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Baseline Report

PRO-PLANTEURS – Baseline / Côte d'Ivoire

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Abbreviations

ANADER	Agence National d'Appui au Développement Rural
CCC	Conseil du Café-Cacao
FCFA	West African Franc CFA
FIRCA	Interprofessionnel pour la Recherche et le Conseil Agricoles
HH	Household
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH
GAP	Good Agricultural Practices
IGA	Income Generating Activities
MINAGRI	Ministère de l'Agriculture
PP	PRO-PLANTEURS
WCF	World Cocoa Foundation
RA	Rainforest Alliance

0 Executive Summary

In Côte d'Ivoire cocoa farming provides income for 1,000,000 smallholder farmers who grow their crop on about 2,000,000 hectares. Around 6 of the country's 24 million people live off cocoa related income – which makes cocoa a strategic crop in the effort to reduce poverty. However, the productivity of cocoa plantations has been in decline with plantations yielding below their capacity.
Against this background, the PRO-PLANTEURS project financed by the German confectionary industry, the German government, the German civil society and retail industry and the Ivorian government in the form of the Conseil du Café-Cacao (CCC) have come together to implement a project that targets improving the livelihood of cocoa producing families living in Côte d'Ivoire.
This baseline study has been commissioned to achieve two main results:

1) To establish a valid dataset of farmer's livelihood conditions disaggregated by gender and age.
2) To obtain guidance with regards to strategic management options of the PRO-PLANTEURS project.

Methodology
800 interviews were conducted with 400 households from 17 cooperatives located in the three regions of the PRO-PLANTEURS project.
Both quantitative data from questionnaires as well as qualitative data generated through focus group discussions and from observations in the field were triangulated to achieve a comprehensive analysis of the farmers' conditions. With this, base and target values were provided for 18 indicators on productivity, nutrition, gender, age structures and cooperatives.

The productivity of cocoa plantations
Farmers produce 323kg/ha with an average possession of 5.81 hectares per interviewee. The average Asian production is 55% higher than in Côte d'Ivoire. The assumption is that the productivity of cocoa farms in Côte d'Ivoire would increase and consequently align with international standards if farmers had sufficient awareness and skills about good agricultural practices (GAP), and applied them consistently in their fields. It was observed that farmers who participated in prior GAP trainings do not implement the required practices. This means that the primary reason for not applying GAP is not a lack of awareness. Rather, causes might be found in the lack of (financial) resources.
At the same time, farmers' yields are highly diversified, achieving 50% of their income from diversified crops, showing that their effort is only partially focusing on cocoa production.
Given their limited amount of resources and low adaptation of recommended farming practices, the promotion of a more concise and in depth approach to crop farming should be considered.

The nutritional status of the households
With 4.5 different food groups per day, respondents achieve a sufficient food score as defined by FAO. Though they consume a lot of starchy roots (yam, cassava, plantain) they also eat sufficient amounts of other food groups to achieve a balanced diet. However, the research was conducted during the most abundant time of the year for food. It has been revealed that there are other periods of the year when households cannot afford to eat sufficient quality and quantity of food. It seems that the biggest obstacle to nutritional balance throughout the year is a lack of resources rather than awareness.

Over-served gender dynamics
Traditionally women farm cocoa alongside their male family members and equally share in the workload. This is not reflected in formal structures: women make up only 12% of the cooperatives' staff members which is in proportional relation to their representation as official members of the cooperatives (14%). This corresponds to women owning only 15% of the land under production.
Strengthening the formal role of women in cocoa production can start with targeted trainings on GAP. Also, their equal consideration for positions as lead and service farmers should be promoted. However, without addressing issues of gender biased land ownership, results will probably be limited.

Generational influences in cocoa production
75% of cocoa farmers in the sample are older than 40 years of age. Access to land is difficult for young farmers who gain access only when their elders die. Alternative income generating activities for young farmers lie in providing services for established farmers. Providing services in a profitable manner requires a widespread observance of payment obligations which to date has not been achieved.

The role of cooperatives
Cooperatives are well organised and their members are satisfied with their services which range from GAP trainings for cocoa and other crops to the provision of micro leans. Supporting cooperatives to further improve their capacities and enlarge their range of service appears to be a promising course of action.

1 Introduction

Côte d'Ivoire is the world's largest cocoa exporter with 33%[1] of global production. 40% of the country's total exports are made up of cocoa related products including cocoa beans, butter and powder. Cocoa farming provides income for 1,000,000 smallholder farmers who grow their crop on about 2,000,000 hectares. In total, it is estimated that around 6 of the country's 24 million people live off cocoa related income – which makes cocoa a strategic crop for the economy and policy makers in the effort to reduce poverty[2].

At the same time, the productivity of cocoa plantations in Côte d'Ivoire has been in decline for multiple reasons including poor planting material, insufficient application of good agricultural practices and soil erosion. Many plantations yield way below their capacity and, therefore, do not fulfil their potential in poverty reduction.

The following study was commissioned to evaluate the living and income conditions of farmer groups in eastern Côte d'Ivoire to generate insight about their status as well as opportunities for improvement. It aims to provide recommendations with regards to strategically sound measures in improving living conditions for smallholder farmers and to identify where obstacles should be anticipated and opportunities for farmer development can be best exploited.

Results from this study will be provided to the PRO-PLANTEURS project as a guide to measure its performance over the next 5 years and to serve as a baseline against which project achievements and improvements can be evaluated at the end of the project life span.

1.1 Background

The PRO-PLANTEURS project financed by the German confectionary industry, the German government, the German civil society and retail industry and the Ivorian government in form of the Conseil du Café-Cacao (CCC).

PRO-PLANTEURS targets professionalising 20,000 cocoa-producing family businesses in the east and southeast of Côte d'Ivoire with the aim to increase income and improve food security.

PRO-PLANTEURS is particularly concerned with addressing the situation of women. By attracting more women to cocoa farming, their income should increase which, in turn, is expected to be reflected in a better nutritional balance at the household level.

PRO-PLANTEURS' strategy aligns with the national cocoa strategy of Côte d'Ivoire, 2QC (Quantité – Qualité – Croissance) and the strategy of CocoaAction, a program by the World Cocoa Foundation (WCF). PRO-PLANTEURS' activities are being implemented in three regions of Côte d'Ivoire and collaborate with 19 selected farmer organisations.

Four specific objectives have been identified 1) strengthening the technical, financial and managerial capacities of farmer organisations, including the strengthening of the role of women, 2) improving productivity and quality of cocoa produce farmed by project beneficiaries through the application of good agricultural practices, 3) diversifying the production of crops and income sources for cocoa families notably women to improve food security and 4) capitalising and sharing best practices and lessons learned as well as exchanging with one another. All aspects are further required to equally promote gender equality and youth participation.

With regards to those objectives the project has identified a set of specific indicators and performance targets that it wants to achieve before its termination in 2019.

The baseline study has been commissioned to achieve two main results:

1) Establishing a valid dataset and target values of farmer's livelihood conditions concerning yield, revenue, nutrition, status of diversification, participation in formal sector structures among others disaggregated by gender and age.

[1] World Cocoa Foundation (2014): Cocoa Market Update

[2] KOUASSI Kouadio Edouard (2015) : INTRODUCTION D'INNOVATIONS EN MILIEU PAYSAN IVOIRIEN : Impact Technique Et Socio-Economique Des Projets De Cacaoculture Durable Financés Par Le Conseil Du Café-Cacao A Travers Le FIRCA, page 173

2) Obtaining guidance with regards to strategic options of the PRO-PLANTEURS project. The study outcomes should serve to support the process of consolidating and/or realigning the project's focus and outreach.

1.2 Structure of the Study

Aligning our research with other notable baseline studies[3] conducted in the same field of work, we, as mandated, focused our attention on those conditions influencing farmers' livelihoods, which at the same time were in the focus of the PRO-PLANTEURS project. Making sure to cover the four areas of intervention (organisational development of cocoa farmer organisations, cocoa productivity, quality and agro-forestry techniques and diversification) we were closely guided by the project structure, activities and objectives on age and gender related topics as a crosscutting issue.
We always chose to evaluate questions and conditions in relation to the indicators. For example, where the project focused on understanding the number of food groups eaten by their beneficiaries on an average day, we captured some of the surrounding nutritional information, e.g. the kind of specific food groups people favoured, whether they were available all year round and whether people preferred to prepare them in the household or buy them externally. Collecting this type of "soft" information has served to complement the statistical numbers, for example, people "eating 4 food groups per day". In considering these multiple facets, we obtained a rather comprehensive picture of farmers and their living conditions in the communities that in turn allowed us to understand some of the wider correlations between findings.
The paper follows the structure of the project's indicators, clustering results around each indicator involving as much information and explanatory details from the different parts of the research as necessary for the argument. Having collected different and diverse information has served to generate "objectivity" as best as possible, triangulating different types of data from diverse sources - each adding another type of insight and facet.

2 Methodology

2.1 Literature Review

Several studies and research projects have been conducted alongside the cocoa value chain. The most pertinent and important of these for the context of the PRO-PLANTEURS project are certainly the ones that have a specific focus on one or more of the four areas of project intervention 1) organisational development of farmer cooperatives, 2) cocoa productivity and quality, 3) diversification and nutrition and 4) capturing and sharing best practices and lessons learnt.

2.1.1 Productivity of Cocoa

Cocoa productivity in Africa is 300 - 400 kg per hectare, which falls below the Asian average of 500 kg[4]. Depending on the sources as they vary[5], Côte d'Ivoire produces between 33% and 41% of the world's cocoa beans and has about 800,000 - 1,000,000 producers who are active in the value chain. Many of them are individual producers that operate independently and sell to middlemen, while others are organised in producer organisations.
Cocoa farmers face many obstacles that lead to low productivity, e.g. limited knowledge of farming techniques, aging trees, decline in soil fertility[6], low prices for beans among others[7]. Based on these obstacles PRO-PLANTEURS baseline evaluation will assess the current situation of the beneficiaries.

[3] See for example IGC (2011): "Sustainable Development for Cocoa Farmers in Ghana", Jens Hainmüller, Michael J. Hiscox, Maja Tampe, MIT and Harvard University
[4] WCF, Food Crops in Ghana, Côte d'Ivoire, Nigeria and Cameroon
[5] Compare KOUASSI Kouadio Edouard (2015) : INTRODUCTION D'INNOVATIONS EN MILIEU PAYSAN IVOIRIEN : Impact Technique Et Socio-Economique Des Projets De Cacaoculture Durable Financés Par Le Conseil Du Café-Cacao A Travers Le FIRCA, page 173 and GIZ (2015), Analyse des chaines de valeur de la filière cacao en Côte d'Ivoire
[6] WCF (2016): Challenges http://www.worldcocoafoundation.org/about-cocoa/challenges/

2.1.2 Cocoa and Nutrition

The Fair Labour Association implemented a study[8] with women and youth in 2015 in which they evaluated the nutritional diversity of cocoa farmers. The main findings showed that nutrition in the families is one-sided and focused mostly on traditional staple foods (sometimes with questionable nutritional content). Also, problems of food shortages during certain periods of the year were identified. "Household interviews revealed that food production does not always respond to the aspirations or needs of families. On the production side, problems are linked to seasonality, productivity, or a lack of variety that makes food production insufficient. […] When producers have sufficient income (after the cocoa harvest) there is an abundance of food crops in their own fields as well as on the market (at low prices). But once the cocoa season is over, income goes down while food products become less available and more expensive on the market. During these periods, providing three balanced meals per day for the average household becomes difficult." (FLA, 2015)
Based on these findings, the current research is targeting the use of the Diversity Dietary Score[9] as provided by the Food and Agriculture Organisation and is evaluating the nutritional situation in the families in more detail.

2.1.3 Aspects of Gender

One study in particular was considered important to help explain and differentiate gender dynamics witnessed during the interventions with the cocoa farmers and observed when analysing the data obtained through questionnaires. Elisabeth Kiewisch's (Kiewisch, 2015[10]) qualitative research sheds light on the importance of household resilience that enables families to satisfy basic family needs throughout the year. Kiewisch makes the argument that joint decision-making between men and women (rather than a one-sided strengthening of female decision-making power) would improve household resilience. The hypothesis is that an increase in collaboration between the genders that usually observe different and complementary obligations in the household, could serve to bridge the lean season gap and structure the allocation of resources more evenly throughout the year.

2.1.4 Generational Considerations

The FLA further assessed the situation of women and youth in the cocoa value chain to identify opportunities for their better integration and consideration with the aim to improve decision-making power and achieve a higher economic resilience of the entire household. The study concludes that limited access to land, input and management capacity leads to a marginalisation of these groups with the effect that they have disproportionately little to no benefit from family income obtained from agricultural activities.

2.1.5 The Cooperatives

PRO-PLANTEURS aims to reach out to its beneficiaries, the cocoa farmers, through their associations, the cocoa farmer cooperatives. The greatest advantage to farmers of being organised in cooperatives is the marketing visibility it provides them. Most cooperatives participating in this study had between 150 and 1,600 members and provide market access as their most important service. As has been found in previous studies, many cooperatives are not able to provide the most important services required to improve quality of members' conditions, as they suffer from many structural issues as "such as managerial weakness, lack of know-how, lack of funds and infrastructure, mistrust"[11].

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[7] Trans Fair (2012): Fairer Handel am Beispiel Kakao. https://www.fairtrade-deutsch-land.de/fileadmin/user_upload/materialien/download/powerpoints/2012_08_Praesentation_Fairtrade_Kakao_download_pdf.pdf
[8] Fair Labor Association (2015): Situational Assessment Of Women And Youth Farmers And Family Nutritional Status In Two Cocoa Producing Communities In Côte D'Ivoire
[9] FAO (2013): *Guidelines for Measuring Household and Individual Dietary Diversity*
[10] Looking within the household: a study on gender, food security, and resilience in cocoa-growing communities, Gender & Development
[11] GEFAK: Study on the state of farmer cooperatives in the cocoa sector of Côte d'Ivoire Draft Final Report

2.2 Research Design

2.2.1 Mixed Method Approach

The baseline has been conducted using a mixed method approach, meaning that both qualitative and quantitative data were used for the analysis. It was set up as a cross-sectional study, measuring findings at a single point in time.
Qualitative elements were introduced through the execution of semi-structured interviews with project partners, focus group discussions with up to 15 participants, visits to local health centres to gain some additional illustrative insight into the lives of people and observations on the ground both during the field trips and while conducting the quantitative questionnaires.
Quantitative data was collected through the execution of 800 interviews in 400 households. Interviews were fully structured and recorded in questionnaires by trained interviewers guaranteeing a high level of objectivity and comparability. In the current report, qualitative insights and findings are used to illustrate quantitative results to paint a comprehensive picture and draw solid recommendations.
Analysis of farmers and cooperatives that constitute the first two links of the Ivorian cocoa value chain, focused on identifying drivers and obstacles to the development of farmers' livelihoods.
The overall purpose of the baseline study was to inform the constitution of the project's key performance indicators. The analysis of the living conditions of cocoa farmers in the three project regions followed the objective to derive conclusions regarding the scope of action of the PRO-PLANTEURS project. The research triangulated research issues by collecting data and perspectives from all major stakeholders. This ensured that preferences and knowledge of important partners and cocoa value chain stakeholders were considered in the analysis.

2.2.2 Sampling Strategy and Sample Size

To identify the sample, the study considered beneficiaries from the three regions of the PRO-PLANTEURS project. The project only targets populations that are official members of cooperatives, i.e. those who are listed on the cooperatives' member lists. Initially the project aimed at working with about 8,000 farmers, however, after obtaining the member lists from 17 cooperatives, the count of members in the 17 cooperatives was 12,410, i.e. 4,400 more than we planned to reach in total. 2 cooperatives failed to submit their member lists and could, therefore, not be considered in the sampling strategy.
The sample size for the study was computed using a 95% confidence level and a 5% margin of error, requiring a total of 373 study participants to yield a representative sample.
Going back to the existing 17 member lists of the cooperatives, the study identified 400 households through proportionate random sampling, i.e. all cooperatives would contribute study participants according to their actual size. Also, two questionnaires were given to each household to make sure that not only the actual cooperative member and primary cocoa producer listed on the member list (predominantly men) were interviewed, but also a second household member chosen by their knowledge of diversification and nutritional aspects of the household (most likely spouses of the first interviewee, i.e. female respondents) would be interviewed. With these strategic choices, the study finally arrived at 800 interviews in total (400 who answered questionnaire 1 and 400 who answered questionnaire 2) and an actual confidence interval of 3.35.
Regarding the actual execution of the study, the biggest cooperative Yeyobie with 1,600 active members is sampled with 52 households and 104 questionnaires. The smallest cooperative Prania with 150 active members only contributed 4 households, and, therefore, 8 questionnaires to the study.
The cooperatives were in three regions in the east of Côte d'Ivoire. The majority (9 out of 17) of the cooperatives that were assessed are located in Abengourou; the remaining cooperatives are split between Aboisso (5 out of 17) and Agboville (3 out of 17).
The survey took place from February 8th to the 27th (16 days) and was implemented by 13 enumerators. RONGEAD, an NGO for international trade and sustainable development, supported the implementation by leading the regular supervision process.

2.2.3 The Questionnaires

Three questionnaires have been developed that subsequently feed into three sets of primary databases, establishing the basis from which to evaluate the economic and social living conditions of co-

coa farmers working with the PRO-PLANTEURS project. The three questionnaires are linked to four different thematic scopes (organisational development, productivity, diversification and lessons learnt) that have an influence on the farmer's livelihoods.
All information is collected on a recall basis, i.e. the research cannot actually verify the accuracy of any of the information collected. Conclusions are drawn on the basis that the information received from the farmers can be trusted. Conscious or unconscious untruthfulness is hard to detect; however, the data has been checked for outliers and obvious misreporting.

Questionnaire 1
The first questionnaire evaluates a range of key technical questions like basic conditions of the farmers' households, revenue generated from cocoa as well as diversified crop sales, the application of good agricultural practices and the benefits that cooperative members derived from their membership. Questionnaire 1 was conducted with the household head, who to be eligible for the survey, had to be a member in a cocoa farmers' cooperative and grow cocoa. By that definition the selection has generated a high number of male respondents, who in the traditional Ivorian context, are the main breadwinners in the family.

Questionnaire 2
The second questionnaire takes a new perspective on some of the basic economic conditions that have been surveyed from the household head's perspective in the first questionnaire, adding the perspective of the spouse/partner. Land ownership, revenue from crop diversification as well as detailed nutritional conditions are evaluated.
Since 75% of interviewees answering questionnaire 2 were spouses of the predominantly male heads of households, questionnaire 2 had mostly female respondents (99%).

Questionnaire 3
Questionnaire 3 considers the institutional organisation of the farmers and thereby specifically focuses on the relationship between the farmer and their cooperatives. It evaluates the institutional setup of the cooperative in terms of existing business structures, inclusion of women in official processes and paid positions and the range of services provided to farmers.

2.2.4 Qualitative Research Instruments

Focus group discussion observations
The most important instrument of the qualitative research was the detailed discussion on individual key themes and questions in focus groups. To execute these discussions, relevant topics and questions were identified and tested with partners and value chain stakeholders as well as with the beneficiaries in the field and the cooperatives before the onset of the research phase. Basing on the indications derived from these discussions, the 7 most relevant topics were distilled and prepared for further discussions in the groups. Group participants were chosen with regards to the specific topic – for questions relating to young farmers, farmers predominantly below the age of 40 were invited, while a discussion on the conditions of women in the value chain were conducted with female participants. The seven topics were discussed in a total of eight groups, featuring each topic at least twice in two different groups. Detailed indication on the methodology and implementation can be found in Annex I.

Observations from enumerators in the field
During the implementation of the quantitative research, interviewers were instructed to collect any important information or detail they might encounter and to record it on the questionnaires. The research team further met with all interviewers each week to collect the questionnaires and to discuss potentially significant experiences they had during the research. Detailed results and observations derived from this feedback can be found in Annex III.

Feedback from the health centres
To complete the qualitative impressions, two health centres in the area of Agboville and Abengourou were visited. During these visits the health staff present was interviewed in an informal setting and

confronted with the objectives of the project and research interest of the baseline study. Recommendations from these meetings served to provide complementary viewpoints regarding nutritional and health questions that help to put some of the insights from the quantitative research in perspective.

2.3 Coordination of the Study

The research was designed and coordinated with actors in Côte d'Ivoire to assure a broad understanding and accuracy of the examined content.
A two-day workshop to review and discuss the PRO-PLANTEURS indicators was held with the World Cocoa Foundation on January 19th and 20th. During the meeting the wording of the indicators was reviewed and adjustments agreed upon. Furthermore, the execution of the study including the choice of interviewers, the sampling strategy and advantages and disadvantages of implementing a recall-based study were considered. It was agreed that due to the time and financial constraints, the only feasible strategy was visiting the household at home while not being able to collect much observational data. This would assure that the right people for the interview could be identified and be interviewed in their own homes. No time, however, was allocated for visiting the farms and controlling certain testimonies, for example, the application of good agricultural practices.
During the finalisation of the research design, all important cocoa actors (FIRCA, ANADER, CCC, Barry Callebaut, Fairtrade, MINAGRI and TechnoServe) that were available were presented with the research design and informed about the objectives of the study. Subsequently, they were offered the chance to comment on any improvements they thought were necessary before implementation began. This broad stakeholder engagement ensured that methodological pitfalls could be avoided and the valuable insights of Ivorian cocoa specialists be included.

3 Discussion of PRO-PLANTEURS Indicators

As described in the methodology section three different questionnaires as well as qualitative information from the focus group discussions and health centre visits were used to inform the analysis presented below.
To summarise the background information of respondents, a producer household in the sample has on average 10 members. Of these households 90% are male headed, 20% of which have more than one wife. The households have on average of 4.7 children and youth below the age of 18 years. The quoted statistics include both respondent groups described in more detail below.

Overview of the average respondent to questionnaire 1:
88% of respondents to questionnaire 1, who were identified through their membership to one of the project's cooperatives, are male. 86% of respondents are simple farmers with the remaining 14% taking on tasks in lead farming and service provision. 82% own the land on which they farm. 43% of respondents cultivate cocoa on farmland between 2 and 5 hectares, while 18% have less than 2 ha. and 28% have 5-10 ha. 85% have participated in previous trainings on good farming practices. Respondents earn on average 2,350€ from cocoa and 1,900€ from the production of diversified crops. They have high diversification of crops, including cassava, plantain, aubergines, pepper, yams and okra within the first 64%[12] of crops of which sales are generated.

Overview of the average respondent to questionnaire 2:
All of the respondents to questionnaire 2 are a part of the household of the respondents in questionnaire 1. 99% of respondents are women and 75% are the spouses of the respondents of questionnaire 1, while 10% are in some other kind of family relationship (brother/sister, uncle/aunt, parent/child). Only 30% own the land they farm while 60% farm on their spouse's land.

[12] 64% chosen to make it comparable to the answers in questionnaire two, whose respondents make 64% of their income from diversified crops from only three different crop varieties.

In comparison, 78% of the respondents from database 2 farm on land that is smaller than 1 hectare and only 14% have previously participated in trainings for crop production. They earn 285€ per year from diversified crop production. 64% of their sales come from cassava, plantain and peanuts.

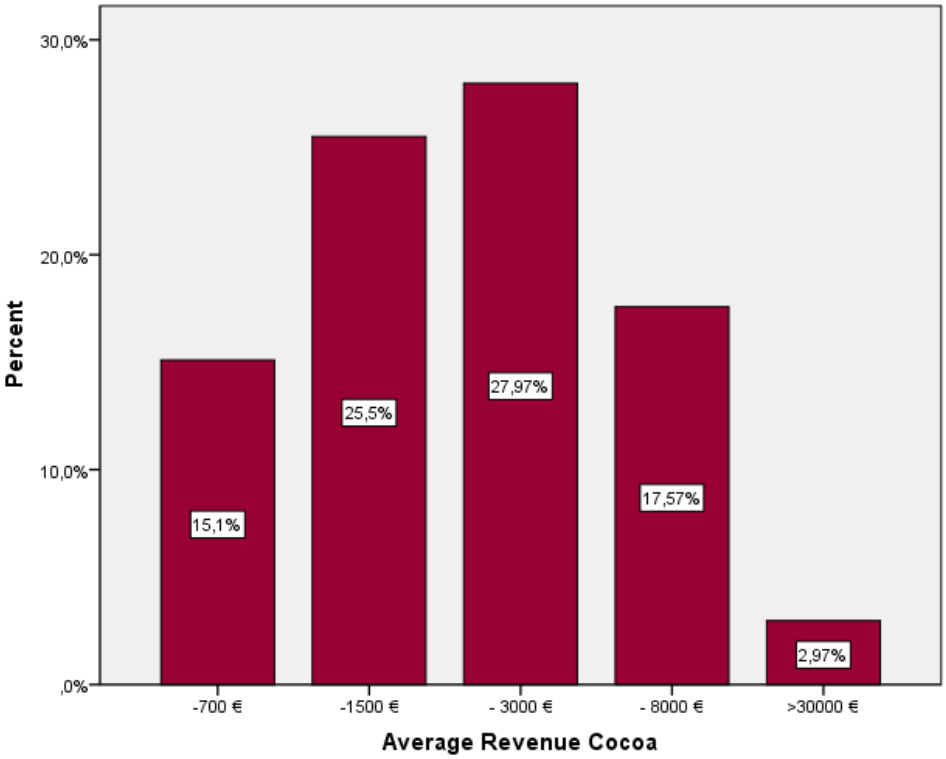
Overview of the respondents to questionnaire 3:
Respondents to questionnaire 3 were managerial staff of the cooperatives. All 19 cooperative managers were invited to Abidjan for a stakeholder workshop, where the nature of the research was explained to generate the cooperatives' collaboration. 17 of 19 cooperatives managed to attend the workshop and were, therefore, able to participate in the interviews. The smallest cooperative among the 17 has only 150 members while the largest cooperative has 1,600 members.
Of course, the size of the cooperative plays a role in how sophisticated and diversified the provided services to their members are – as income is generated through fees.

3.1 Indicator O1

"XX% of the supported producers and their families (20,000) have increased their revenues of sustainable cocoa production of at least XX Franc CFA/year"

Impact assumptions
PRO-PLANTEURS has aimed to work with cocoa farmers registered with farmer cooperatives, assuming that these cocoa farmers obtain their family revenue predominantly from cocoa production. Considering the low productivity of Ivorian cocoa farmers and low application of good agricultural practices, the project assumes that farmers do not have sufficient knowledge of how to apply GAP. One of PRO-PLANTEURS' core activities has, therefore, been GAP training for cocoa producers with the intention to boost their productivity per hectare. Once the productivity, i.e. quantity of produce with steady land usage rises, the annual revenue of beneficiaries should rise accordingly.

Findings in the sample



Graph 1: Average Cocoa Revenue (Data Base 1)

Farmer's revenue is on average 1,538,386 FCFA (2,349 €[13]) per year from cocoa production which translates into 128,199 FCFA (196 €) per month or 6.5€ per day. Revenue per hectare is on average 463€[14]. This is the farmer's actual turnover and does not consider eventual costs incurred to grow the crop. Furthermore, it is important to note that this income concerns the person interviewed only and does not capture the revenue of other household members.
The cocoa revenue from the second household member has not separately been recorded. However, knowing that respondents to questionnaire two own 0.9ha of cocoa land on average, we can extrapolate their income from the average yield per hectare of 323kg. This suggests that respondents to the second questionnaire would currently have an income of 290,000 FCFA or €430 per year from cocoa. As explained in indicator R2.1 below, the research expects a yield increase of 97 kg per hectare, while farmers own an average of 5.81 ha in total. This increased yield corresponds to a 30% yield increase from the current value of 323kg per hectare.
It is worth noting that farmers were questioned about the price they were able to set for their dried cocoa beans in 2014-2015. In fact, 15% of farmers answering to questionnaire 1 and several farmers during the focus group discussions claimed to not always have received the minimum price of cocoa that is fixed by CCC. This could potentially bring a certain margin of error into the revenue projections. The reasons for price inconsistencies have not been part of the evaluation.

[13] Conversion rate of 1€ = 655 FCFA, xe currency converter, 15.07.2016
[14] The slight discrepancy results from the fact that not the number of missing values (missing or incorrect answers) is not the same for both results.

Link to project activities
An increase in revenue can be attributed to higher productivity and/or prices. The project manual details activities related to farmer trainings on GAP, replanting with improved cocoa germplasm and awareness building measures to raise productivity. However, experience in the field has confirmed that the reasons that farmers do not apply GAP seem to be structural limitations, for example, insufficient financial resources rather than lack of knowledge on how to apply certain measures. This is supported by the finding that 85% of farmers are aware of GAP and received at least one training in the recent past.

Conclusions from the findings
For the 2015/2016 season, the Côte d'Ivoire fixed minimum price per kg of dried cocoa beans was 1,000 FCFA (1.53€) which will be used to calculate the potential revenue increase from cocoa. Assuming that farmers will comprehensively apply GAP, the yield increase has been calculated to be around 30% from the base value which means 565kg per year per farmer (over 5.8 ha or 97kg per ha), which corresponds with an increase of total annual revenue of 560,000 FCFA or 860 € per year. This does not consider costs incurred to increase productivity, but is purely revenue based.
Combining the cocoa land ownership of both study respondents (questionnaire 1 and 2), the total household land used for cocoa production is 6.9ha. Again, data on actual cocoa production levels of respondents from the second questionnaire were not collected during this study, however based on the observations from the first group of respondents, it is assumed that respondents to questionnaire two can produce 323kg per hectare. With the same increase in productivity of 97kg / hectare that is assumed for respondents to questionnaire one, the household would arrive at a combined increase in income of 670,000 FCFA or 1,022 € per year.
However, the increase in revenue is a high-profile indicator that depends on many factors including the weather, prizes for cocoa, financial resources among others. Most of them are not addressed by the project.
The proposed increase in revenue can only be expected if farmers apply a comprehensive package of GAP (without fertiliser application) and overcome the various challenges, such as insufficient financial resources that prevent them from doing so.

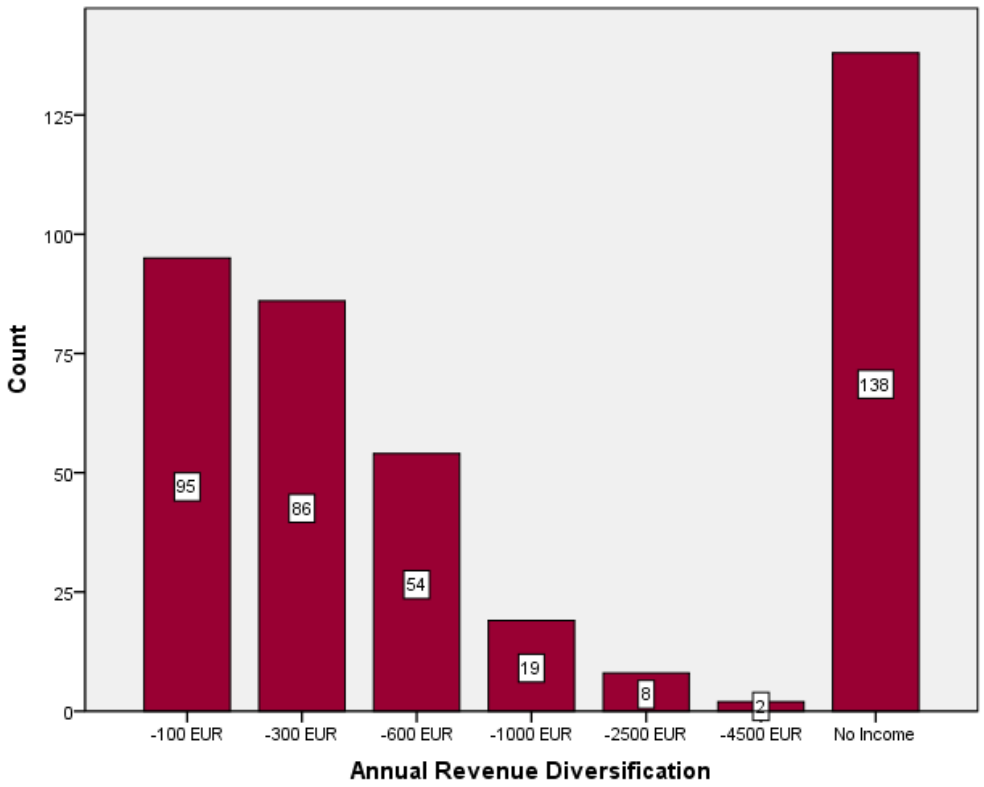
Recommendations and targets
We recommend that a maximum of 80% of trained farmers will implement the practices as advised. Those who implement the package in a comprehensive manner should then be expected to achieve an increase of 560,000 FCFA per year.
However, we also recommend reassessing the challenges facing farmers in GAP application and being aware of adverse effects that might prevent farmers from achieving the targeted increase in revenue.

3.2 Indicator O2

"XX% of the producers and their families supported by actions have increased their incomes from diversified food crop products by at least XX Franc CFA/year"

Impact assumptions
The hypothesis is that cocoa farmers first and foremost grow cocoa while they engage in the production of diversified food crops only as a side activity. Witnessing that many households struggle to secure sufficient quality and quantity of food throughout the year, it is, therefore, assumed that an increase in food crop production and food crop diversification would lead to an improvement in food security.
To this end, the project aims to enable farmers to grow more and diverse food crops in an increased quantity, thereby contributing to their wellbeing.

Findings in the sample



Graph 2: Annual Revenue from Diversification (Data Base 1)

Farmers in database number one (i.e. the household heads) earn on average 1,243,974FCFA (1,900€) personal revenue from diversified production per year and 443,533FCFA (677€) from other income generating activities including sales of produce and phytosanitary products or service provision. This adds up to 2,577€ and exceeds the average revenue that farmers generate from cocoa.
Their spouses in database number two earn on average 193,019FCFA (294€) from diversified production per year and an additional 148,505FCFA (227€) from other income generating activities (sales of phytosanitary products or fertilisers etc., sales of food, service provision to other farmers and others) gross without considering cost of cultivation.
That adds up to a combined HH income from diversified production and IGA's of 2,029,031FCFA (3,098€) per annum.
This household revenue does not include the household revenue from other household members that have not personally participated in the baseline survey.
Of the 404 respondents in database number two, only 59 or 14% of respondents (predominantly women) had previously participated in good agricultural practices trainings for food crops. During the focus group discussions, many respondents raised the desire to improve their knowledge of food crop farming, indicating that some cooperatives had started to provide initial trainings to them. They assessed those as very helpful.

Link to project activities

The project document in its current form is foreseeing trainings on nutritional practices. It further targets awareness building activities for crop diversification to achieve increased nutritional diversity. Also mentioned are trainings on “aspects of diversification […] through Farmer Business Schools”,

however, it does not further describe whether this entails GAP practices for food crops, which would be strongly recommended.
Surely the document does not specifically refer to activities that could enable farmers to produce all year round, bridging the lean season GAP in which food production becomes challenging. Ideally activities addressing this challenge should be added.

Conclusions from the findings
In the sample under observation, food crop revenues exceed revenues from cocoa farming. Aligning methodologies to indicator O1, the assumption is that farmers would be able to achieve an increase of 30%[15] of the current revenue if they use GAP in a comprehensive manner. However, this assumes that the PRO-PLANTEURS project develops activities to support its beneficiaries in realising production all year round to reduce the revenue gap from July to September.
It is assumed that trainings on food crop practices have a significant potential to achieve a strong impact, as many respondents (especially women) have not previously been trained on food crop practices. Still, many obstacles with negative effects on food crop productivity (for example, access to good quality water all year round) are not targeted by PRO-PLANTEURS activities.

Recommendations and targets
As in indicator O1, we recommend that 80% of trained beneficiaries will follow the trained practices and, therefore, improve their revenue in a significant manner achieving 30% more revenue equalling 650,000 FCFA. In fact, regarding the food shortage in some parts of the year as well as with regard to the relatively high income that is already earned by farmers compared to cocoa – one recommendation is to support selected farmers in changing their business models away from cocoa to specialise fully in food crops. This could support the mitigation of food shortages for farmers that also plant cocoa and would raise revenue of food crop farmers by a factor of the freed hectares that previously have been occupied by cocoa trees. However, the project should invest in marketing opportunities for food crops to be able to offer farmers a comprehensive crop revenue strategy – it could be beneficial to commission a study for market opportunity verification.

3.3 Indicator O3

"# of women from supported HH who have improved their revenues from diversified agricultural products"

Impact assumptions
This indicator is a derivation of indicator O2 and, therefore, has the same impact assumptions, but considers only the women who benefit from it.

Findings in the sample
The sample has a total of 14% of women in database number one, which is an equivalent to 56 women who also earn land and are part of the official member lists of the cooperatives.
In addition, however, there is a second layer that is the number of women who are part of the beneficiary households though they might not be direct beneficiaries of the actual interventions. This would assume that whenever one woman of a specific household is trained, the other women in the households will benefit as well, since knowledge would be passed on informally between the female household members.
Findings on the household structure showed that an average household has a bit more than 10 members, consisting of five children and youth below the age of 18, three men and three women (numbers rounded to full HH members which leads to the total being slightly higher than the actual average of HH members). Women constitute 28% of household members, with almost three women per individual

[15] Detailed explanation of the rationale of 30% yield increase is described in the according indicator R.2.1.

household. 75% of respondents to questionnaire 1 and 48% of respondents to questionnaire 2 are older than 40 years old.

Link to project activities
See project activities from O2. Furthermore, it should be considered that this indicator aims specifically at women's revenue; activities that make sure that an appropriate number of women are identified should be considered.

Conclusions from the findings
At the same time indicator O2 is achieved, the O3 indicator should be achieved as well, as its success derives from the success of O2. Each household has 3 women on average leading us to conclude that the project should target the improvement of three women per household. As in indicator O2, a 100% adoption rate of best practices cannot be expected; we similarly recommend expecting an 80% rate of adoption among beneficiaries.

Recommendations and targets
PP is planning to work with a total of 20,000 households, each household containing on average of 3 female members. Taking 80% of these households, the project should achieve an additional income security for 48,000 women.

3.4 Indicator O4

"Diversity in the diet of women and children has increased by intake of 2 to 5 food groups every day. (Reference: household "dietary diversity score [DDS]")"

Impact assumptions
The household dietary diversity score assesses the adequacy of nutrient supply either on a household or individual level to make statements about basic livelihood conditions of communities. The assumption is that when nutritional variety meets a minimum standard of at least five different food groups consumed per day, "socio-economic status and household food security" will accordingly be adequate. However, as the approach of correlating nutrition and livelihood adequacy is a relatively recent scientific approach of the past 15-20 years, "research is ongoing and there is currently no international consensus on which food groups to include in the scores at the individual level for different age/sex groups".
The baseline study has adapted the standard questionnaire provided by FAO to the cultural context and nutritional preferences (for example, considering a high percentage of starchy staple foods as yam, cassava and plantain) of the region. The food groups considered were 1) CEREALS (*corn, rice, flower, sorghum, millet and other grains*); 2) WHITE ROOTS AND TUBERS (*yam, cassava, plantain bananas*); 3) VITAMIN RICH VEGETABLES AND TUBERS (*calabash, carrots, sweet potato, palm oil, green beans, peanuts*); GREEN LEAFY VEGETABLES (*amaranth, manioc leaves, cabbage, spinach*) OTHER VEGETABLES (*tomatoes, aubergines, okra and onions*); FRUITS RICH IN VITAMINS (*mangoes, pineapple, papaya); OTHER FRUITS (bananas); MEAT AND FISH; EGGS and DAIRY*. The questionnaire was conducted with the household member who was most in charge of preparing food for themselves and the other household members to assure sufficient insight in nutritional questions, i.e. questioning was conducted on an individual basis, not considering food groups consumed by other family members.
However, respondents were asked strictly about their own personal consumption of food from the past 24 hours. They were encouraged to indicate up to six ingredients for every meal (breakfast, snack, lunch, snack, dinner, snack), thereby exemplifying the typical ingredients of food during a normal day in their life, providing a detailed and qualified picture of the variety of their recent food consumption. All interviews took place in February, i.e. the lean period of the year. Assuming that food consumption changes with the changing season and with food availability in the market, it could be concluded that the variety and amount of food available will increase when food crops becomes abundant.

The following findings and analysis display an overview of the variance in answers and an interpretation of results.

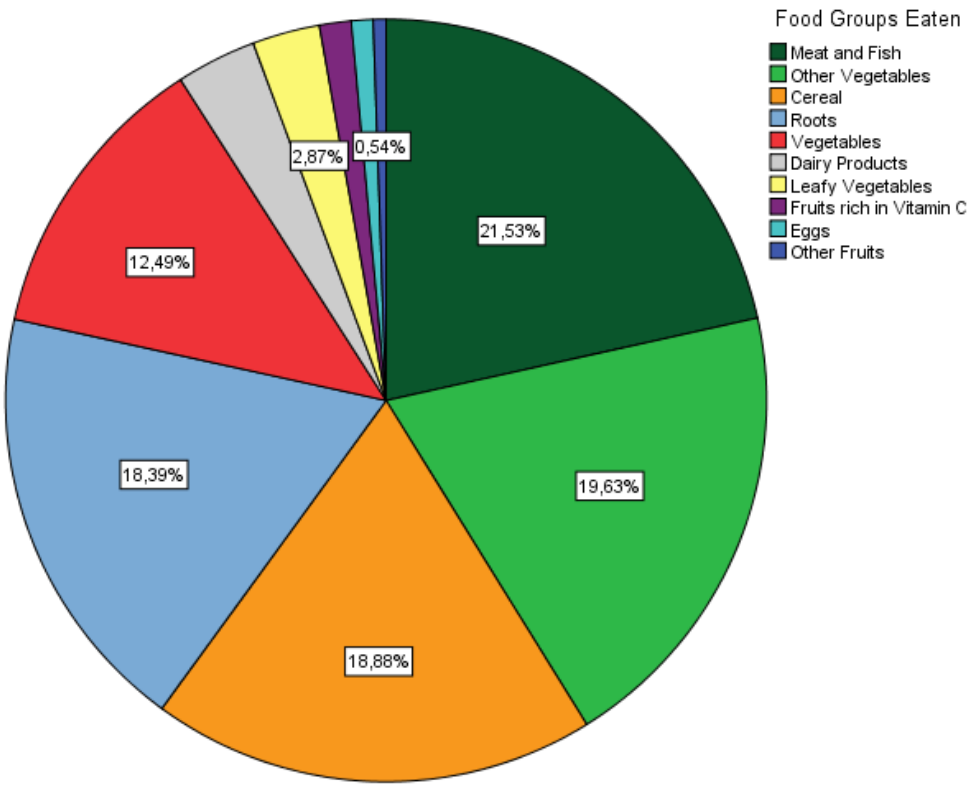
Findings in the sample

Breakfast:
The three most common food groups consumed were 1) cereals, including rice, flower, maize and grains, 2) meat and fish and 3) other vegetables, including tomatoes, onions and okra.
Lunch:
The three most common food groups consumed were 1) meat and fish, 2) other vegetables, including tomatoes, onions and okra and 3) cereals, including rice, flower, maize and grains.
Dinner:
The three most common food groups consumed were 1) meat and fish, 2) other vegetables, including tomatoes, onions and okra and 3) roots, including cassava, plantain and yams.
Throughout the day eating habits can be aggregated in the following table:

$foodgroups Frequencies

		Responses		Percent of Cases
		N	Percent	
Food Groups Eaten[a]	Cereal	349	18,9%	86,8%
	Roots	340	18,4%	84,6%
	Vegetables	231	12,5%	57,5%
	Leafy Vegetables	53	2,9%	13,2%
	Other Vegetables	363	19,6%	90,3%
	Fruits rich in Vitamin C	25	1,4%	6,2%
	Other Fruits	10	,5%	2,5%
	Meat and Fish	398	21,5%	99,0%
	Eggs	17	,9%	4,2%
	Dairy Products	63	3,4%	15,7%
Total		1849	100,0%	460,0%

a. Dichotomy group tabulated at value 1.



Graph 3: Eating Preferences by Food Groups (Data Base 2)

The display of answers includes eating habits during snack hours. Over all six meals of the day (1) breakfast, 2) snack, 3) lunch, 4) snack, 5) dinner, 6) snack), the most common ingredients were meat and fish (99%) followed by other vegetables (90%), cereals (87%) and roots (85%).
Foods that were rarely eaten were eggs (4%), fruits (9%), leafy vegetables (13%) and dairy products (16%).
In total, respondents ate an average of 4.6 food groups per day, settling close to the 5 food groups per day, which according to FAO indicate a sufficiently varied diet.

Link to project activities

The project has planned to develop training materials on nutrition to educate the households on a varied and rich nutritional diet.

Conclusions from the findings

Farmer households have a varied nutritional diet based on the diversity dietary score, reaching an average of 4.6 different food groups per day. However, within the 10 possible categories of foods eaten, there is a strong focus on five dominant food groups, which are eaten for all three major meals. Some food groups that could easily be consumed such as fruits that grow in abundance do not seem to make up a part of the overall diet. Enhancing the consumption to add these groups to the five food groups already consumed would help to further enhance an already acceptable diet.

Recommendations and targets

If the project has resources available to address this topic it can surely invest in nutritional trainings and awareness building measures. However, it should be noted that there are serious shortcomings in some of the other evaluated conditions (food shortages in the dry season for at least 30% of the population) and a strategically sensible approach might be to focus on those conditions that present a

much graver picture. In general, the suggested indicator is not relevant since farmers come close to eating 5 food groups a day.

3.5 Indicator R1.1

"Up to 50 farmer organisations are registered as cooperative societies according to the harmonised cooperative law (OHADA)"

We recommend removing this indicator as it is a pre-condition for the cooperatives to be part of the project and, therefore, has been achieved by all cooperatives prior to the start of the intervention.

3.6 Indicator R1.2

"50 farmer organisations have developed business plans, development plans and commercial organisational structures"

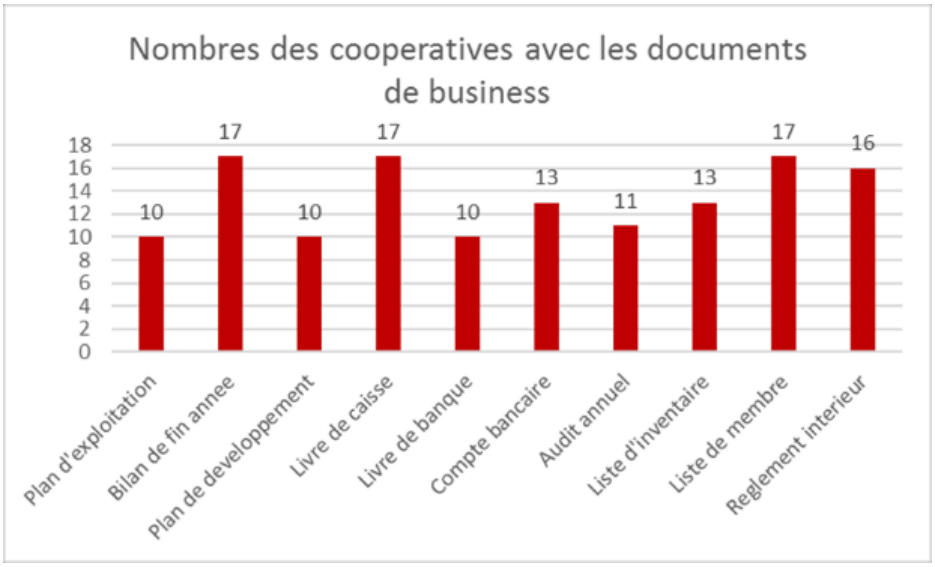
Impact assumption

Achieving a sufficient degree of sector organisation and grouping farmers in cooperatives offers individual producers the chance to organise their interests and defend preferences as a group in front of other stakeholders, increasing their bargaining power for better market access. In the Ivorian cocoa sector, at least 40%[16] and according to some sources even more than 50%[17] of all individual farmers are organised and sell exclusively in these farmer cooperatives. To assure that cooperatives can live up to the expectations of representing the farmers' interests in the sector, they need a certain level of professionalism and formal structures to function effectively and efficiently.
The project aims to support the professionalism of cooperatives with advisory services as well as to support them in establishing a minimum set of structures necessary for their successful intervention in the sector.

Findings in the sample

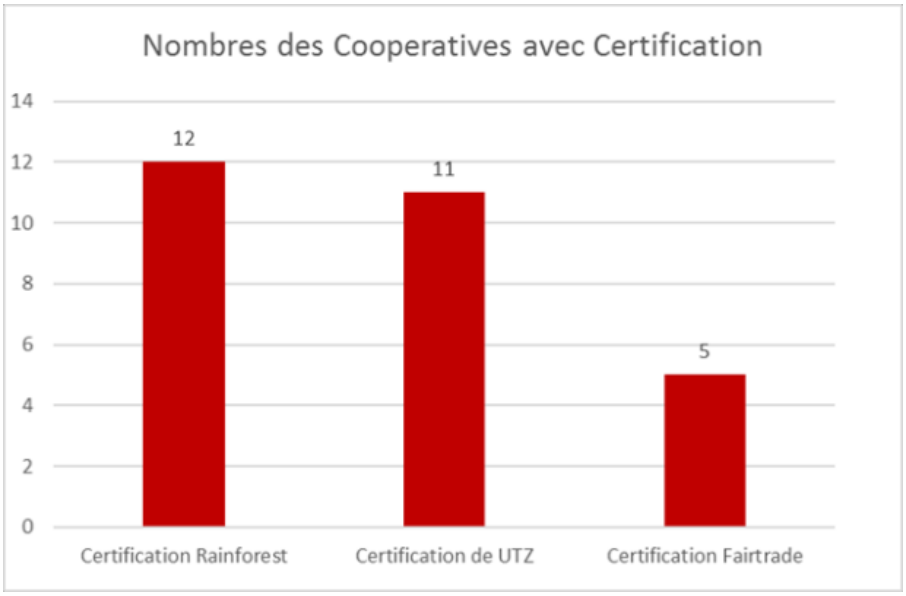
The project intends to work with 20 cooperatives in the initial phase. While assessing the cooperatives in detail, it became apparent that one of the 20 cooperatives was in fact a union of cooperatives, i.e. an umbrella organisation for other cooperatives and, therefore, didn't qualify for the assessment. Of the remaining 19 cooperatives, 17 have been interviewed to assess their level of business structures and member services.
Using a specific cooperative questionnaire, all 17 cooperatives have been assessed for the existence of 10 basic internal provisions defined as the most crucial ones in discussion of the project. Our research looked at whether the cooperatives have the following structures:

[16] KOUASSI Kouadio Edouard (2015) : INTRODUCTION D'INNOVATIONS EN MILIEU PAYSAN IVOIRIEN : Impact Technique Et Socio-Economique Des Projets De Cacaoculture Durable Financés Par Le Conseil Du Café-Cacao A Travers Le FIRCA, page 173
[17] GEFAK: Study on the state of farmer cooperatives in the cocoa sector of Côte d'Ivoire Draft Final Report



Graph 4: Number of cooperatives with the required business documents

(1) Exploitation Plan, (2) Development Plan, (3) End of Year Statement, (4) Cash Flow Statement (5) Income Statement (6) Bank Account, (7) Annual Audit, (8) Inventory List, (9) Member List, (10) Regulations Handbook.
The examination revealed that all 17 cooperatives have an end of year statement, a cash flow statement and a member list in place and that 16 of the 17 cooperatives already possess a regulations handbook. Only 10 of the 17 cooperatives (59%) had an exploitation plan, an end of year statement and an income statement.



Graph 5: Number of cooperatives with Certification

Looking at the degree to which certification has been implemented, we can conclude that cooperatives are very interested in being certified, with 70% already possessing a RA certificate, 64% having UTZ and 30% having a Fairtrade certification. Of the 17 cooperatives, 4 have all three certifications, 6 are at least double certified and each three have only one or no certificate.
We consider it worthwhile to conduct additional studies into the routes that are chosen by the cooperatives for the commercialisation of their product. While engaging in such an exercise, one might also be interested in investigating further the different funding institutions and projects involved with the cooperatives.

Link to project activities
Improving the professionalism of cooperatives and creating development plans for the cooperative area should, in fact, support farmers to better transport, store, dry, ferment and sell their produce. The project manual specifies strong support for cooperatives that targets training in business skills and developing business plans, improving professionalism in the structures for all organisations.

Conclusions from the findings
Judging from the high motivation of the cooperatives to optimise their market approach and outreach to their members, bringing all cooperatives up to the same advanced level appears to be a promising target. A realistic goal would be getting all cooperatives to have all their required business documents in place by the end of the project.

Recommendations and targets
Solid support and concentration on achieving the targets, as foreseen in the project document according to the research outcomes, is a relevant objective. Also, seeing that a good number of cooperatives already have certification labels in place and others are planning to do so; a viable option would be to focus on promoting certification labels among the cooperatives, who with a minor support could benefit from the additional income the labels offer them. With regards to the target, we recommend maintaining it, as it is already formatted in the indicator by PRO-PLANTEURS.

3.7 Indicator R1.3

"The share of women in management positions of farmer organisations increased by XX%"

Impact assumption
A low level of female representation in formal structures of the sector is assumed. Although women play an important role in the fields and in growing and harvesting cocoa, they are not as visible in cooperatives relative to their significance in producing activities. PRO-PLANTEURS assumes that this under-representation of women in formal structures also reflects their presence in the management structures of the cooperatives, depriving them of the opportunity to shape the development of the sector according to their own interest.
To counterbalance this situation, the project has targeted augmenting the percentage of women in management positions, contributing to gender equality and diversity.

Findings in the sample
Of the 404 household heads questioned to establish database number one, 14% were women. All individuals questioned for database one were registered and paid members of at least one of the cooperatives working with the project.
To evaluate female representation in official positions in the cooperatives, all cooperatives have been asked about the gender of their paid staff. The current display in the sample shows that women are represented as paid employees in the cooperatives in proportionally (12%) to their representation in the overall sample (14%) of registered members of the cooperatives – 24 of the total 194 paid cooperative staff are female.

Descriptive Statistics

	N	Minimum	Maximum	Sum	Mean
Number of Staff	17	2,00	25,00	194,00	11,4118
Number of Female Staff	17	,00	4,00	24,00	1,4118
Valid N (list wise)	17				

Graph 6: Women in Management Positions (Data Base 3)

A more qualitative look at the statistic shows that of the 24 total positions held by women, 4 are directors, i.e. in very influential positions within the cooperatives. 4 of the 17 director positions held by women corresponds to a total of 24% of female directors. The remaining positions include vice directors, accountants, treasurers and other lower qualified staff.

Link to project activities

There seems to be no activity that is directly related to influencing the level of representation of women in management positions in the cooperatives. Training in the project's concept rather focuses on the promotion of young farmers to enable them to become service providers and sound business men and women. However, if one of the project targets specifically aims at improving the percentage of women in managerial roles, the project's activities should be reviewed to assure a sufficient inclusion in the implementation of the project.

Conclusions from the findings

The representation of women in managerial roles is, however, contrary to expectations, not low. As a matter of fact, if compared to female representation in the overall sample, women are represented proportionally, including in managerial roles. Even when examined for more qualitative factors like types of positions held by women, it should be emphasised that out of the sample, 4 of the 34 managers (12%) are women – and those 4 are, in fact, directors.
In addition to these few top management positions that come with a high degree of decision-making power, women also held other salaried positions as accountants and other administration staff. During the focus group discussions, many women did not widely support the idea of aspiring to more leadership roles, as it didn't correspond to their traditional expectations of the role of women in society. Surely however, this does not lead to the conclusion that women are represented in the cooperatives in accordance with their stake in the sector. Women play an important role in growing and harvesting cocoa and its fruits that is not reflected in their overall 14% representation in the sample. Nevertheless, it should be evaluated whether increasing the representation of women lies in promoting them to positions of power, or rather in assuring that women own land and are, therefore, members of the cooperatives relative to their involvement in the cultivation of the crop. Judging from their balanced (proportional to their membership) significance in official (paid) positions within the cooperatives, it wouldn't be absurd to assume that a higher membership of women might automatically lead to a higher representation in positions of influence. However, to make solid recommendations regarding this hypothesis, further research should be planned.

Recommendations and targets

The research team proposes to entirely remove the indicator. First, it seems that its main preoccupation of female representation in positions of power has been achieved already and, secondly, it does not have corresponding activities in the project outline that would address the existing conditions. Some of the other indicators (for example R1.4 and R2.4) could serve better to influence female representation in the sector.

3.8 Indicator R1.4

"Percentage of female lead farmers (paysans relais)"

Impact assumption

Given the cultural disposition of women manifesting in insecurity or timid reactions around men not part of their family structures, we expect female farmers to prefer female trainers to male lead farmers. During the review of indicators, we have, therefore, proposed adding this indicator to the existing log frame complementing it by a genuinely female perspective that has the potential to improve the quality of outreach to female farmers.

Findings in the sample

The total percentage of women in the sample is 14% (56 of 404), which is low in absolute terms, but high when compared to our expectation of having up to 5% of female cocoa farmers in total (as previously suggested by partners of the project).

Most of the women in the sample became cocoa farmers through inheritance of land already used for cocoa production – they simply took over the land from their parents when they died. Some, however, reported to have received land from their husbands or other male family members with the intent to provide them with an independent income.

	Men	Women
Lead Farmer	56	4
Simple Farmer	286	52
Service Provider	25	0

Graph 7: Farmer Types (Data Base 1)

As presented in the current sample, most female farmers are simple farmers; only 7% of female farmers are lead farmers with not a single woman providing agricultural services.

		Men	Women
Have you previously participated in a GAP training?	No	42	16
	Yes	305	40

Figure 6 further shows that "only" 71% of all women surveyed with questionnaire 1 have participated in previous trainings on good agricultural practices – compared to 88% of men.

Graph 8: Participation in GAP trainings (Data Base 1 and 2)

This percentage becomes more serious in the results of the second set of respondents; here only 15% of women have participated in any agricultural training of food practices.

Relating this to the focus group feedback that women provided can help to clarify the situation: several women reported not participating in agricultural training due to the fact that most trainers are male. They indicated that it might be easier for them to attend training if there were more female trainers.

Link to project activities

There is no specific intent in the current project planning materials to train women as lead farmers. However, it might be an easy addition to the planned activities that include general GAP and business training for lead farmers to set additional focus on reaching out to women in particular.

Conclusions from the findings

The current project manual proposes to train 400 lead farmers who, in turn, are expected to reach out to 20,000 simple farmers. Targeting the training of at least 20% (i.e. 80) female lead farmers would surely set a good starting point to achieve more gender equality. However, it is important to keep in mind that women made up only 14% of all farmers in the sample. Therefore, training a higher number

of women would emphasise the role given to female farmers by the project and could possibly have a trickle-down impact that first translates to women feeling encouraged to become members of the co-operatives and then to them assuming positions of responsibility in the cooperatives.

Recommendations and targets

The target should be set to increasing the representation of trained female lead farmers to 20% of all lead farmers. That 20% should ideally also be engaged with the cooperatives in an official manner. As female farmers only make up about 14% of the sample, the recommendation implies that it would be sensible to train a higher percentage of female farmers than their natural representation in the sample. This measure has the potential to specifically attract women to attending the offered trainings. Measures could include awareness training for female farmers to understand the advantages of becoming lead farmers (high esteem, additional income etc.) to then methodically strengthen women in the value chain.

3.9 Indicator R2.1

"XX% of the female and male producers have increased the cocoa production yield by XX%"

Impact assumption

As in indicator O1, a significant weakness among cocoa farmers is the low productivity level of their cocoa plantations resulting from the limited application of GAP. The reason for a limited GAP application has been identified in the lack of knowledge of the practices. Following that logic, training farmers in GAP should result in a comprehensive application of GAP on the fields and result in an increase in cocoa yields.

Findings in the sample

Case Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
GAP Young Farm[a]	86	21,3%	318	78,7%	404	100,0%
GAP Adult Farm[a]	401	99,3%	3	,7%	404	100,0%

a. Group

Graph 9: Application of GAP (Data Base 1)

Farmers were asked about a) the size of their farms and b) the quantity of their production of cocoa in the past season of 2014-2015. Not only was their annual production measured, but also the unit in which they measure the beans (in kg or sacs of 75/80kg) and the income, they derived from this activity. The interviewers were instructed to cross check the different values given to assure a solid understanding of the proportions and to identify when farmers might be indicating the wrong values. Nevertheless, the inquiry relied on a recall basis, i.e. questioning the memory of the farmers regarding their production from a year earlier. All numbers were collected for the interviewee only, i.e. it was specified that other yields that might have been generated by other household members should not be part of the consideration.

The measurement of these different values revealed that farmers in the sample produce on average 323kg/ha with an average possession of 5.81 hectares of land per interviewee. This number has been compared with information from the World Cocoa Foundation, which quotes an average African productivity of 300-400kg per hectare. Compared to that, the Asian average is 200 kg higher, at 500kg per hectare.

The assumption is that productivity of cocoa farms would increase with a consistent application of good agricultural practices (weeding, pruning, pest and disease management, shade management, harvest procedures, fertiliser application, farm rehabilitation and replanting) as recommended by CCC. To find out if farmers have indeed applied the required practices, they have been questioned on which practices they applied on their farms and in what frequency – and interviewers were instructed not to prompt them but to only note practices that they brought forward independently.

The answers revealed that many farmers know many practices and know when and how to apply them. However, in practice it also showed that farmers do only implement those GAP that are, first,

inexpensive and, secondly, easy to apply. Concretely, this revealed that most farmers employ some kind of weeding, pruning and pest and disease management on their fields. During the focus group discussions the fact was brought up that CCC supplies free pesticides to farmers – however, only one bottle per person. For some with small farms this was enough to apply pesticides in the recommended frequency while for others this would mean an application below standard. It was a common notion that only what was supplied for free would be used on the fields.
Similarly, observation of fertiliser guidelines was mentioned by only few farmers as a successful practice. This seems to stem from the fact that fertiliser application is expensive, while many farmers do not have the necessary access to finances to buy them. However, it is also clear that the yields will only achieve their potential, if all practices are applied in the appropriate manner.

Link to project activities
The project strongly focuses on the training of good agricultural practices, assuming that farmers would require the knowledge to understand how to farm. The project has not planned activities that can serve to equip farmers with fertilisers and other financially intensive provisions, which according to the findings seem to be the real inhibitors of GAP application.

Conclusions from the findings
Judging from the constraints of the farmers to buy fertilisers (which can lead to a higher productivity increase than only simple GAP application) it is assumed that the best-case scenario would be a comprehensive application of the GAP standard package (incl. application of pesticides) as listed above. The World Cocoa Foundation has estimated that the comprehensive application of GAP not including fertiliser application can achieve an increase of productivity of 50% from the starting value, i.e. before the application of GAP.

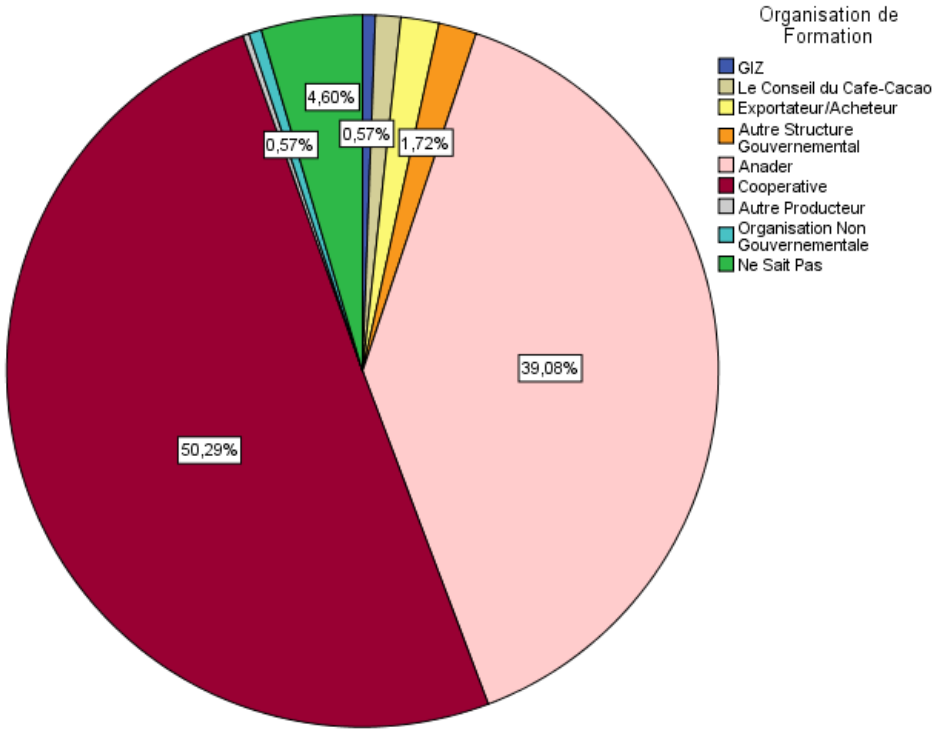
Recommendations and targets
In the case of the PRO-PLANTEURS farmers, who start with 323kg/ha and exercising caution, considering a margin of farmers who won't apply GAP as required, the target should be set to achieve a value of 420kg/ha, i.e. an increase of 32%. This target value is 80kg or 16% below the global average, while considering the obstacles, it is still ambitious.
Since the people in the sample own on average 5.81 ha per person, this would result in an average annual increase of yield of 565kg in total.

3.10 Indicator R2.2

"Number of producer organisations recommending GAP, selected plant material and soil fertility improving measures to their members as integral part of their services"

Impact assumption
The understanding is that this impact assumption follows the same logic as the understanding under indicator R2.1: farmers will increase their yields, if they start understanding and as a result implement the diverse good practices that are promoted from an agricultural standpoint. One of the players in an ideal position to promote good practices are the diverse cooperatives, since they are closely connected with the farmers' communities and have an ideal structure to pool and distribute knowledge. The farmer organisation in this understanding can be seen as a catalyst that can distribute and multiply learning and innovations in an efficient and comprehensive way.
Clearly this impact direction builds on the assumption that the problem of a limited GAP application among farmers is their lack of knowledge, which as soon as it is eliminated will lead to an ideal application of practices in the field.

Findings in the sample



Graph 10: Provision of GAP trainings (Data Base 1)

Farmer cooperatives made a very solid impression during the baseline research. Many of them were very interested and well versed in describing their services, often not only commercialising cocoa, but also coffee and other cash crops.
In terms of interacting with their farmer members, they mostly did not stop at just recommending good agricultural practices, but trained farmers in implementing them as well. A good number of them went even a step further, resuming a social function in their communities, taking on the responsibility to also function as a financial service provider, loaning farmers money for occasions like school fees, health care expenses or social events (e.g. funerals or weddings). Based on those experiences, most farmers also spoke very appreciatively of their respective cooperatives in the focus group discussions.

Link to project activities

The project manual outlines strong plans to work with cooperatives, using these organisations as a point of connection to reach out to the farmers.

Conclusions from the findings

Many co-ops have strong structures on the ground, working closely with their farmers to achieve high ratings when being questioned on the quality of their services.
Most of them understand that selling cocoa is a numbers game in which only those organisations succeed that reach economies of scale and take advantage of certain niche markets, for example, Fairtrade products that only capture about 0.5%[18] of the total market, and the diverse certifications that are being offered.

[18] ICCO (2016): http://www.icco.org/about-cocoa/chocolate-industry.html

However, despite the good work that cooperatives implement on the ground, they often still struggle to make ends meet and work in a profitable manner.

Recommendations and targets
This indicator doesn't seem very relevant as most cooperatives already exceed the minimum requirements of supplying the services and actually training farmers in the respective disciplines.
The indicator should be adjusted to cover some relevant obstacles such as profitability or be removed entirely.

3.11 Indicator R2.3

"At least 30% of participants on trainings about productivity increase, FBS, CCE, IPM or Biodiversity are women"

This is an activity indicator that should be measured through the project's records. It hasn't been part of the baseline study.

3.12 Indicator R2.4

"XX young entrepreneurs are specialised and trained service providers in the cocoa sector (trimming trees, grafting, professional leading of a tree nursery, integrated pest management)"

Impact assumption
The sustainability of the cocoa sector depends on the regeneration of its population, i.e. the inclusion and encouragement of its young members to sustain the practice of growing cocoa. Opposing this thought, many cocoa farmers who own the land and generate revenue are old (defined as above 40 years old) preventing younger generations from getting interested and engaged in the sector.
The project has identified service provision in the sector as a profitable activity that can offer income potential to younger generations, offering them a livelihood in the same environment as their parents.

Findings in the sample
The age structure in the current sample shows that 25% of the sample are 40 years old or younger, which has been assumed as the definition of young farmers. Only 6% or a total of 25 people in the sample were service providers. Of those 25, only 7 are young service providers – and none of these 25 people were female.
During the focus group discussions, young farmers have affirmed their interest in cocoa production. A lot of the discussion evolved around the topic of access to land and how young farmers have difficulty receiving an appropriate opportunity to establish their own fields and agricultural businesses due to a lack of access to land. Land ownership is mostly passed on from the old to young as inheritance which in return means that young farmers must wait for their elders to die before they will have access to farm land. At the moment, by the time that happens, many in the younger generation have already come of age and have already chosen a different profession. Many reported preferring to go and try their luck in the cities where they hoped for a profitable income. By the time they then inherit the land they often are 40 years old or older.

Age Group / Service Provider	30-40 Years Old	41-60 Years Old
Count	**7**	**18**

Graph 11: Age Structure of Service Providers in the Sample (Data Base 1)

At the same time, participants in the focus groups reported that despite their interest in becoming service providers of tree trimming, grafting, running a tree nursery and integrated pest management (some even had experience in providing services) they are facing constraints which render a successful and profitable provision of services to other farmers difficult. Limitations that have been reported are 1) the financial situation of cocoa farmers who end up not paying for services they have received and 2) cultural circumstances that prevent people from granting strangers access to their land. Financial constraints were highlighted particularly in the focus groups as farmers reported multiple incidents when they had not been paid for services rendered. Some even tried to set up services in a commercial manner, collaborating with other young farmers in the area, but indicated that finally they all had to stop providing their services, because they were not set up in a viable manner.
Beyond financial limitations they indicated having insufficient knowledge in business planning and execution to successfully maintain a commercially operating facility.

Link to project activities
The project has identified an activity that focuses on training 300 young entrepreneurs as service providers in nursery management, pruning, spraying of agro-chemicals and providing technical advice. No gender focus has been specified.

Conclusions from the findings
Since to date only a small percentage of farmers provide services in a commercial manner, working towards increasing this figure has big potential. However, as constraints appear not to be limited only to the lack of appropriate knowledge, a closer look should be taken to the exact conditions that prevent young farmers from establishing themselves as service providers so that provided knowledge can result in an appropriate impact.

Recommendations and targets
The project manual specifies that a total of 300 farmers should receive training during the project life span. The opportunity should be seized to train 20% of female farmers, i.e. 60 women, to make sure that the project achieves its goals with regards to gender factors.
Of all farmers, 80% should end up being professional service providers in the sector that makes 240 beneficiaries in total (50 of which would be women).

3.13 Indicator R2.5

"xx% of producers apply agroforestry systems which also include native shade trees"

Impact assumption
Cocoa grows more productive when it is planted together with trees other than cocoa. This due to the fact that a certain range of trees have a positive impact on the soil quality while at the same time provide shade to the sensitive cocoa plants, establishing an environment which is closer to the natural eco-system that favour cocoa production.
However, mono-culture and limited knowledge of cocoa producers has led to most naturally occurring shade trees being cut down, leaving wide stretches of land where cocoa trees are the only tree crop left.
To help support farmers in increasing the productivity of their existing plantations, PRO-PLANTEURS has identified the cultivation of recommended shade trees other than cocoa as an activity that would support their target.

Findings in the sample
88% of farmers grow trees other than cocoa on their land, however, in very small numbers. At the 50th percentile, they grow as few as 6 trees per farmer (average land size per farmer being 5.8 ha). 74% of farmers know which types of trees other than cocoa grew on their land, indicating a deliberate cultivation.

Statistics

		Other Trees than Cocoa	Number of Trees	Cocoa ha/person
N	Valid	354	311	396
	Missing	50	93	8
Mean			101,984	5,81
Median			6,000	4,00
Minimum			1,0	1
Maximum			2980,0	39
Percentiles	25		3,000	3,00
	50		6,000	4,00
	75		14,000	7,00

Graph 12: Tree Distribution (Data Base 1)

During the focus group discussions, farmers gave very positive feedback to the idea of planting shade trees alongside their cocoa plants – knowing well that it would improve the conditions for their cocoa production. Contemporary research seems to suggest a similar result, indicating that while some varieties have higher yields under direct sunlight, they also expire earlier, requiring replanting earlier[19].

Link to project activities

The project is planning to distribute 100,000 trees over five years. With the current beneficiary population of 20,000 farmers, this would mean an average of 5 trees per farmer or 1 tree per hectare.

Conclusions from the findings

The plan to distribute 5 trees per farmer aims at doubling the number of non-cocoa trees per household from the current 5 to 10. However, also considering that farmers have on average 5.8 hectare per person that would mean only 1 tree per hectare – hardly a comprehensive shade creation.
Farmers in any case, knowing of the advantage of shade trees on their land, will gladly accept planting trees that are provided.

Recommendations and targets

It is recommended to give some further consideration to the notion of an “agroforestry system”. Currently a majority of farmers plant trees other than cocoa, however, viewed from a qualitative standpoint, we cannot assume that they apply agroforestry systems just because they cultivate a handful of trees on their land.
When distributing the 100,000 trees through the project, a more strategic decision might be to concentrate on a few model farms and create a proper agroforestry system that can then be used as demonstration units for other farmers rather than spreading the available trees widely to all beneficiaries.

[19] FAZ (2016) : http://www.faz.net/aktuell/wissen/erde-klima/das-behagliche-schattendasein-des-kakaobaums-14199361.html

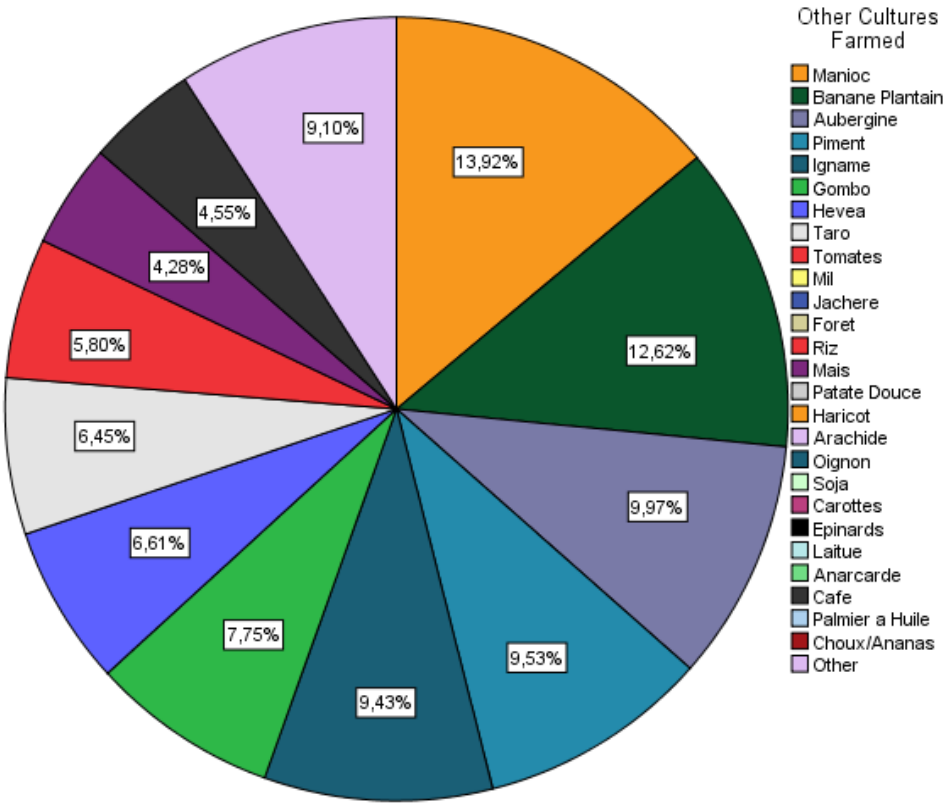
3.14 Indicator R3.1

"# of households/cocoa families who have diversified/intensified their productions beyond cocoa"

Impact assumption

Choosing this indicator, the project assumed that cocoa farmers concentrate mainly on cocoa production to generate their household revenue. The cultivation of diversified food crops is assumed not to take place.
Achieving a diversification of crops is expected to lead to a) an increase in revenue and b) an increase in food security.

Findings in the sample



Graph 13:Type of crops farmed (Data Base 1)

98% of households grow other crops than cocoa. In fact, as described in indicator R3:2 in terms of value, households in the sample sell more food crops than they do cocoa, establishing food crop production as a crucial source of family income. Most households favour cassava and plantain, followed by aubergines and pepper. During the focus group discussions, farmers indicated that these crops play a major role in the daily nutrition, so that farmers usually directly eat what they produce, selling only the excess production.
At the same time, diversification is a seasonal advantage – when the season is dry and the weather gets hot, the crops on the fields would not usually survive due to lack of shade and water. Most farmers who we encountered during the research were aware of the huge potential that a food crop cultiva-

tion all year round could have on their household's well-being as well as the commercial opportunity it might present to sell produce all year round.

Link to project activities

The project focuses widely on awareness building interventions such as training on food variety and crop production methods. However, it doesn't consider that the biggest obstacle that was observed doesn't seem to be lack of knowledge or awareness, but is the fundamental situation of adverse environmental conditions.

Conclusions from the findings

The indicator is not perceived as relevant in its current form; almost all households diversify their production already, so there is no valid target to work towards while at the same time many households do not achieve a sufficiently positive impact on their livelihoods through their diversification.

Recommendations and targets

Remove indicator.

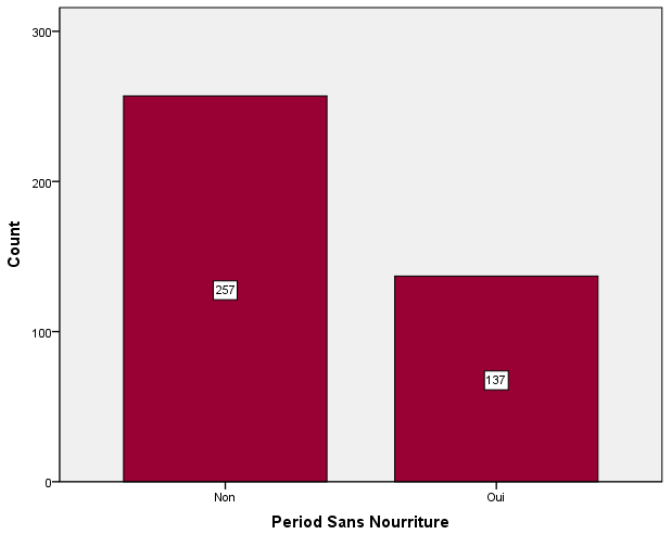
3.15 Indicator R3.2

"At least 50% of the trained farmer families produce enough and diverse nutritious food to nourish the family and livestock throughout the year"

Impact assumption

It has been witnessed that households suffer from food shortages that inhibit the development of livelihood improvements. It has been assumed that food shortages can be attributed to the fact that farmers do not diversify their production beyond the production of cocoa, limiting their household's resilience and depending on cocoa as a single source of income.
PP assumes that if they encourage farmers to produce another crop aside from cocoa, farmers will automatically achieve higher income through crop diversification, limit dependency on cocoa and therefore limit household vulnerability.

Findings in the sample



Graph 14: Percentage of respondents indicating food shortages (Data Base 2)

As discussed for indicator R3.1, 98% of households engage into diversification of crops to the degree that 62% can sell their surplus production on the local markets.
At the same time, the answers to the nutrition questionnaire revealed that 34% of all households experience periods during which they do not have access to enough food to comfortably feed all household members. 7% of households responded that they would have to sell personal items or borrow money to make sure that their household members are fed. This is a clear indication that despite their best efforts to diversify, a significant proportion of the sample does not generate enough means to maintain their household throughout the year.

Link to project activities
As in the last indicator the project focuses on awareness building measures to educate farmer households about the desirability of diversification.

Conclusions from the findings
With regards to the indicator, it can be said that 64% of all households achieve a sufficient nutritional basis throughout the year already. Although it would be a great achievement to increase this percentage, one should carefully consider the causes of food shortages and if their elimination is within the scope of the project.
The findings suggest that the causes of the households starving during the lean period are systemic in nature, which would require a much more comprehensive intervention than can be achieved by a short-term project.

Recommendations and targets
Adjust the indicator to focus on some of the conditions causing problems in the cultivation of food crops in a professional manner and during the lean season (e.g. lack of water).
Principally the assumption that farmers would be better off achieving a sufficient income can of course be supported. To lead to an impact, however, the causes of an insufficient household income need to be eliminated. And judging from the findings, we cannot confirm that farmers are not aware of the desirability of crop diversification, but rather that they do not seem to have a way to establish diversification to a degree that would afford them a sufficient reward to maintain food security throughout the year.
From what we witnessed, a course of action could be to support farmers in a way that they establish themselves as professional food crop producers of some sort, putting a focus on the commercial aspect of their activity, selling food crops for a living. Considering that during the lean season vegetables are in short supply, an existing demand for produce is presumed. Professionalising farmers to a degree that they can manage the environmental challenge and maintain a sufficient production of food crops throughout the year could indeed result in a lasting impact.

3.16 Indicator R3.4

"% and # of farmers applying improved practices for food crops"

As the indicator was only proposed at a very late stage in the research phase when the questionnaires were already developed, it has not been possible to include it in the baseline assessment.

3.17 Indicator R3.5

"At least 50% of the trained farmer families produce surplus nutritious food crops or small animals that are marketed locally or through the farmer organisations"

Impact assumption
The project started with the assumption that farmers do not grow or sell produce other than cocoa beans. Enabling these farmers to grow food crops not only for their own consumption, but also to sell the excess produce on the market, which they don't consume at home, is, therefore, assumed to have the potential to improve household resilience.

Findings in the sample

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not Sold	144	35,6	36,5	36,5
	Sold	250	61,9	63,5	100,0
	Total	394	97,5	100,0	
Missing	System	10	2,5		
Total		404	100,0		

Graph 15: People selling their produce (Data Base 1)

Usually households would sell what they cannot eat or use themselves, i.e. excess production. As discussed in indicator R3.2, 98% of households already engage into diversification with a total of 62% of all households selling surplus produce.

This especially concerns fresh foods, such as tomatoes or aubergines that perish easily and cannot be stored for later consumption.
However, promising the numbers coming from this indicator does not give an appropriate indication of the living situation of people. 34% of the population still end up not having sufficient food during the lean period of the year.

Link to project activities
Trainings on diversification practices.

Conclusions from the findings
It has become clear that a rather natural approach for farmers is to sell their surplus production in local markets to avoid losing the value of what they have produced. At the same time, the increasing percentage of farmers selling produce has not eradicated hunger. This is because food crops for consumption are only available during the already abundant months of the year when markets are full of fresh vegetables and the income earned from diversified crops is not sufficient to last throughout the year.

Recommendations and targets
The realities that determine cocoa farmers living conditions are manifold and complex. Enabling them to have sufficient quality nutrition all year round is surely related to their farming activity, specifically the income they derive from selling food crops. However, more factors are clearly involved besides just selling the products. These factors need to be observed in more detail and with attention to the level of income that is generated through food production – as already focused on in indicator O2.
If farmers had enough income from sources other than cocoa, they would be enabled to nourish their households by purchasing whatever the household cannot produce themselves. And as a matter of fact, as demonstrated in indicator O2, farming households in the sample achieve a revenue stream from food crops that is comparable or even greater than the revenue they generate from cocoa production.
It might be of interest for the project to commission a more qualitative study which follows a chosen set of farmers throughout the project to evaluate their living conditions and their chances, but also the pitfalls that cocoa farming holds for them.

In its current form the indicator is not relevant, because it has been achieved already and, therefore, should be removed.

3.18 Indicator R4.1

"XX cooperatives are members of information platforms to share lessons learnt and good practices with their communities"

Impact assumption

Farmer cooperatives serve as the place where learning is exchanged and discussed. In a sector where comprehensive knowledge is a rare good, professionalising learning patterns can go to great lengths to intensify best practices and spread success stories.
In this sense, the project has set out to support the establishment of learning platforms as one of its objectives, expecting to multiply learning and success.

Findings in the sample

There are currently no existing information platforms, as their development is an aspiration of the project. The project manual does not entirely clarify which activities are to be targeted in this direction nor what the desired direct outcomes should be.
The sample has shown that most farmers (85%) participate in meetings of their own cooperatives at least once a year, 60% of which say they participate more than once a year.
A surprisingly high number (30%) participate in meetings with farmers from other cooperatives at least once in a year.

Conclusions from the findings

There is surely an interest among farmers to meet and exchange ideas – be it with colleagues from their own or other cooperatives. However, with the limited amount of information available on how this information exchange platform is going to be constituted, it is not possible for the research to determine a target.

4 Propositions for a Monitoring System

An effective monitoring system measures outputs and outcomes (i.e. the intended changes) resulting from the implementation of the project's activities. Furthermore, it considers the impact on partners and value chain actors and the use that beneficiaries and other stakeholders derived from its interventions as well as the long-term effects it might have on its environment. This includes potential positive effects that have not explicitly been foreseen as well as adverse effects that might negatively influence later events.
The baseline has set a starting point for the diverse indicators and objectives of the project and offers orientation for a starting point to measure possible outcomes and the effects of its interventions.
The findings of the baseline research have confirmed certain expectations, but not affirmed others – drawing from these results, adjustments in strategy and operational plan should follow.
The guiding interests should be to achieve the targets that were proposed during the baseline research and track their progress over the course of the five years of the project implementation.
A concrete proposition of a monitoring system can be found in Annex II.
In any case a monitoring system consists of "hardware" and "software". The hardware is made up of monitoring instruments – as e.g. proposed in Annex II. The software consists of the monitoring processes that must be organised to implement the system effectively. This includes clarification of responsibilities, setup of processes, use of information for steering and feedback etc.[20]
Our recommendation to PRO-PLANTEURS is to set aside financial and personnel resources to kick-off and maintain an effective monitoring system.

[20] See GIZ handbook on quality in monitoring systems

5 Additional Recommendations along the Main Lines of Interventions

5.1 Productivity

The current productivity of the cocoa plantations in the sample is very low. This confirms the initial assumption of the project that increasing productivity might be a good way to increase earnings of cocoa producers. Low productivity usually results from several factors, such as insufficient application of good agricultural practices, including mechanical practices, such as weeding and pruning as well as application of fertilisers and rehabilitation. Some of these practices are easy to apply, but expensive in nature while others function exactly the other way around, being inexpensive but tedious to implement. As seen from the data and in discussions with farmers, respondents favour applying GAP that are both: a) easy to apply and b) inexpensive. These are two conditions that not many practices satisfy, widely leading to the lack of application of GAP in the appropriate manner.

To explain these observations, it is important to consider the farmers' revenue streams which show very low revenue per capita, not allowing them to build up savings and, therefore, not allowing them to accumulate reserve funds that they need to accrue for business investments. Since cocoa is a resource intensive crop that needs appropriate care (i.e. investment) to be productive, it is not surprising that farmers do not achieve high productivity with their current income. Of course, those who do not have enough money will try to cut costs whenever they can – resulting in a lack of investment in their cocoa plantations, which in turn will not achieve appropriate yields.

Farmers could increase their income if they had sufficient access to fertilisers and phytosanitary products. However, in the current situation the application of these GAPs results in a reduction of revenue for the farmers, leading to the conclusion that their application is not profitable under imperfect conditions. National conditions for prices, production units, business knowledge, generational structures and other framework conditions need to be adjusted before the revenue can be increased in a sustainable manner.

This dynamic is not expected to change soon as the fundamental mechanism of the cocoa value chain (e.g. age or gender structures) and macroeconomic conditions (e.g. adequate prices for the cocoa beans produced) do not play in favour of the farmers. Many of the farmers encountered during the research know about this situation, but, given their limited resources, are still not able to change anything about it.

This leads to the conclusion that training farmers on GAP practices does not promise high probability of changing the current situation. Farmers simply cannot be expected to implement practices that they don't have the resources for. This is confirmed by the finding that most farmers have previously participated in trainings on good agricultural practices of cocoa production – to no avail.

Interestingly most of the farmers achieve a higher income through food crop production than with cocoa.

Growing food crops comes with its own set of challenges and limitations. However, we could consider instead of supporting diversification of food crops alongside cocoa, supporting the specialisation in food crops instead of cocoa thereby achieving a professionalisation of effort on a single commercial cause. This recommendation is backed by various research[21] which suggests that the diversification into a multitude of crops only makes sense when it can be assured that the income generated from diversified crops offsets the food security achieved by the initial produce farmed. In particular, this is

[21] http://www.fao.org/docrep/U8050T/U8050T06.HTM, FAO, Immink and Alarcón (1991): Household food security and crop diversification among smallholder farmers in Guatemala

https://www.researchgate.net/publication/275031635_Does_Crop_Diversification_Enhance_Household_Food_Security_Evidence_from_Rural_Ethiopia, Goshu, Kassa, Ketema (2012): DOES CROP DIVERSIFICATION ENHANCE HOUSEHOLD FOOD SECURITY? EVIDENCE FROM
RURAL ETHIOPIA

true for the introduction of cash crops – if a crop is farmed that cannot be consumed it has a high potential of increasing the risk for food insecurity instead of reducing it. As we have shown income generation through the cash crop cocoa is not yet very stable, suggesting that it increases the risk of food insecurity. On the other hand, farmers are already highly diversified, growing a high number of crops including other cash crops as well as food crops. What we have seen is that farmers engage in such a diverse range of activities that they fail to do anything properly – ending up having neither the knowledge nor the resources to establish a stable income. We consider this outcome strong enough to recommend the further evaluation of concentrating on food crops as well as reducing of the number of crops grown per household. Practically, this could mean PRO-PLANTEURS support selected farmers in giving up cocoa farming and engaging fully in food crop production.
What is happening now is that farmers are trying to produce crops mostly in a semi-professionalised manner and end up passing on their financial limitations to potential services providers (i.e. supply of inputs, supply of transport, regular supply of food etc.). These service providers then face the consequence of unreliable profit generation of the producers and do not get paid. Which, in turn, prevents the specialisation of service provision in the first place. The lack of money is preventing a healthy and self-sufficient “cocoa-ecosystem” from springing up. If the project had the funds to inquire further, it would recommend assessing the possibilities of including an access to finance components in its activities, and to elaborate further how the provision of sufficient funds might benefit the different stages of cocoa production.

5.2 Cocoa and Nutrition

As observed in the sample, respondents achieve a sufficient food score as defined by FAO. Although they tend to consume a lot of starchy roots (yam, cassava, plantain) they also eat other food groups achieving a pretty solid and balanced diet, based solely on the number of food groups eaten. Nevertheless, it surely is important to notice that the survey was completed in times of food abundance, collecting only information on the preceding 24 hours. When asking people about the food availability of the previous 12 months, the picture was more varied: answers revealed that there are times in the year when they could not afford to eat a sufficient quality and quantity of food, which usually happened during the lean season. Setting this result in perspective with their low household income and their inability to produce food crops throughout the year, it is clearly a result of low household resilience, leaving them vulnerable to external shocks, leaving producers in the dire situation of having to sell household assets and take on involuntary loans or starve.
Two solutions can serve to change this situation: 1) generating sufficient income to feed all household members throughout the year or 2) producing food in lean seasons when other income is exhausted. It is a common notion that diversification can be a good tool for poverty reduction and nutritional security. This assumption, however, needs close observation - a few reports[22] point out that exactly the opposite effect can be the result of diversification if certain minimum conditions are not met. This includes, for example, the danger that the income from cash crops that are grown is not significant enough to offset the loss of other food crops that could be produced instead. And as we have seen with the farmers in our sample, cocoa production is not automatically a guarantee for improved income generation. What we rather observed is that farmers, being highly diversified already, do many things at the same time without sufficient knowledge or financial capacity to engage properly in any one activity. They end up not making any significant income from any single source and therefore do not have the financial resource to feed themselves and their families. Directing their interests towards a professionalisation of food crops that can be both eaten as well as commercially marketed is suggested as a viable alternative, though it does need further research to identify the exact crop and circumstances that need to be promoted.

22
https://www.researchgate.net/publication/275031635_Does_Crop_Diversification_Enhance_Household_Food_Security_Evidence_from_Rural_Ethiopia,
http://www.fao.org/docrep/U8050T/U8050T06.HTM

5.3 Gender

Empowering women is a central motive of the PRO-PLANTEURS project. And indeed, when collecting data and information, farmers in the sample have confirmed the assumption that there is a steep power imbalance between men and women. First, much of the workload in cocoa production is achieved by women, who grow and harvest the beans alongside their male household members. They, however, are not represented on a formal level of the value chain as cooperative members.
Surely this under-representation stems from the fact that women do not possess their own land, resulting in production quantities in cocoa, but also in food crops being almost entirely achieved by men. And of course, when owning less than 1 hectare of land on average, the opportunities for commercial food crop farming are limited. Consequently, men earn the lion's share of household income leaving women in the role of the dependent beneficiary of their mercy.
To achieve a significant impact on enabling women to get their fair share of the earnings and formal influence, drastic changes in the traditional societal patterns will be necessary – land ownership surely being on top of that list. Though the project can clearly not achieve this, there are contributions that the project can make that could serve to have a trickledown effect.
For example, it has been observed that there are very few female lead farmers and no female service providers. The few women, who are officially members of the cooperatives and grow cocoa on their own land, have reported feeling intimidated by the absence of women in the value chain that serves to re-affirm their exotic status as female farmers. The project, in choosing its beneficiaries for lead farmer and service provider training, should put an emphasis on assuring that a fair share of women are trainees and equipped with the knowledge and means to confidently perform in their aspired roles as female value chain actors of all sorts. In focus group discussions, many women felt it preferable to have female leaders and role models – while at the same time finding it absurd to assume that role, lacking the confidence they would need to dare to take even the first step. Identifying capable women who can imagine standing up and acting as role models would be a first step that is within the means of the project to implement. And then equipping them with the fundamentals that would enable them to stand their ground in the presence of their male colleagues and friends surely is more than many of the women we have encountered can currently imagine.
In the long run, fostering women on the bottom of the value chain to become more active and confident surely should go hand in hand with political and societal adjustments enabling women to assume roles and responsibilities they have not previously achieved. Seeing that the women who play an active part in the value chain are also reflected in official positions, as is suggested in their roles in the cooperative staff, strengthening the base would also eventually result in a stronger female representation in management levels.

5.4 Generational Considerations

The farming population is fairly old, not offering young people many entry points to get involved in cocoa production in a commercial manner. Similar to what was observed with gender conflicts, this stems from the fact that older people tend to own the land on which agricultural crops are cultivated. And from what we have seen, as long as the young are not in possession of land, they will have difficulties to gain ground and become significant value chain actors.
The project suggested entry point of training young farmers to become service providers (i.e. to concentrate on income opportunities other than primary cocoa production) is a good consideration. However, like the productivity objective, careful consideration should be made on what connections and dependencies in the sector would help or inhibit the young farmers to benefit from additional knowledge.
The current service providers we encountered during the research phase reported low payment commitment of services that they provided to cocoa farmers in their area. Clearly, when relating this to the fact that farmers already have difficulty paying for their own living, they would have a high tendency to default on their service providers.
Therefore, before training 300 young farmers to enter the sector with businesses in service provision, there should be a solid plan on how these businesses will generate profit and become successful value chain actors.

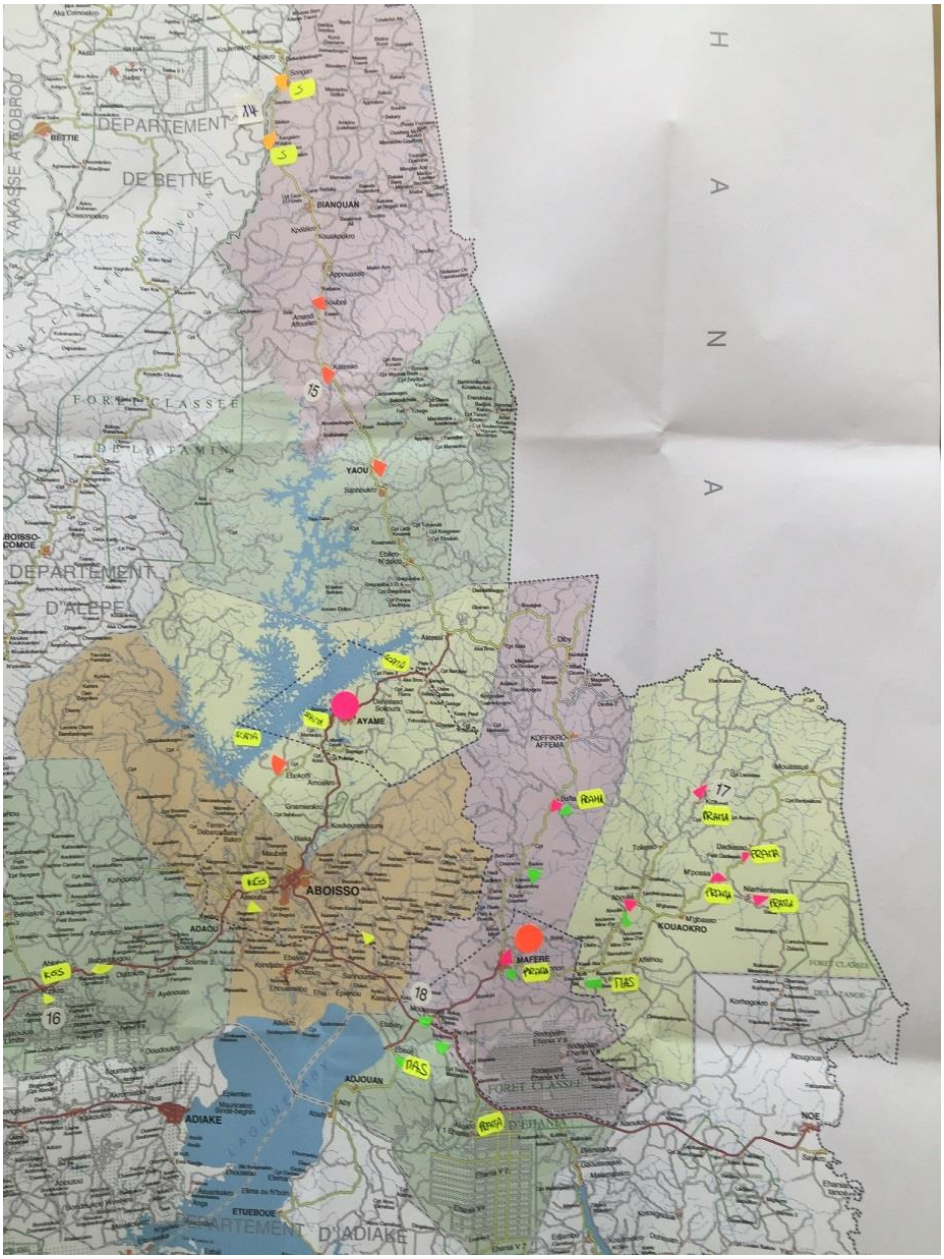
6 Conclusion

The baseline study has been carried out with great success, achieving a significant amount of insight and giving solid recommendations on some of the important strategic questions of the PRO-PLANTEURS project. Drawing conclusions from the study's results, base values have been found and many of the indicators have been equipped with target values (compare e.g. O1 to O3).
Other indicators have been argued to be inapplicable in their current form (compare e.g. indicator R1.3 or R3.2) and propositions for an adjustment to the indicators have been made.
A third category of indicators were those that were already achieved. The suggestion was made to entirely remove them from the project's monitoring system (compare indicators O4 and R3.1).
It is important to notice that a baseline study only provides the first step for the implementation and monitoring of a project. Repeated monitoring and evaluation of the progress achieved must be done. A mid-line and end-line evaluation should be executed to inform the project of possible adverse effects and changing conditions on the ground that potentially require adjustments to the projects activities.
Also, if the budget allows, a great addition to the upcoming monitoring system would be to collect some observational data, for example to follow some farmers throughout the project's life cycle, collecting qualitative information on how the project impacts their lives.

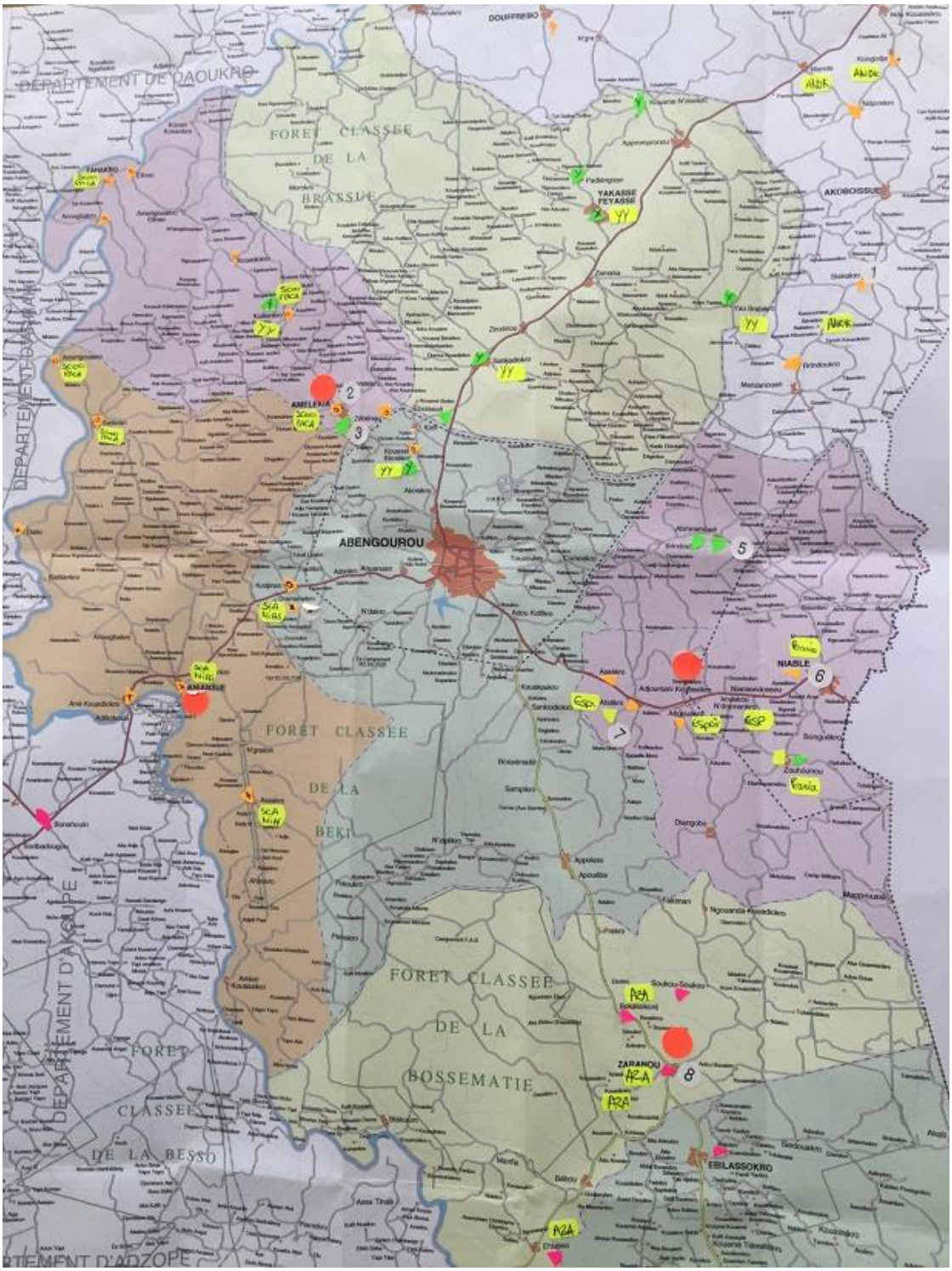
7 Annex

7.1 Annex I: Maps of the Three Regions

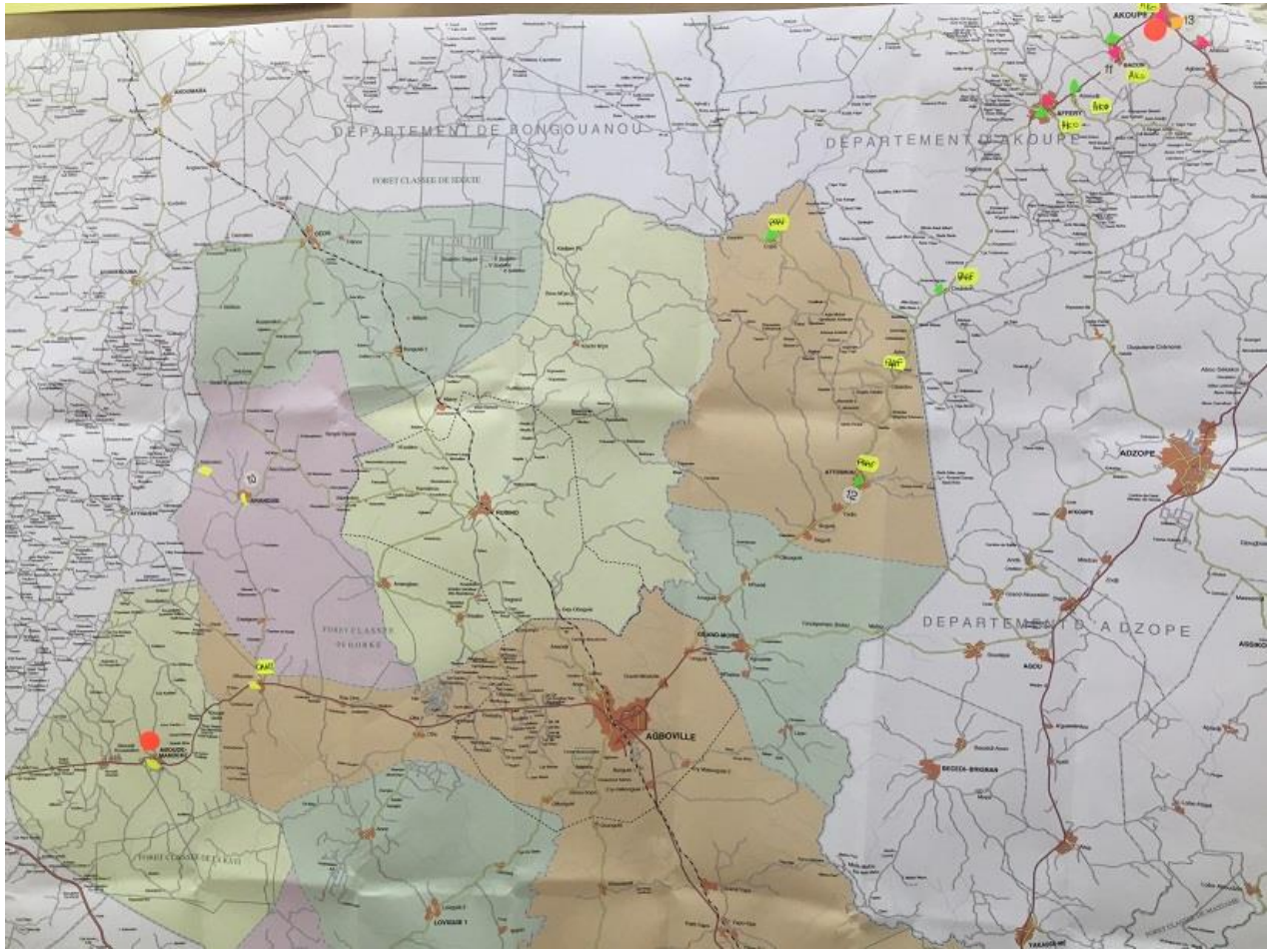
Aboisso



Abengourou


DEPARTEMENT DE DAOUKRO
FORET CLASSEE DE LA BRASSUE
YAKASSE FEYASSE
AKOBOISSUE
AMELEKIA
ABENGOUROU
NIABLE
ZARANOU
EBILASSOKRO
FORET CLASSEE DE LA BEKI
FORET CLASSEE DE LA BOSSEMATIE
FORET CLASSEE DE LA BESSO
DEPARTEMENT D'AKOUPE
DEPARTEMENT D'ADZOPE

Agboville


DEPARTEMENT DE DONGOUANOU
DEPARTEMENT D'AKOUPE
DEPARTEMENT D'ADZOPE
AGBOVILLE
ADZOPE
AKOUPE

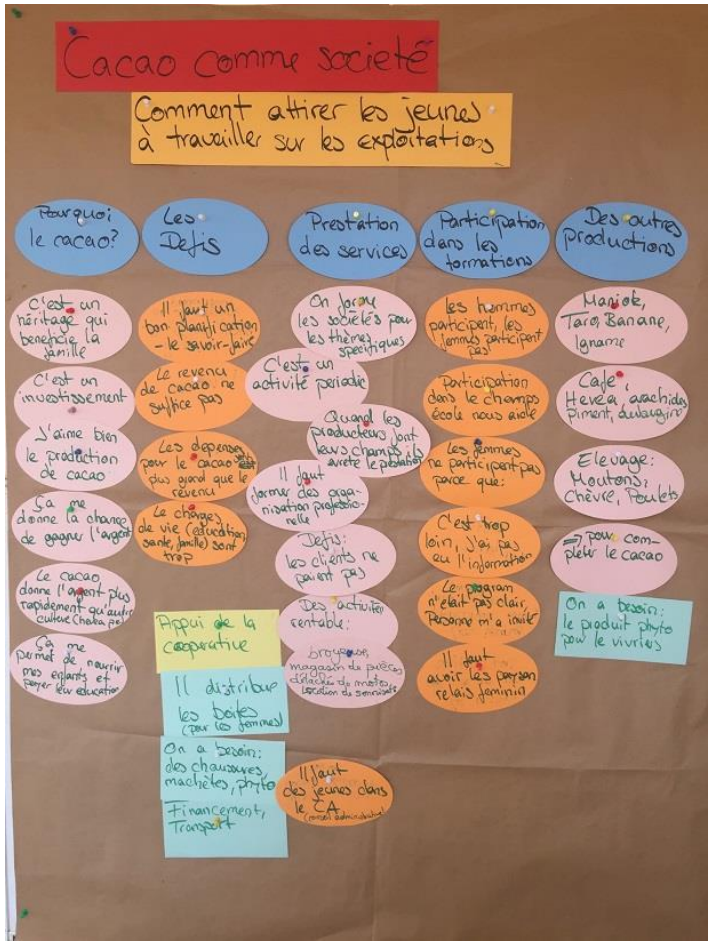
7.2 Annex II: Focus Group Discussions

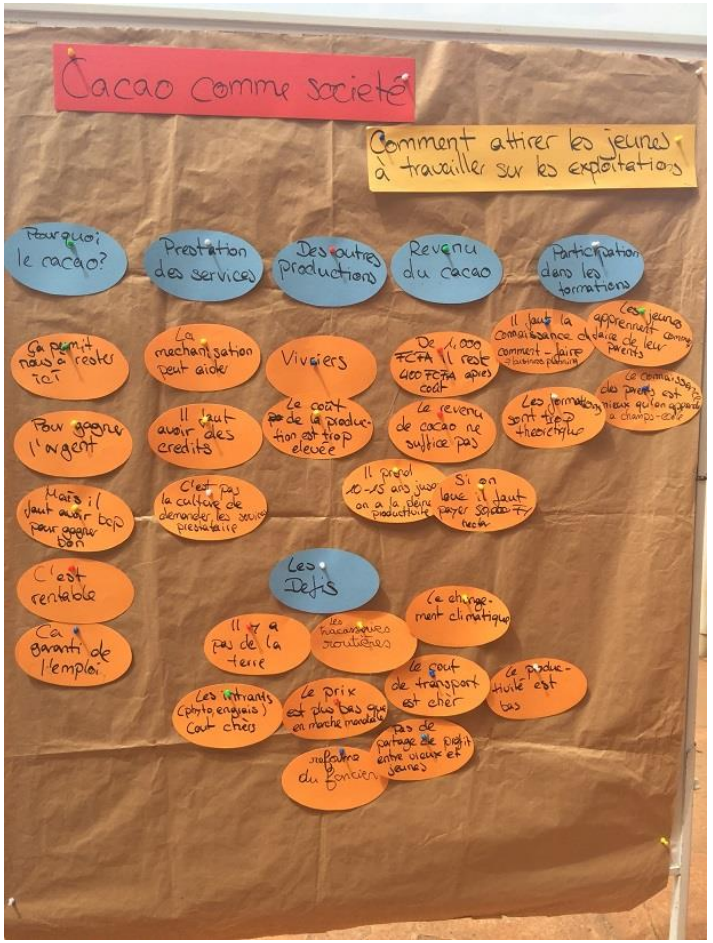
	Topic	Date	Cooperative	Place	No. of Participants	Gender Balance	Age Balance	Questions Discussed
1.	Services of the Cooperatives	03. Feb 16	CAAM	Aboude-Mandeke, Agboville	8 Persons	6 men, 2 women	6 people above 40, 2 below	1. Which kind of services does your cooperative provide you with? 2. Do you estimate that those services are provided to you at a reasonable cost? 3. Are the services you receive conclusive or would you wish for additional support? 4. If you need additional support, what would be the most important points to tackle?
		10. Feb 16	COOPAZA	Zaranou, Abengourou	11 Participants	7 men, 4 women	All above 40 yrs	
2.	Application of GAP	03. Feb 16	CAAM	Aboude-Mandeke, Agboville	8 Persons	6 men, 2 women	6 people above 40, 2 below	1. Which are the good agricultural practices that you know of? 2. Which of those practices do you apply and which do you not apply and why? 3. Under which conditions would you be able to apply GAP's to the best of your knowledge?
		10. Feb 16	COOPAZA	Zaranou, Abengourou	11 Participants	7 men, 4 women	All above 40 yrs	
3.	Diversification of Crop Cultivation and other IGA's	04. Feb 16	SCAMA	Ayame, Aboisso	10 Participants	7 men, 3 women	3 below 40, 7 above	1. Which crops other than cocoa do you grow? 2. Which crops other than cocoa do you sell? 3. Which crops other than cocoa would you like to produce and where do you see its advantages? 4. What are your limitation to producing more and other crops?
		09. Feb 16	SCANIAS	Aniasue, Abengourou	10 Participants	5 men, 5 women	3 exactly 40 yrs, the rest above	
4.	The division of household income along gender lines	04. Feb 16	COOPRAMA	Mafere, Aboisso	6 Participants	All women	5 below 40 years, 1 above	1. Who in your household is in charge of finances? 2. Is there differences of who maintains the money for different sales? 3. Which is your principal expenditures and who covers for them
		08. Feb 16	ESPOIR	Angouakro, Abengourou	7 Participants	All women	1 below 40 years, 6 above	
5.	Auto-consumption of self-produced food crops	04. Feb 16	COOPRAMA	Mafere, Aboisso	6 Participants	All women	5 below 40 years, 1 above	1. Do you succeed to produce some or all of the crops that you eat? 2. If not, what are your obstacles to using your land to provide you with sufficient food? 3. When you produce crops – do you eat or sell them?
		08. Feb 16	ESPOIR	Angouakro, Abengourou	7 Participants	All women	1 below 40 years, 6 above	
6.	Management Positions in Cooperatives for Women	04. Feb 16	COOPRAMA	Mafere, Aboisso	6 Participants	All women	5 below 40 years, 1 above	1. Would you be interested in accessing a leading position at your cooperative? 2. If you were in charge – what would you change?
		08. Feb 16	ESPOIR	Angouakro, Abengourou	7 Participants	All women	1 below 40 years, 6 above	
7.	Needs of young farmers in the cocoa value chain	09. Feb 16	COOPAAKO	Akoupe, Agboville	12 Participants	6 men, 6 women	10 max 40 years old, 2 above	1. Which type of activities related to cocoa are interesting for you as young farmers? 2. Do you have the impression that cocoa has the potential to provide you with a steady and lucrative income? 3. Which crops other than cocoa would be interesting for you to venture into? 4. How have you acquired your fields (inherited vs. bought)?
		11. Feb 16	SCOOPAKA	Amelekia, Abengourou	10 Participants	5 men, 5 women	9 max 40 years old, 1 above	

								5. Have you ever participated in any professional coca training and if not, where stems your knowledge of cocoa production? 6. Would you consider becoming a professional service provider for cocoa related activities? If this also interesting for women?

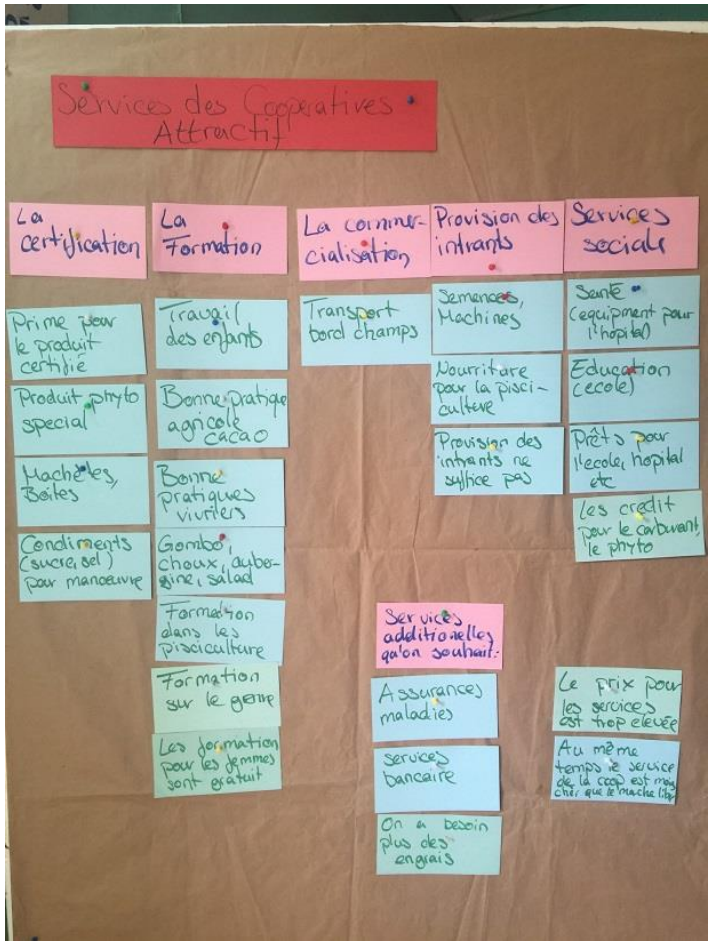
	Topic	Results
1.	**Services of the Cooperatives**	Good range of complimentary services as the provision of transport, inputs, trainings, credits etc. Participants assessed their coops a being very helpful and fair Frequent complains about the limited availability of inputs as for example phytosanitary products
2.	**Application of GAP**	They know all the GAP's in detail and have often received several trainings However they apply only what is 1) easy and 2) inexpensive They like most, what produces immediate reward like post-harvest practice They criticise most trainings for teaching skills but ignoring the main obstacles which are not skills related
3.	**Diversification of Crop Cultivation and other IGA's**	Broad range of products (cassava, maize, aubergines, okra, pepper, yam, tomatoes, onions, rice, beans, ground nuts and rubber) Limited professionalization but some groups of youngster specialise on commercial production Repeating complaints about powerful obstacles (no access to water, heat, limited resources) However, farming seen as a big chance – if those obstacles can be tackled, perceived high income potential
4.	**The division of household income along gender lines**	HH expenditures are shared between men and women, each taking care of different items (men of staple food, women of condiments) and some items being shared (health, education) Most HH experience lean seasons when they cannot afford their usual standard products Women don't know the exact income of their husbands but equally husbands don't know the exact income of their wives either
5.	**Auto-consumption of self-produced food crops**	Almost all HH grow vegetables and/or raise animals for self-consumption Production for self-consumption works well for certain months of the year (April – September) It does not work in the lean season (November – March) at all as the climatic conditions are unfavourable
6.	**Management Positions in Cooperatives for Women**	Diffuse feeling that "things would change" if women had more to say however no consciousness for women specific needs and relating services Limited qualification (education) to be able to apply for certain positions Shyness towards the thought of holding positions with responsibility
7.	**Needs of young farmers in the cocoa value chain**	Strong business interest – cocoa as an income generating activity Flexibility to consider alternative methods as acting as service providers for certain agricultural activities Expression of generational conflict à access to land only after the parent generation deceases

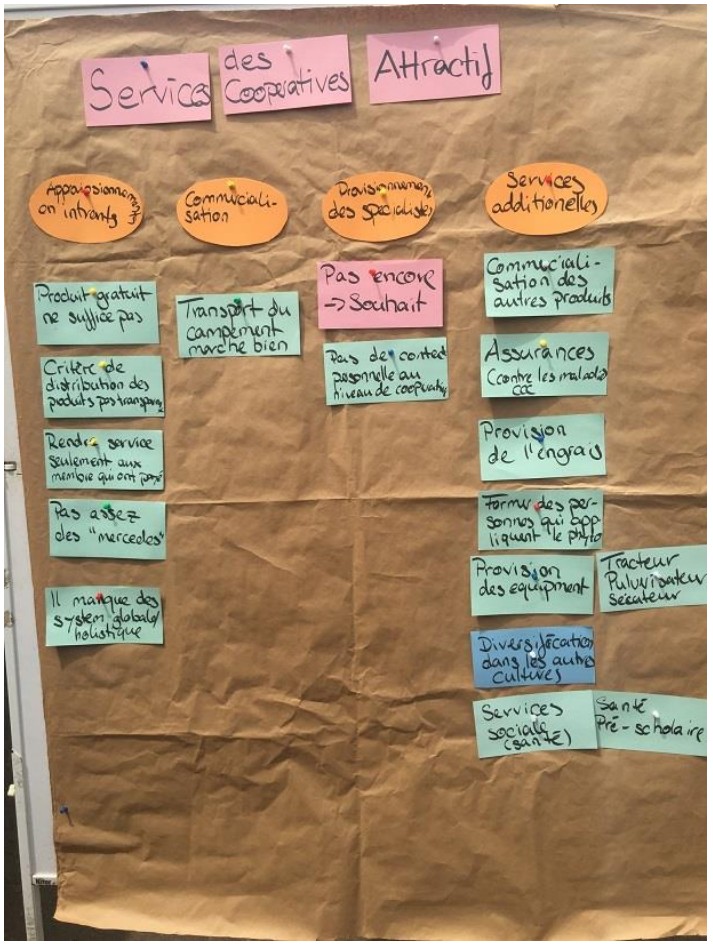
Documentation of Focus Groups on Generational Questions



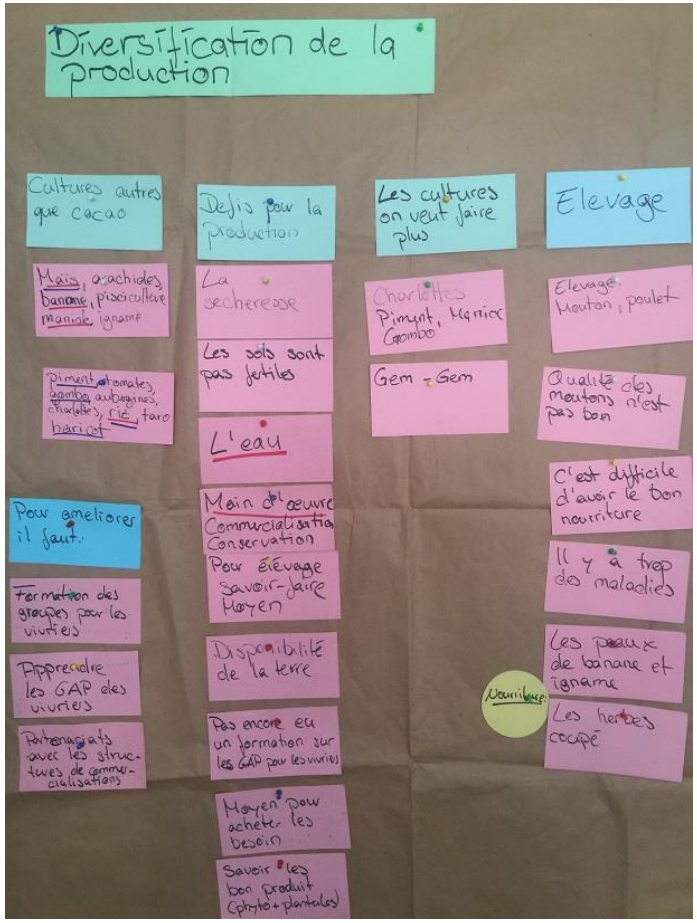


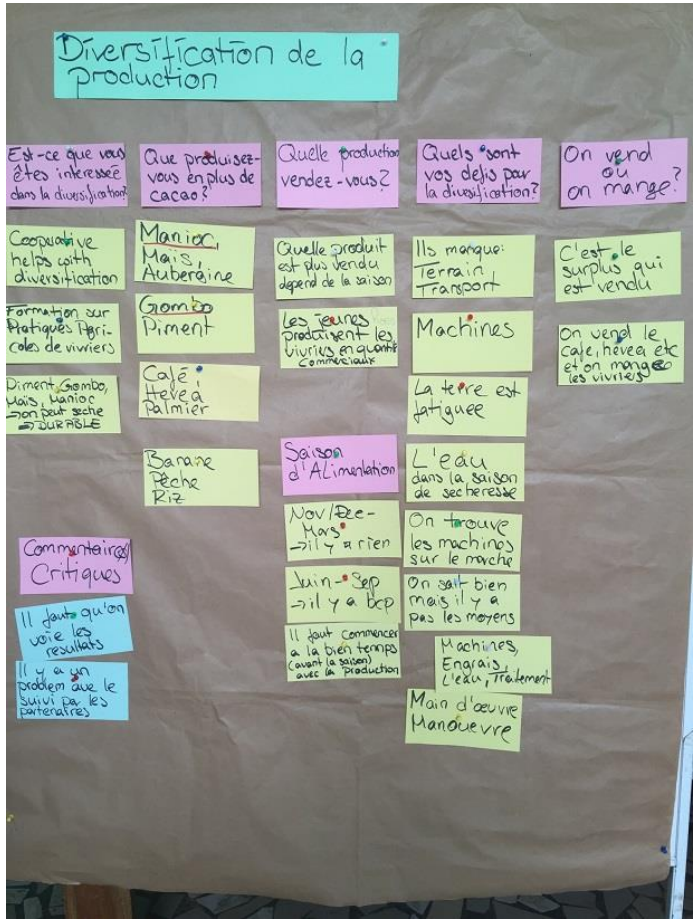
Documentation of Focus Groups on Member Services of Cooperatives





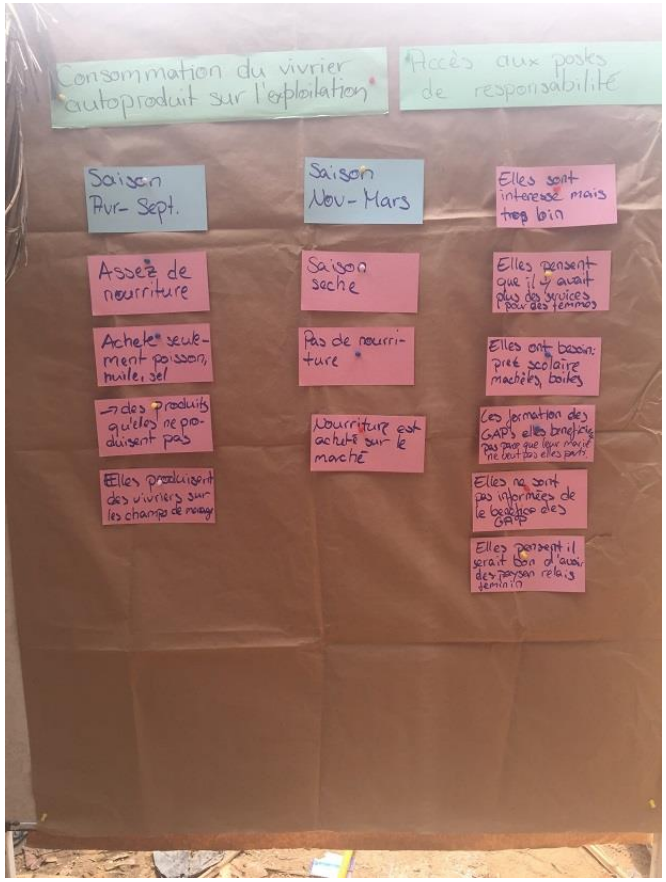
Documentation of Focus Groups on Diversification of the Production

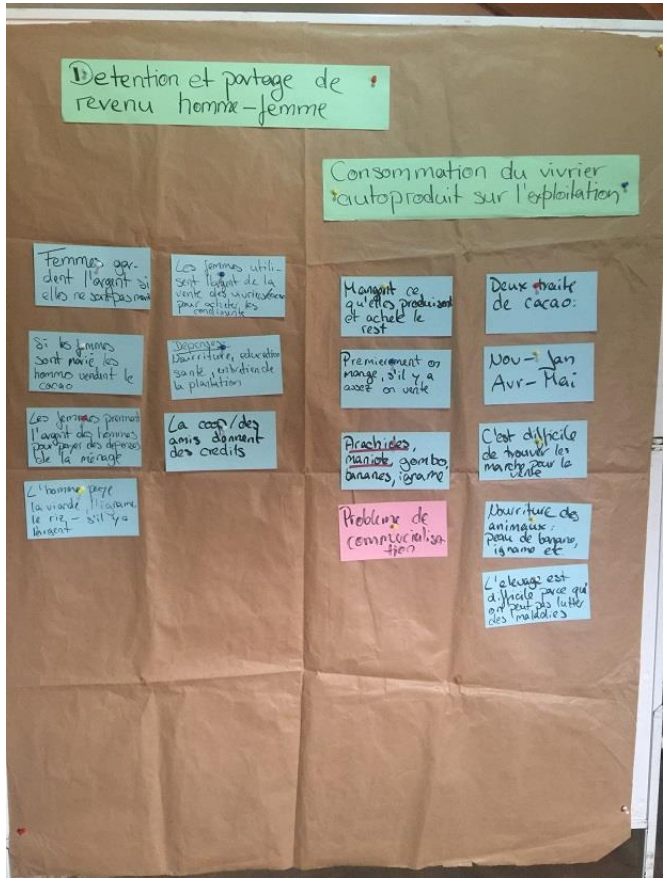




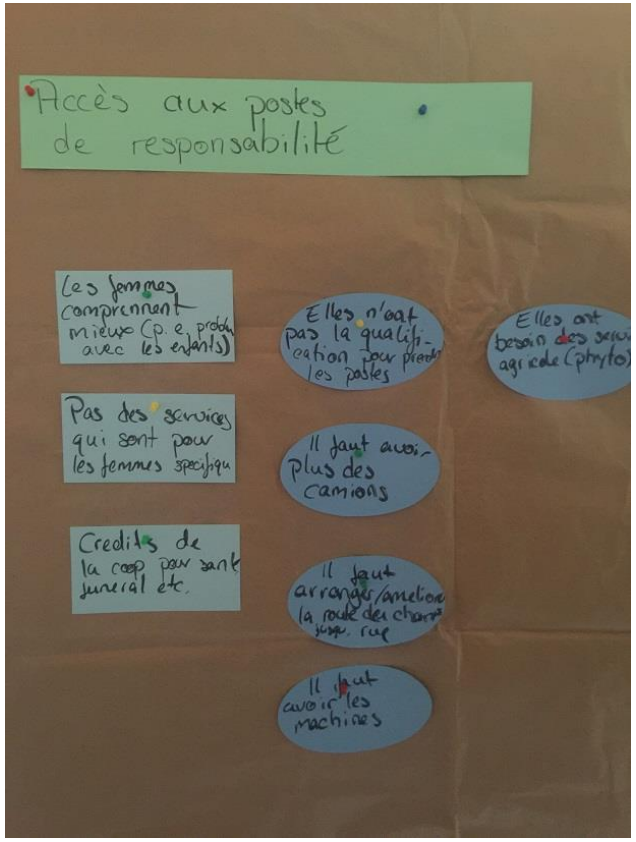
Documentation of Focus Groups on Good Agricultural Practices

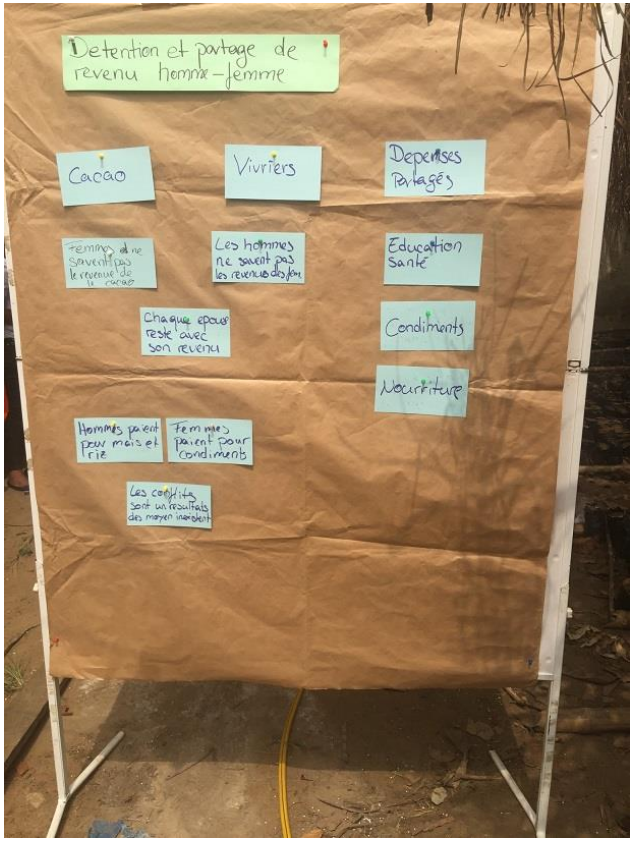
Documentation of Focus Groups on Nutritional Aspects & Male/Female Revenue Division





Documentation of Focus Groups on Male/Female Revenue Division & Access to Leadership Positions





7.3 Annex III: Monitoring Plan

Indicator Monitoring Plan PP

#	BMZ	Indicator	Comment	Required data	Methods of data collection	Data Source	Frequency	Status 2016	Status 2017	Status 2018	Status 2019	Status 2020	Attribution	Responsible for measuring	How often and until when	Baseline
Direct impact																
O1		80% of the supported producers and their families (20.000) have increased their revenues of sustainable cocoa production of at least 740,000 Franc CFA/year		Revenue from cocoa (FCFA/year)	Survey	Farmer	**Baseline, Midline, Endline**	1,500,000								1,500,000
O2		80% of the producers and their families supported by actions have increased their incomes from diversified food crop products by at least 650,000 Franc CFA/year		Revenue from diversified Crop (FCFA/year)	Survey	Farmer	**Baseline, Midline, Endline**	2,000,000								**2,000,000**
O3		# of women from supported HH who have improved their revenues from diversified agricultural products	Project needs to define budget and activities to set target	Revenue from diversified Crop (FCFA/year)	Survey	Farmer	**Baseline, Midline, Endline**									

O4		Diversity in the diet of women and children has increased by intake of 2 to 5 food groups every day. (Reference: household "dietary diversity score [DDS]")	Has been achieved - remove	Score	Survey	Farmer	**Baseline, Midline, Endline**	4,6								**4,6**
Intervention Field 2																
R1: 1		Up to 50 farmer organizations are registered as cooperative societies per the harmonized cooperative law (OHADA)	Remove	Number of Coops		Cooperative		50								20
R1: 2		50 farmer organisations have developed business plans, development plans and commercial organisational structures	Taking all 10 documents as a basis, only full implementation of all is considered achieved.	Number of Coops	Records	Cooperative	**Annual**	7								7
R1: 3		The share of women in management positions of farmer organizations increased by XX%						24%								24
R1: 4		Percentage of female lead farmers (paysans relais) reaches 20%		Number of women	Records	Cooperative	Annual	7%								7

Intervention Field 2															
R2: 1		XX% of the female and male producers have increased the cocoa production yield by XX%		Metric tons of cocoa per hectare	Survey, Observations	Farmer	**Annual? Baseline, Midline, Endline**	0.3							0.3
R2: 2		Number of producer organisations recommending GAP, selected plant material and soil fertility improving measures to their members as integral part of their services	Remove												
R2: 3		At least 30% of participants on trainings about productivity increase, FBS, CCE, IPM or Biodiversity are women	Not a baseline indicator		Training Records	Project Records	**Quarterly**	0							-
R2: 4		240 young entrepreneurs, of which 60 women, are specialized and trained service providers in the cacao sector (trimming trees, grafting, professional leading of a tree nursery, integrated pest management)		Number of entrepreneurs	Training Records Cooperative Records	**Cooperative**	**Annually**	7 men 0 women							7 men 0 women

R2: 5		20% of producers apply agroforestry systems which also include native shade trees	The notion "agroforestry system" requires further definition to identify beneficiaries that implement according systems	Percentage of farmers	Survey Project records of tree distribution	**Farmer Cooperative**	**Baseline, Midline, Endline**									
Intervention Field 3																
R3: 1		# of households/cocoa families who have diversified/intensified their productions beyond cocoa	**Remove**		Survey	**Farmer**		98%								98
R3: 2		At least 50% of the trained farmer families produce enough and diverse nutritious food to nourish the family and livestock throughout the year	**Remove or adjust**		Survey	**Farmer**		64%								64
R3: 4		% and # of farmers applying improved practices for food crops	**Was not part of baseline**		Survey	**Farmer**	**Midline, Endline**	No data								-
R3: 5		At least 50% of the trained farmer families produce surplus nutritious food crops or small animals that are marketed locally or through the farmer organ-	**Base value exceeds target, whilst the nutritional situation is still unsatisfactory**		Survey, Focus Group Discussions, Observations	**Farmer**	**Baseline, Midline, Endline**	62%								62

		izations														
Intervention Field 4																
R4: 1		XX cooperatives are members of information platforms to share lessons learnt and good practices with their communities														

7.4 Annex IV: Field Observations

ENQUETEURS

	nombre de ménage	region	nom coopérative	nom section	nb de ménages enquetés la semaine 1 (8 au 14/02)	nb de ménages enquetés la semaine 2 (15 au 21/02)	nb de ménages enquetés la semaine 3 (22 au 28/02)	TOTAL	Commentaire SEMAINE ENQUETE 1	Commentaire SEMAINE ENQUETE 2	Commentaire SEMAINE ENQUETE 3
1 Charlene BOULON	6	AGBOVILLE	CAAM	Offumpo	6			30	manque code producteur Offumpo --> à completer ; Q1, D3.2: mettre 0 si pas mentionné, ne pas laisser la case vide; B1.2 mettre 0 si pas de cacao pour Q2 ; questionnaire2: bien completer B1.2.a et B1.2.b. ---> questionnaires en attente de complément de réponse	Offumpo beaucoup ne savent pas qu'ils sont certifiés mais en fait ils sont fairetrade. Affery: l'enquetrice a pris une liste a la coopérative car erreur sur la liste transmise par la coopérative (les producteurs étaient d'akoupé et non afféry) Asseudji: le code producteur est UTZ (+1 faire trade + 1 non certifié). A affery ils sont tous certifié UTZ Difficulté pour les producteurs à estimer les arbres , ils le font par parcelles puis font la somme	ok
	6	AGBOVILLE	COOPAAKO	Affery		6					
	6	AGBOVILLE	COOPAAKO	Bacon			6				
	6	AGBOVILLE	COOPAAKO	Akoupe	6						
	6	AGBOVILLE	COOPAAKO	Asseudji		6					
total enqueteur 1	*30*										
2 Adou LANDRY	7	AGBOVILLE	COOPAAF	Attobrou		3	4	32	questionnaire2: bien completer B1.2.a et B1.2.b et B.3.1. --> questionnaires en attente de complément de réponse	Attobrou: la majorité des planteurs ne livrent plus à la coop car ils veulent créer leur propre cooperative (ils ne sont pas satisfait des services et notemment sur le plan social). En 2015, 7 roducteurs ont livré a la coop et ont été enquétésmenée, ils veulent creer eux meme leur propre coop	ok
	9	AGBOVILLE	COOPAAF	Acho		7	2				
	7	AGBOVILLE	COOPAAF	Copa	5	2					
	7	AGBOVILLE	COOPAAF	Dodokoi	7					COOPAAF certification rainforest: si le prod n'a pas de numero c'est qu'il n'est pas certifié. Dans la liste des contacts transmise par la coopérative ils ont tous un numero donc ils	
	2	ABENGOUROU	YEYOBIE	Yao babikro			2				
total enqueteur 2	*32*										

										sont TOUS certifiés mais parfois ils ignorent qu'ils le sont	
3 Parfait KOUASSI	8	ABOISSO	KGS	Assouba		7		30	Q1: D31 et D32, mettre 0 si pas mentionné par le producteur; qqfois il entoure la reponse mais ne la recopie pas dans les cases : relire et verifier les Q	RAS hormis difficulté de deplacement	ok
	7	ABOISSO	KGS	N'zikro			8				
	8	ABOISSO	SCAMA	Ayame/Yaou Soubre	7	1					
	7	ABOISSO	SCAMA	Piste 1/2/3/4/5/Bilekro	3	4					
total enqueteur 3	*30*										
4 KONAN Dick Joseph	5	ABOISSO	COOPAMAS	Kouamekro	2	3		30	Q1: D31 et D32, mettre 0 si pas mentionné par le producteur ; D5.4.a est souvent non complété, manque code producteur BONDOUHO KOFFI Rene, Q2: E7.1 café avec pain ne comporte pas de produit laitié code 10	akakro: village detruit par un deputé, donc chacun habite dans son champs, donc difficile d'acces	ok
	5	ABOISSO	COOPAMAS	Eboue			5				
	10	ABOISSO	COOPRAMA	Akakro		6	4				
	10	ABOISSO	COOPRAMA	Mafere	10						
total enqueteur 4	*30*										
5 KOUASSI Mathias	6	ABOISSO	COOPRAMA	Mpossa		6		30	questionnaire2: bien completer B1.2.a et B1.2.b. Il a été malade (paludisme) pendant 2 jours.	dans toutes les sections qui sont proche de la frontière ghaneene : pas beaucoup d'activités en ce moment donc les producteurs hommes voyagent. C'est pourquoi l'enqueteur a trouvé plus de productrices membres de la cooperative que d'hommes pour repondre au questionnaire 1. L'enqueteur a recu une liste de la cooperative de 103 noms car sur la liste transmise au départ: beaucoup en voyage au ghana, decedé, absent pour funerailles, distant de + 20km	ok
	6	ABOISSO	COOPRAMA	Niomielessa	6						
	5	ABOISSO	COOPRAMA	Kotoka			6				
	7	ABOISSO	COOPRAMA	Dadiesso		2	4				
	6	ABOISSO	COOPRAMA	Bafia	6						
total enqueteur 5	*30*										
6 OUATTARA Moumouni	5	ABENGOUROU	PRANIA	Ahondjo			8	30	Oublie de remplir la date des questionnaires; Q1, B11: ne marque jamais homme polygame alors que plusieurs femmes; G14: ne remplit pas les cases; D31 et D32: mettre 0 si pas mentionné par le producteur; Q2: il faut mettre le meme code producteur sur les 2 questionnaires.	ok	ok
	6	ABENGOUROU	PRANIA	Zouhounou			3				
	13	ABENGOUROU	ESPOIR	Affalikro		5					
		ABENGOUROU	ESPOIR	N'dramankro		3					

		ABENGOUROU	ESPOIR	Angouakro	4	1					
	6	ABENGOUROU	COOPAAZA	Bokakokore	6						
total enqueteur 6	30										
7 ADEKE Innocent	8	ABENGOUROU	COOPAAZA	Ehuasso/ Mahounou			8	32	Excellent!	ok	ok
	8	ABENGOUROU	COOPAAZA	Zaranou	8						
	7	ABENGOUROU	COOPAAZA	Soukou-Soukou	4	3					
	7	ABENGOUROU	COOPAAZA	Mbasso		7					
		ABENGOUROU	YEYOBIE	Yao babikro			2				
total enqueteur 7	*30*										
8 NGOUAN Jonas	8	ABENGOUROU	SCOOPAACA	Amelikia			8	32	Il n'y a pas de code de producteur; Q1, D31 et D32, mettre 0 si pas mentionné; Q1 et Q2 laissez la case vide pour le lien de parenté entre les deux interrogés si il s'agit de la meme personne.	ok	ok
	7	ABENGOUROU	SCOOPAACA	Amangouakro	7						
	7	ABENGOUROU	SCOOPAACA	Tahakro	2	5					
	8	ABENGOUROU	SCOOPAACA	Koitenkro		8					
		ABENGOUROU	YEYOBIE	Zinzenou			2				
total enqueteur 8	30										
9 AHOUTOU Alexis	24	ABENGOUROU	SCANIA	Aniansue	8			32	Q1 B15 et B16: le nombre de personne qui constitue le menage ne correspond pas au detail des personnes femmes, hommes, enfants. --> je retourne les questionnaires pour correction.	ok	ok
		ABENGOUROU	SCANIA	Dramanekro		8					
		ABENGOUROU	SCANIA	Assakro	4	3					
	6	ABENGOUROU	SCOOPACA	satikran			7				
		ABENGOUROU	YEYOBIE	Zinzenou			2				
total enqueteur 9	30										

10 Engueran DJAHA	30	ABENGOUROU	ANOKLON	Nguessankro		5	1	32	Q1E1 et Q2C1 n'a pas rempli les cultures si elles ne sont pas vendues: retour des questionnaires pour correction; Q2 B12a, B12b souvent pas rempli.	ok	ok
		ABENGOUROU	ANOKLON	Kotorosso			7				
		ABENGOUROU	ANOKLON	Kongodia	4						
		ABENGOUROU	ANOKLON	Nianda	2	5					
		ABENGOUROU	ANOKLON	Emanzoukro	6						
		ABENGOUROU	YEYOBIE	Yao babikro			2				
total enqueteur 10	30										
11 Julien NGUESSAN	30	ABENGOUROU	YEYOBIE	Koitenkro		4	2	32	Q1 D2,, mettre 8888 quand ils ne connaissent pas le nombre d'arbres d'ombrages; le lien entre le personne du Q1 et du Q2 ne correspond pas regulierement : retour de ces questionnaires pour validation;	ok	ok
		ABENGOUROU	YEYOBIE	Yakasse	6						
		ABENGOUROU	YEYOBIE	Kouassibeniekro		6					
		ABENGOUROU	YEYOBIE	Sankadiokro			6				
		ABENGOUROU	YEYOBIE	Kouameziankro	6						
		ABENGOUROU	YEYOBIE	Zinzenou			2				
total enqueteur 11	30										
12	*0*	*ABENGOUROU*	*YEYOBIE*	*zinzenou*				*0*	*ENQUETEUR NON RECRUTE*		
		ABENGOUROU	*YEYOBIE*	*Yao Babikro*							
		ABENGOUROU	*YEYOBIE*								
total enqueteur 12	*0*										
13 OUASSOU Hilarion	15	ABENGOUROU	CAPRESSA	Moussakro		6	6	30	Q1 C: mettre les 0; Q1 et Q2 remplir les noms des villages.	Le 1 er jour les gens se cachaient mais ils ont fini par sortir de chez eux quand ils ont compris l'objectif des enquetes	Ok
	15	ABENGOUROU	CAPRESSA	Apprompron	10	4					
		ABENGOUROU	CAPRESSA	Akacomoekro			4				
total enqueteur 13	30										

14 BROU Frédéric	16	ABENGOUROU	CAPRESSA	Borobo		9	7	32	Q2, D1: mettre 2 si la reponse est non et pas 0. Q1, B1.7 souvent oublié de repondre	Pas de code section pour Borobo. Borobo = 103; le nombre de personne dans le menage ne correspond pas au detail!	le nombre de personne dans le menage ne correspond pas au detail!
	7	ABOISSO	SCOOPES	Songan	7	3					
	7	ABOISSO	SCOOPES	Ndakro	4						
	2	ABENGOUROU	YEYOBIE	Yao Babikro			2				
total enqueteur 14	32										
								404			
TOTAL MENAGES	**394**				**146**	**138**	**120**	**404**			

7.5 Annex V: Baseline Power Point Presentation

como/consult

PRO-PLANTEURS
Baseline Study – Integrated final presentation

PRO-PLANTEURS – *Professionalizing Cocoa Producers*

Hamburg, 24 October 2016
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