedlings from private sources and centralized nurseries to their farms, others pay a percentage of the cost of production as service fee. Inputs such as agro-chemicals and fertilizer are not provided for free. Different innovative approaches have been introduced to provide quality inputs to farmers on credit or deduct the cost from beans sold. Input shops and Rural Service Centers have been set up to support farmers to procure quality inputs at discounted prices. Questions remain related to the optimal arrangements for the provision of these goods and services to cocoa farmers in or through the supply chains of the major exporters or as independently operated businesses, loosely organized within networks. In a similar manner, understanding the financing of these goods and services within a regulated commodity marketing system remains unclear since many originally viewed these as public sector responsibilities whereas the reality of government structuring and financing suggests that greater policy reform will lead to greater efficient if privatized.

10.3 WCF's new Strategic Framework

For the past year, WCF has been embarked on a new strategic plan and has come to the realization that we are increasingly focused on creating the right 'enabling environment, policy, and partnership with government that will transform the sector. It is a recognition that WCF should move away from transactional development project and focus more directly on partnership and agreement with government and industry on priorities. Our new strategic plan has been broken into three practical strategic pathways that lead ultimately to our impacts of prosperous farmers, empowered communities, and a healthy planet. This work has greatly benefited from the expansion of areas of collaboration among our member companies and with government that were spurred by the Cocoa Livelihoods Program, which enable companies to be comfortable in the pre-competitive space of public private dialogue around common issues. In many ways, the precursor to the industry's signature platform for sustainability, namely CocoaAction, has its roots in the work of the Cocoa Livelihoods Program. Our renewed focus on farmer livelihoods and income beyond cocoa are building on the valuable lesson from CLP in relation to food crop diversification and production.

10.4 Impact of government policies and regulations

The ban on productivity support in Côte d'Ivoire has greatly affected WCF and partners with respect to our support on planting material and cocoa rehabilitation and renovation. CLP was collaborating with CCC and the research institution on supplying improved hybrid cocoa to farmers and even commissioned a study to better understand the utilization of the planting material in 2017. The government new regulation has negatively impacted program achievements around planting material and rehabilitation since MGPs are not able to provide the needed support for their farmers. It is difficult to anticipate such policies and regulations at

the inception of projects and one lesson is for WCF and partners to always include the likelihood of such acts in the critical assumptions when drafting results frameworks. We are not certain when the ban will be lifted but WCF plans to engage government agencies to reach a common understanding of the issues that the productivity ban is responding to as well as creative and innovative approaches to address them. We believe that a renewed focus on sustainable livelihoods and income diversification remain key elements to the solution.

10.5 CLP serves as platform for diversification interventions

Cocoa is a seasonal crop and farmers have been growing other crops over the years to eat and supplement incomes from selling the surplus. According to MGPs and partners, the program served as the platform for piloting some of the ground-breaking and innovative activities around additional livelihoods especially the focus on food crop production and engaging women in income generating activities (IGA). The lessons learnt is already influencing current discussions on sustainable livelihoods and living income as per the earlier comment under 10.4. Some of approaches such as soilless medium propagation of plantain, processing of cassava, sourcing and provision of improved varieties and other IGAs in vegetable gardens, bee keeping for honey, snail rearing and soap making form the basis for supporting farmers to diversify their income sources. Our member companies have also learned that by offering support to food crops, they often directly support the female members of the household since food crop production often falls to women, whereas cocoa marketing typically is a man's responsibility. By providing support to food crops, the CLP companies have developed closer ties with the entirety of the cocoa farming household and often provide relief to women to generate additional on-farm income and produce food for household consumption.

10.6 Innovations in savings and premiums increase social action

MGPs have been implementing VSLAs and paying premiums from certification of cocoa over the years but CLP has brought a renewed focus to applying credit and savings from VSLA activities and cocoa premiums to invest in IGA. Some MGPs have been supporting cocoa farmer groups, Cooperatives and societies with financial management plans and some are collectively using their extra money to provide for social development interventions in their communities. With their capacity built in financial management, the farmers transferred their skills to the development of Premium Plans which stipulates their various planned investments. The year 2018 saw some farmer Unions in Ghana complete the construction of various building projects like schools, bore holes, bridges, office buildings, among other investments.

10.7 Challenges and Adaptation to Gender Mainstreaming

Strengthening Women's Empowerment and mainstreaming gender in programs takes time. MGPs demonstrated a great deal of flexibility and innovation in their approaches to addressing gender, which is also an element of their CocoaAction commitments. Efforts have included the use of male trainers, women focused IGAs, and skills training in leadership within the cooperative structure. According to one MGP, women already are a key part of program, making up one-third of their farmer base, but they had to design and deliver specific interventions that are more useful and meaningful for them (e.g. support to food crops, VSLA, non-land IGAs, and nutrition training.). Mondelez International has started using female extension agents to better cater to the needs of female farmers. CLP MGPs have been learning and adapting with some making several changes in approach throughout the project to better meet the needs on the

ground and address challenges faced. These learnings have been incorporated into the draft gender integration guidance note that Care International produced for CocoaAction, which will be distributed shortly to the public via our website.

ANNEX

A. List of Acronyms

Annex 5 - List of Acronyms

ACI	African Cocoa Initiative
AEToT	Adult Education & Training of Trainer
AFAP	African Fertilizer and Agribusiness Partnership
BMGF	Bill and Melinda Gates Foundation
CA	Community Animators
CHED	Cocoa Health and Extension Division
CCC	Conseil du Café-Cacao
CCE	Certification Capacity Enhancement
CDI	Côte d'Ivoire
COCOBOD	Ghana Cocoa Board
CLP	Cocoa Livelihood Program
CRIN	Cocoa Research Institute of Nigeria
CSDS	Cocoa Sector Development Strategy
CSO	Civil Society Organization
CSSVD	Cocoa Swollen Shoot Virus Disease
CVC	Cocoa Village Centers
FAAB	Farming as A Business
FBS	Farmer Business Schools
FDP	Farm Development Plans
FFS	Farmer Field School
GALS	Gender Action Learning System
GAP	Good Agriculture Practices
GEP	Good Environmental Practices
GIS	Geographic Information System
GIZ	Gesundheits-Informations-Zentrum
GPS	Global Positioning System
GSPs	Good Social Practices
ICRAF	World Agroforestry Center
IDH	The Sustainable Trade Initiative
IFAD	International Fund for Agriculture Development
IFC	International Finance Corporation
IFDC	International Fertilizer Development Center
IGA	Income Generating Activity
IITA	International Institute for Tropical Agriculture
IRC	Initiative Restore Cacao
LCF	Local Cocoa Facilitators (LCF)
LDC	Louis Dreyfus Commodities
KIT	Royal Tropical Institute of Netherlands
KKP	Kookoo Pa
MGP	Matching Grantee Partner
MOFA	Ministry of Food and Agriculture
MOU	Memorandum of Understanding
MTN	Mobile Telephone Network
NA	Not Available
NGO	Non-Governmental Organization
PBC	Produce Buying Company

PMU	Program Management Unit
PSM	Plantain Sucker Multiplication
RA	RainForest Alliance
RFP	Request for Proposals
RSC	Rural Service Center
RTIMP	Roots and Tubers Improvement Program
SC	Steering Committee
SPD	Seed Production Division
TOR	Terms of Reference
ToT	Training of Trainer
TSP	Triple SuperPhosphate
USAID	United States Agency for International Development
UTZ	Unheimlich Toller Zauberer (Universal Trade Zone)
VSLA	Village Savings and Loans Association
WAAPP	West Africa Agriculture Productivity Program
WCF	World Cocoa Foundation
WIAD	Women in Agriculture Development