MOBILIZING COMMUNITY ACTION AND PROMOTING OPPORTUNITIES FOR YOUTH IN GHANA'S COCOA-GROWING COMMUNITIES (MOCA)

Baseline Survey Report

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This report is made possible by the support of the United States Department of Labor (USDOL). The contents of this report are the sole responsibility of Winrock International and do not necessarily reflect the views of USDOL or the United States Government.

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Acronyms and Abbreviations

CAHR	Children at High Risk
CAPs	Community Action Plans
CL	Child Labor
CLFZ	Child Labor Free Zones
CPC	Child Protection Committee
CRI	Child Rights International
EAs	Enumeration Area(s)
FAO	Food and Agriculture Organization
GLSS	Ghana Living Standards Survey
GSS	Ghana Statistical Service
HCL	Hazardous Child Labor
HHs	Households
ILO	International Labor Organization
MOCA	Mobilizing Community Action and Promoting Opportunities for Youth in Ghana's Cocoa-Growing Communities
NCLMC	National Child Labor Monitoring Committee
ODK	Open Data Kit
PPS	Proportionate to the Population Size
PSU	Primary Sampling Unit
USDOL	United States Department of Labor
VSLA	Village Savings and Loans Association
WFCL	Worst forms of Child Labor

Executive Summary

INTRODUCTION

This report presents findings of the baseline study of the Mobilizing Community Action and Promoting Opportunities for Youth in Ghana's Cocoa-Growing Communities (MOCA) project; an initiative of Winrock International with funding from United States Department of Labor (USDOL). The project which is to run for four years uses the integrated area based approach to reduce child labor and hazardous child labor in cocoa growing communities in Ghana. It seeks to empower 280 community leaders to design and implement Community Action Plans (CAPs) that address child labor; help 3,200 youth gain relevant skills and get on a path toward acceptable work; and give 1,600 female family representatives from the youths' households access to livelihood services to increase household income. The project operates in two (2) regions: Ashanti and Western Regions and four (4) districts, Atwima Mponua and Atwima Nwabiagya (Ashanti Region) and Sefwi Wiawso and Wassa Amenfi West (Western Region). The baseline study serves two main purposes:

1) to provide information required to inform MOCA program strategies aimed at addressing child labor through an Integrated Area Based Approach in cocoa-growing areas, with a focus on child labor in cocoa production

2) to establish baseline measurements and project targets as a basis for comparison to data collected at the end of the project. The baseline study information will contribute to achieving MOCA's aspirational goal of making substantial progress toward realizing Child Labor Free Zones (CLFZ) in target cocoa-growing communities.

To achieve the objectives of this study, a household survey was conducted with representative sample of 936 caregivers/ household heads and 2,025 children aged 5 to 17 years living in the households. Data collection took place between January 23rd and February 10th 2017 in 55 census enumeration areas across four districts: Atwima Mponua and Atwima Nwabiagya (Ashanti Region) and Sefwi Wiawso and Wassa Amenfi West (Western Region).

KEY FINDINGS

The study has the following key findings:

- 53% of household members are less than 18 years of age. Of these, 40% are between 5 and 17 years of age.
- The proportion of male (50%) and female (49%) household members in agricultural households are about the same.
- 70.6% of households are headed by males while 29.4% are headed by females.
- The average household size is 7.3 persons with no differences between male- and female-headed households. Wassa Amenfi West has the largest average household size (8.1) while Atwima Nwabiagya has the smallest household size (6.2).
- The self-reported literacy rate within households is 59%, with the literacy rate for males (68%) higher than females (51%). Sefwi Wiawso has the highest proportion of male (72%) and female (54%) who reported being literate compared to the rest of the districts.
- Less than half of farmers live in small houses (47%) followed by about a quarter (24%) who live in compound houses.
- About 40% of households rely on pipe-borne water outside their homes as their main source of drinking water with about 33% relying on bore holes.
- The majority of households (82%) rely on wood as their main source of fuel. This is observed across the four districts.
- Cell phones (85%) are the most common household asset. This is followed by radio (77%).
- The main source of household income is 'sale of cocoa beans' (82%) followed by sales of other

crops (36%). This pattern can be observed across all of the districts.

- Average household income per year amounts to GH¢7,183.5[1] with average income from cocoa sales amounting GH¢3,848. The survey observed that male-headed households (GH¢8,512.5) earn relatively higher income than female headed households (GH¢3.832.6).
- About 83% of households engage in cocoa cultivation with average output of 1,132.6 Kg in the past 12 months. Wassa Amenfi West reported the highest cocoa output in the last 12 months.
- About 63% of children are engaged in agricultural activities with more boys (69%) than girls (57%). Wassa Amenfi West (71%) recorded the highest proportion of children engaged in agriculture while Atwima Nwabiagya (57%) recorded the least.
- About 85% of children are engaged in cocoa farming activities with more boys (87%) engaged in cocoa farming than girls (83%). Wassa Amenfi West (92%) had the highest proportion of children engaged in cocoa farming while Atwima Nwabiagya (69%) had the least.
- On average children work 6.5 hours per week in agriculture of which 5.8 hours are spent on cocoa farming.
- Two-thirds (76%) of children are engaged in employment with more adolescents (15 to 17 years) engaged in employment (98%) compared to other age groups.
- About 58% of children are engaged in child labor with more boys (63%) than girls (52%). Among age groups, adolescents (15 to 17 years) have a higher level of engagement in child labor (80%) compared to other age groups. Across districts, Wassa Amenfi West has the highest proportion of children engaged in child labor (68%) with Sefwi Wiawso recording the lowest (54%). Child labor activities were recorded in 71% of households surveyed.
- Overall, 54% of children are engaged in hazardous child labor (HCL) with a higher proportion of boys (60%) than girls (47%). Among age groups, adolescents (15 to 17 years) are more frequently engaged in hazardous child labor (80%) compared to other age groups. Similar to the incidence of child labor, hazardous child labor activities are most frequent among households in Wassa Amenfi West (66%) and lowest in Sefwi Wiawso (49%).
- About 39.2% of children are at high risk of engaging in child labor with more girls (44%) than boys (34%) being at risk.
- Overall, 34% of children are exposed to environmental hazards with a slightly higher proportion of boys (35%) than girls (33%).
- About 53% of children reported carrying heavy loads in the last 12 months while 28% of children experienced injuries related to work in agriculture in the last 12 months.

CONCLUSIONS AND RECOMMENDATIONS

The baseline findings indicate that MOCA objectives are relevant to the targeted areas and populations. Based on the data collected, 2.5% of the children in households surveyed are not in child labor or at high risk of engaging in child labor. Thus, over 97.5% of children are either in child labor or at high risk of engaging in child labor. This is compounded by very low outcomes on socio-economic indicators such as household income (GH¢7,183) and large families (approximately 6 persons per household), which are likely to overstretch these limited household resources. The low household income in the intervention districts may lay an excessive burden on parents/caregivers. This situation prevents households from removing their children from child labor and from continuing to support their stay in school. Few resources are available for families to pay for labor in place of using their children. This is further exacerbated by the number of needs that must be met for each member of the household, that is; food, shelter, clothing, and medical expenses among others. Prioritization in the allocation of said resources will certainly be tilted in favor of more basic needs, in many cases to the exclusion of education or vocational training.

The MOCA project should deepen the livelihood services to increase household income to address the demand-side bottlenecks influencing engagement of children in child labor which centers on poverty in the

[1] GH¢1 equals approximately US$0.226.

project communities. This may include empowerment programs such as the village savings and loans associations (VSLA) as well as exposure to other off-farm income generating activities.

The findings also reveal that female headed households are more economically disadvantaged compared to their male counterparts. This is because they have lower cocoa production compared to male headed households since other cash crops (e.g rubber, palm) are not prevalent in the project districts and even where available are not controlled by them. Rather, the female headed households rely on income from non-cash crops which are not as lucrative. The project should therefore target both children in both male and female-headed households as the area-based approach is being adopted by the project.

Considering the high prevalence of child labor and HCL in the project districts, MOCA may consider intensifying the community engagement and sensitization activities to sensitize both parents/caregivers and children on the effect of child labor and hazardous child labor on education, wellbeing and childrens' future prospects. MOCA should also ensure learner-centered and gender-responsive vocational training programs to stimulate the interest of older children above the minimum working age to pursue the identified vocation as a career. Vocational training should therefore create a welcoming environment for older child laborers to foster learning, accommodate different learning styles, and motivate students to accept responsibility for skills training.

The findings of the study show that most children in the MOCA project districts who are child laborers in agriculture are involved in hazardous activities which are harmful to their health, safety and wellbeing. In particular, 44% of children in the project districts are using sharp tools in their work in cocoa and other crop agriculture which are also interfering with their schooling. Similarly, activities of children involved in economic activities is 15%. To achieve project results, the MOCA project should conduct activities to sensitize community actors including households, traditional leaders and school authorities on the dangers of usage of sharp tools by children. Also, MOCA should sensitize households on the negative effect of involvement of children in household work in the project communities. These household work activities may interfere with the children schooling, health and wellbeing.

The study found that hiring of children for farm operations is particularly high in Atwima Nwabiagya compared to other districts. The project should therefore sensitize communities on the negative effects of children for farm operations. The findings revealed that 3% of children reported applying agrochemicals with a higher proportion of children in Wassa Amenfi West exposed to agrochemicals (13% for males and 7% for females) compared to the other districts. The project should therefore intensify sensitization of communities, especially in Wassa Amenfi on the harmful effects of exposure of children to agrochemicals.
The study found that Atwima Mponua and Atwima Nwabiagya are poorer districts and have relatively low percentage of households employing children. There appear to be some unique factors in Atwima Nwabiagya that leads to high employment of children which may require further probing.

The study also finds that children start work in agriculture at about 8.6 years old within the focus districts. The children start time for agricultural work increases with age. The younger children (5-12 years) reported their initial agricultural working age as 7.4 years while older children (15 -17 years) reported their initial working age as 10.7 years; this is not significantly different from the age children begin work in cocoa. This gives an indication that households are increasingly involving their children in agriculture at an earlier age. The project should include in their program a targeted sensitization to create awareness to assure commitment from the grassroots (employers/users, parents, traditional authority) to appreciate the danger children, especially the youngest, are exposed in the conduct of agricultural work including cocoa activities.

1. Introduction

1.1 About the Project

Ghana is faced with the challenge of the elimination of child labor, especially in the cocoa sector. Child labor contributes to a violation of the rights of children to education and protection and it is putting at risk the country's progress by limiting the potential of its workforce. In terms of education, child labor has dire consequences on the quality of education of the victims since either they do not attend school or their schooling suffers due to long hours dedicated to work. Child labor also contributes immensely to loss of high level of skilled manpower in the country, which impacts the level of productivity and income of the population.

It is estimated that in 2014, some 246,400 youth aged 15 to 17 worked in cocoa production in Ghana, with many exposed to one or more hazardous conditions, which include but are not limited to exposure to agrochemicals, weeding, use of harvesting hooks to reach overhead cocoa pods, breaking cocoa pods with a knife and working without protective gear. In addition, 286,600 child laborers aged 12 to14 were moving into the 15 to 17 age bracket, when their risk for hazardous labor will increase. It is further estimated that about 500,000 youth will be particularly vulnerable to hazardous work in Ghana's cocoa-growing areas between 2017 and 2020. Many would have left school already and may not have the skills needed for other, less hazardous work. Although girls work less than boys in cocoa production (36% of girls compared with 45% of boys), the gender margin narrows when assessing child laborers in the entire agriculture sector in cocoa-growing areas 62% girls compared with 70% boys). Because education is typically considered less important for girls, girls' school attendance is lower than boys' (94% compared with 97%).[2]

It is against this background that Winrock International with funding from United States Department of Labor (USDOL) is implementing the project titled Mobilizing Community Action and Promoting Opportunities for Youth in Ghana's Cocoa-Growing Communities (MOCA). The MOCA project is a four-year project using an integrated area based approach to reduce child labor in cocoa growing communities in Ghana. It seeks to empower 280 community leaders to design and implement community action plans (CAPs) that address child labor; help 3,200 youth gain relevant skills and get on a path toward acceptable work; and give 1,600 female family representatives from the youths' households' access to livelihood services to increase household income. The project operates in two (2) regions: Ashanti and Western Region and four (4) districts, Atwima Mponua and Atwima Nwabiagya (Ashanti Region) Sefwi Wiawso and Wasa Amenfi West (Western Region).

To provide knowledge, test the project causal pathways; confirm the targets of key indicators; and lay the groundwork for impact assessment, Winrock International commissioned a baseline study. The study serves two main purposes:

1) to provide information required to inform MOCA program strategies aimed at addressing child labor through an Integrated Area Based Approach in cocoa-growing areas, with a focus on child labor in cocoa production
2) to establish baseline measurements and project targets as a basis for comparison to data collected at the end of the project. The baseline study information will contribute to achieving MOCA's aspirational goal of making substantial progress toward realizing Child Labor Free Zones (CLFZ) in target cocoa-growing communities.

[2] All statistics in this paragraph are from Tulane 2013/2014 survey

1.2 Rationale and Scope of Work

The baseline survey was designed to systematically collect, analyze, and report on conditions among the target population at the outset of the MOCA project. It contributes to the measurement of project outcomes and informs management decisions by:

1) Estimating the prevalence of child labor in 4 target districts by sex and by age group (5 to 14, 15 to 17), including the percentage of children working, the percentage of children in child labor and hazardous child labor (HCL) as well as the proportion of children at high risk (CAHR) of engaging in child labor;
2) Providing baseline values for project indicators,
3) Providing context-related information to plan interventions, which must include, but are not limited to: household and family characteristics for working children and children in child labor (sex, age, ethnicity, education status, work status), formal and non-formal education opportunities for children (5-14, and 15-17), employment opportunities for youth 15-17, and involvement of cocoa processing/buying companies and farmer unions/cooperatives.

1.3 Organization of the Report

The rest of the report is arranged into three chapters. Chapter 2 provides an insight into the overall survey methodology and its implementation. The characteristics of the sampled households and household members are outlined in Chapter 3. The chapter also looks at education characteristics of household members with a focus on children aged 5 to 17 years. The activities of working children including the sectors of employment, occupations in which children are engaged, prevalence of child labor and related characteristics are outlined in this chapter. The chapter also assesses the consequences of work of children on their education, health and safety. The final chapter, (Chapter 4) provides some conclusions and recommendations for programming based on the findings from the study.

2. Baseline Methodology

2.1 Research Design

The baseline survey design utilized a quantitative approach for data collection in the form of a household survey. The survey adopted a stratified multi-stage cluster sampling approach in selecting a representative sample of households in the cocoa growing areas, and all children between 5 and 17 years living in these households. For the purpose of this study, a household was defined as "a person or group of persons who live together in the same house or compound, share the same housekeeping arrangements and are catered for as one unit[3]". The prevalence survey sample was designed to be representative of households in the study area (i.e. four districts). Thus, the study is generalizable to the project districts.

2.2 Sample Size Calculation

The overall sample size for the study area (i.e. all four districts) was calculated using the formula below[4]. The sample was designed to estimate a 50% prevalence rate for child labor with 5% precision at 95% confidence interval, allowing for a design effect of 2 at the study area level. Initial sample size of 768 households was ascertained. This was adjusted for 10% non-response and non-availability, bringing the final sample size to **845** households. Because the sample for Atwima Mponua and Atwima Nwabiagya was small, the sample size was further increased to 990 households to make estimate at the district level meaningful.

Sample size (N) required in estimating prevalence with 95% confidence limit[5]:

$$N = \frac{1.96^2 \times (P)(1-P)}{d^2} \times deft$$

1.96 = Z value for a = 0.05 or 95% confidence limits
P = estimated prevalence (varies, set at 0.5)
d = desired precision (0.05 for ± 5%)
deft = design effect = 2 (estimate) - is related to the fact that we use a two stage-cluster sampling; **deft** is a function of the intra-cluster correlation. In other words, the more the outcomes of the sampling unit per-cluster are homogeneous, the more important "d" is.

$$N = \frac{1.96^2 \times (0.5)\ (1-0.5)}{0.05^2} \times 2 = 768 \text{ (HH) per district}$$

The final sample size derived from this formula is corrected for expected refusals and unavailability of HHs, (10%) = 77

[3] Ghana Statistical Service
[4] The sample size calculation follows the method used in School of Public Health and Tropical Medicine, Tulane University. (2015). *Final Report: 2013/14 Survey Research on Child Labor in West African Cocoa Growing Areas*. Retrieved from http://www.childlaborcocoa.org/images/Payson_Reports/TulaneUniversity-SurveyResearchonChildLaborintheCocoaSector-30July15.pdf
[5] This is the formula employed by the Tulane study, ibid.

This brought the total **minimum** sample size to **845** HHs for the entire survey.

55 clusters were sampled across the four districts with the number of clusters per sample determined by PPS as described in Table 1 below.
Sample size per cluster/EA =18

2.3 Sampling Process

Two-stage stratified cluster random sampling was used. In the first stage, Enumeration Areas (EAs) or clusters were sampled from the four districts **proportionate to the population size of cocoa communities per district**. Because this sampling strategy resulted in a sample size for the two districts in Ashanti Region (Atwima Mponua and Atwima Nwabiagya) that was too small to obtain a reliable measure of prevalence, this necessitated an adjustment to 990 households which was distributed among the two districts. The actual sample size was however 936 giving a response rate of 95%.

Table 2.1 Sample distribution by district

	Population of cocoa communities	Sample fraction (%)	Expected Sample Size (990 HHs)	Actual Sample Size	Response Rate (%)	Number of EAs per district)
Atwima Mponua	39,664	14	216	209	97%	12
Atwima Nwabiagya	20,869	8	126	124	98%	7
Sefwi Wiawso	117,705	41	342	311	91%	19
Wassa Amenfi West	105,843	37	306	292	95%	17
Total	284,081	100	990	936	*95%*	55

The sample distribution was broken down into the following strata by urban and rural commuities:

Table 2.2 Sample distribution by strata

EA size	Atwima Mponua		Atwima Nwabiagya		Sefwi Wiawso		Wassa Amenfi West		Overall
	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	
1-99	5	0	3	0	3	1	4	0	16
100-199	7	0	4	0	9	4	11	0	35
200+	0	0	0	0	1	1	2	0	4
Total	12	0	7	0	13	6	17	0	55

2.3.1 Sampling of Enumeration Areas

The sampling frame for the first stage was all EAs in cocoa growing communities in the four districts. The Enumeration Areas (EAs) created by the Ghana Statistical Service (GSS) from the 2010 Population and Housing Census served as the primary sampling unit (PSU). An EA is the smallest geographical unit whose boundaries can be easily identified for the purpose of identifying and listing structures and households living within it. These EAs are used by the GSS as the primary sampling unit in drawing nationally representative samples for other surveys such as the Ghana Living Standards Survey and the Demographic and Health Surveys. This EA data set includes the population of the EA, description (urban or rural) and size (number of households). Consistent with a previous study on child labor conducted by Tulane University,[6] EAs in the district capital were excluded from the sample frame.

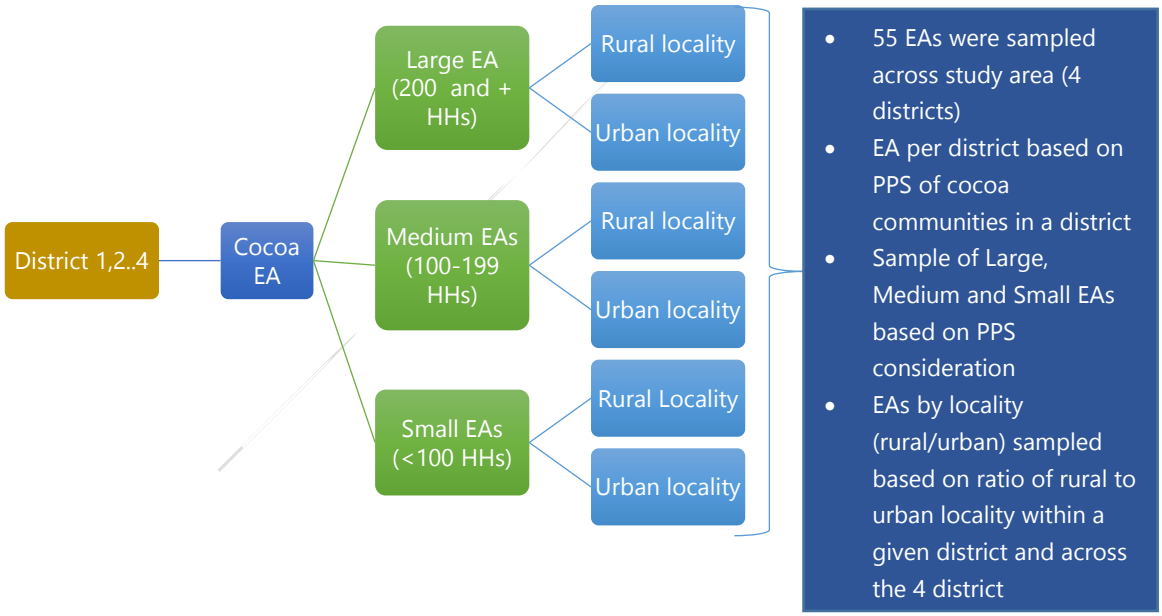
[6] School of Public Health and Tropical Medicine, Tulane University, op.cit.

A Cocoa Community according to the Department of Agriculture is a community in which the majority of households (50% or more) are into cocoa production. A household was classified as a cocoa household if at least one household member was into cocoa production. Since the study was interested in assessing the prevalence rate of child labor in cocoa, only cocoa communities in each district were included in the sample frame for the survey. A list of all cocoa-growing communities was obtained from the District Department of Agriculture through their respective District Assemblies. The Ghana Statistical Service has further matched the EAs falling within these cocoa growing communities in the project area.

Using this information, the survey sampled 55 EAs in cocoa growing communities across the study area. The number of EAs allocated to a given district was informed by the proportion of the population of cocoa growing communities in that district within the sample frame. EAs was stratified by size, namely; Large EAs (200 & more HHs), Medium EAs (100 to 199 HHs), and Small EAs (<100 HHs) (i.e. three strata) and locality type, (i.e. rural or urban (two strata), yielding a total of 6 strata. In developing these strata, we used the same thresholds across the four districts because the distribution of EA sizes across the four districts does not look dramatically different.

The stratification of EAs by locality type (urban/rural) is underpinned by the fact that **one** of the project districts (Sefwi Wiawso) has significant urban population (at least 25%) that were classified as cocoa growing communities; hence their inclusion in the sample frame.

Figure 1 Sample allocations based for Enumeration areas

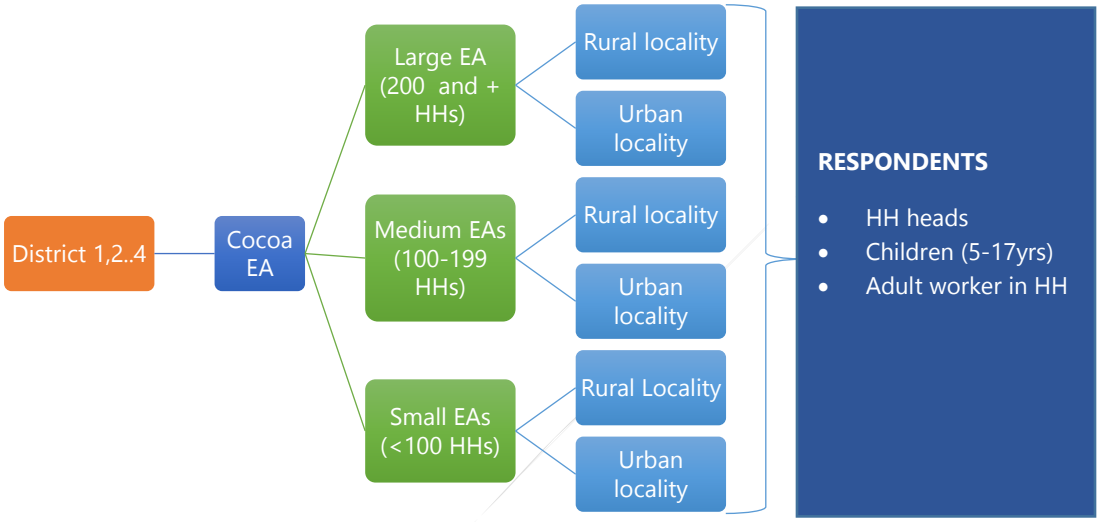


2.3.2 Sampling households from the sampled EAs

In the second-stage sampling, households were sampled from the EAs selected in the first stage (see Figure 2.x below). To obtain the sampling frame for this stage, a listing of all households in the EA was conducted. In conducting the listing exercise, enumerators were given EA maps obtained from the Ghana Statistical Service (GSS) which served as a guide on the boundaries of the enumeration areas and the location and size of each of the 55 communities in the EAs. Household heads/adult household members were interviewed. Information collected included the name of the household head, the number of HH members and the

number of children aged 5-17 in the household (see details on the listing of households in Annex 2). Each household in the EA was then given a unique household ID for ease of identification. Household listing was important to provide updated information on household numbers since the census information from which the EAs were created was conducted 6 years ago. Listing of households took place between January 9th and 13th 2017. After the listing, the number of households required per EA was obtained by dividing the required sample size by the number of EAs, resulting in a target of 18 households per EA. Households were randomly selected using Stata software. The sample was limited to cocoa-growing communities, but included all households regardless of whether they were cocoa-growing or not. The inclusion criterion was households where there is at least one child aged 5-17 years.

Figure 2 Household sampling from Enumeration areas



2.3.3 Calculation of sample weights

The allocation of EAs and households to the four districts was not exactly proportional to the sample fraction because it was necessary to increase the clusters in some districts to attain the minimum number needed to measure change in prevalence over time with statistical reliability. To correct for oversampling households in these smaller districts, it is necessary to weight the data to obtain a representative sample. The weights were generated as the inverse of the probability that each household in cluster c in statum s, p_{sc}. This probability was calculated at the product of two probabilities:

$$p_{sc} = p_{1sc} * p_{2sc}$$

Where p_{1sc} is the first-stage sampling probability of cluster c in stratum s, defined as the ratio of number of clusters sampled from statum s (n_{sc}) and the total number of clusters in stratum s (N_{sc}): $p_{1sc} = \frac{n_{sc}}{N_{sc}}$

p_{2sc} is the second-stage sampling probability of households within cluster c and is defined the ratio of the number of listed households selected from cluster c (18 for each cluster) (T_{sc}) by the total number of households listed in cluster c (T_{sc}): $p_{2sc} = \frac{T_{sc}}{L_{sc}}$

The sample weight ($sweight$) was then calculated as: $sweight = \frac{1}{p_{sc}}$

2.4 Development and Piloting of Survey Instruments

The baseline survey employed three instruments (shown in Annex 1). The first instrument is the household roster which contains information on household demographics for all household members. The second is the caregiver questionnaire containing information on the socio-economic characteristics of the household, farming characteristics, child work, hazardous work, access to health care, adult worker characteristics, education etc. The third instrument is the children's questionnaire which collects information such as caregiving arrangement, work activities, working hours, injury and illness, heavy loads, exposure to environmental hazards and other dangers, tools, equipment and machinery and education, etc.

These tools were adapted from Tulane University 2013 Ghana Child Labor Survey[7]. In reviewing the Tulane tools, the project indicators were matched against the Tulane's children questionnaire to identify the sections of the questionnaire relevant to the MOCA baseline study. For ease of reference, the indicators which the questions are designed to measure were indicated in a column in the questionnaire grid. A remarks section was also provided explaining whether the questions were extracted from the Tulane instrument or developed by JMK. The last section in the children and caregivers instrument contained additional questions, titled "programming", which relates to relevant project output indicators originally planned to be collected by project staff during implementation. We included these questions to provide contextual information to aid project implementation.

The draft tools were subjected to a series of internal reviews by Winrock and DOL and this feedback was incorporated into the revised tools. The tools were also shared with the National Child Labor Monitoring Committee for their input and comments to solicit their buy-in. The feedback from the Committee was incorporated into the design of tools. For detailed insight see Annex 3 for minutes of the meeting with the National Child Labor Monitoring Committee.

The draft survey tools were piloted by the JMK team of consultants and supervisors with 30 households between 30th and 31st of December 2016 at Apedwa in the East Akyem District[8]. Apedwa is an Akan speaking and cocoa growing community with similar socioeconomic features to the survey communities. The main objectives of the pilot were to identify problems with the questionnaire that might lead to biased answers and questions that may need to be re-worded. The pilot was also used to improve the list of key terminologies in the questionnaire as well as improving the survey flow and skip logics using the ODK data collection form on Android tablets. A report on the pilot was shared with MOCA and approved changes incorporated into the tools and survey implementation guide (see Annex 3).

2.5 Training of Enumerators

To implement the survey, 32 enumerators and 8 supervisors were recruited, trained, and deployed for data collection. The 4-day training, which took place between January 16th and 19th 2017, progressively built the enumerators' understanding of the study rationale, data collection tools and its practical application in the field. During the training, participants were given the baseline survey questionnaire manual, the survey implementation protocol and training curriculum and quality assurance protocols. The training participants were further made to develop a flowchart of the questions to identify the logic of the questions. The training included a detailed presentation of the entire questionnaire to ensure that enumerators fully understood all questions and how to correctly record/register answers. This understanding was deepened

[7] School of Public Health and Tropical Medicine, Tulane University, op.cit.

[8] Apedwa is a cocoa growing community approximately 77 Km from North-West of Accra the capital of Ghana. The town has approximately 7,764 inhabitants with 2,085 households. The majority of households rely on agriculture as the main source of food and income ~~in the community~~ with cocoa production being the main source of livelihood.

through various exercises including simulation interviews with each other as well as the field pre-testing that was designed to detect any uncertainties and misunderstandings in administering the questionnaire. Here, challenges and difficulties relating to phrasing and terminology issues were addressed before the actual data collection commenced. During the training, the questionnaire was orally translated and practiced in local languages (Twi and Sefwi) and discussed among participants who speak that language to ensure that terminological issues were well addressed and understood. Enumerator understanding was deepened through various exercises (i.e. simulation interviews with each other as well as the field pre-testing) that was designed to detect any uncertainties and misunderstandings in administering the questionnaire. During the training, oral translation took a meaning-based approach from English to the local languages (Twi and Sefwi). The team agreed on consistent translations to convey the meaning of the source language (English) within the natural grammar of the target local language. In addition, clarifications were made in order to capture and interpret for enumerators, meaningful elements of words in the questionnaire (in English), and the way the elements or words combine to form the meaning of a given question. Quality criteria for the translations during training and subsequent data collection was comprehensibility (especially relating to culture-specific concepts), appropriateness (in content and approach) and accuracy (faithful to the source text and key facts). The tools were configured on android tablets in English language for both the training and field data collection.

The survey was pretested on the third day of training in Apedwa, Eastern region, a cocoa growing community after which a debriefing session was conducted within groups and also at plenary to discuss challenges and phrasing issues.

2.6 Field Data Collection

Data collection for the baseline survey took place between January 20th and February 15th covering 55 census enumeration areas across the 4 districts. Eight (8) field teams, made up of 4 enumerators and 1 supervisor each were deployed for field data collection. The enumerators interviewed household heads/caregivers and all children aged 5-17 years available during the survey period were individually interviewed using tablets with ODK (an android version software). The basic protocol developed for the household survey was for the enumerator to interview the household head and/or the primary caregiver. The survey questionnaire was administered to the sampled households (in each EA) after the census/household listing in accordance with the survey implementation protocols. The survey response rate for each district is provided in Table 2.2 below.

Table 2.2 Baseline Survey Response Rate

Districts	*Number of EAs*	*Expected Households*	*Achieved*	*Survey Response rate*
Atwima Mponua	12	216	209	97%
Atwima Nwabiagya	7	126	124	98%
Sefwi Wiawso	19	342	311	91%
Wassa Amenfi West	17	306	292	95%
Total	***55***	**990**	***936***	***95%***

In total, 2,025 children (aged 5-17 years) were individually interviewed out of a total of 2362 children residents in the 936 households (See Table 2.3). This gives a response rate of 87% for all children in the households. Out of this number 52% were boys while the remaining 48% were girls. The most common reason for why the team could not reach out to all the targeted children was because some were attending school outside the communities. This is especially noticeable for children between 15 and 17 years with a

recorded response rate of 74%. A significant number of these children were attending senior high schools outside the communities. They return to their parents in the communities during vacations. Some children were also found to be staying with relatives in the district capitals to attend school and only return to the communities during school vacations. In each of the 936 households, a household head/caregiver was interviewed detailed in Table 2.3 below.

Table 2.3 Household membership and children response rate

	Atwima Mponua		Atwima Nwabiagya		Sefwi Wiawso		Wassa Amenfi West		Overall		Total
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	
All Household members	624	590	356	330	949	951	995	996	2924	2867	5,791
Number of HH heads/ Caregivers interviewed	146	63	80	44	212	99	226	66	664	272	936
All Children in households											
5 to 12	202	158	93	84	249	210	261	239	805	691	1,496
13 to 14	40	35	31	20	59	64	56	72	186	191	377
15 to 17	55	40	31	16	95	77	96	79	277	212	489
Total	297	233	155	120	403	351	413	390	1268	1094	2,362
Number of children interviewed											
5 to 12	183	140	87	77	216	205	210	208	696	630	1,326 (88.6%)†
13 to 14	32	38	28	19	58	49	53	57	171	163	334 (88.6%)†
15 to 17	35	37	26	14	70	59	63	61	194	171	365 (74.6%)†
Total	250	215	141	110	344	313	326	326	1061	964	2025
Children response rate	86.5%	94.3%	93.4%	92.4%	87.5%	90.7%	80.1%	84.5%	85.6%	89.4%	87.4%

† Response rate of children within age groups

2.7 Data Processing

The first stage of data processing was carried out during the design phase of the questionnaire in the data collection ODK xlsforms. This was done by developing constraints to ensure skip patterns were followed and extreme values brought to enumerators' attention for cross-checking and verification before the data was submitted. Stata programming was used to run consistency checks to ensure the quality of the responses. Information such as age categories, income, children working hours etc. were re-coded into different variables for purposes of analysis. The three data sets (Household roster, Caregiver, and Child questionnaires) were merged using codes assigned to each member of the household for extensive analysis where applicable. It was merged to enable the computation of indicators where the variables needed for the calculation were in different datasets.

2.8 Data Analysis

The analysis of data was informed by the demands of the specific survey questions and baseline indicators as defined in the project logical framework. Data were organized using graphs and other descriptive statistics including cross tabulations to analyze trends, within and between the various sub-groups or user categories. Data were disaggregated by sex, age and district. In carrying out the analysis, differences and relationships between groups were established using t-tests and correlations at $p<.05$ significance level. For all statistically significant differences noted, an asterisk (*) has been used to show cases where a significant difference was found. Where asterisks are placed on overall scores, comparisons are made across districts; and where they are placed on the female-headed household or female child, comparisons are made with

male heads and male children respectively. Computation of estimates for key indicators have also been included based on 95% confidence interval. All figures in the narrative report have been rounded down.

2.9 Ethical Considerations

The survey was conducted with utmost adherence to the ethical standards in social research and under the laws of Ghana in relation to child protection, gender equality and non-discrimination policies and procedures. The survey questionnaire and protocols were reviewed and approved by the National Child Labor Monitoring Committee to ensure consistency of measurement and conformity of the protocols to standard practices in child protection and child labor surveys. To integrate child protection and gender equality issues in the data collection, the training curriculum deployed for the survey included a module on child protection and actionable step that enumerators should undertake to ensure that children and other vulnerable groups are protected. Enumerators were also trained on specific gender sensitive methods to enable them interview women and men appropriately.

The survey questionnaire included a consent form where respondents were asked to provide their agreement to participate or withdraw from the interview at any time at their own volition. In the case of children, consent was not only sought from them, but also from their parents. Respondents were informed they could stop or withdraw at any time. Further, data was collected at the parent's convenient time and children were also interviewed in the evening after school in some cases. In addition, no information was disclosed in relation to the conduct of this assignment or the reporting of findings and recommendations to third parties. The survey team also used the appropriate procedures (logistics, timing, venue, etc.) to ensure full participation of women. Also sex-separated discussions facilitated by male or female enumerator were promoted. Enumerators were also made to sign confidentiality agreements to ensure that no information collected were disclosed. During the survey, no child protection violation occurred or was witnessed by the team.

2.10 Limitations to the study

1. **Timing of the survey:** The study was conducted during the tail end of the main cocoa season when migration outside the communities were high. This affected the response rate for the survey. It was observed that some households who were present during listing were not permanent residents in the communities. Their presence in the communities were based on the fact that their cocoa farms are located in the communities. These seasonal farmers migrate outside the communities when the cocoa season ends. While these households were listed, they had travelled out during the time of data collection. This partly affected the project's inability to achieve 100% response rate.

   The response rate for the child questionnaire was also affected by the fact that the study was carried out at a time when school had re-opened. It was observed that children in senior high school and to some extent Junior High school had travelled to school. These schools are located outside the communities and as such the team could not reach out to these children for interview.

2. **Interviewee Fatigue.** Some respondents refused to be interviewed on the grounds that they had been interviewed several times by other organizations but have had never benefitted from their interventions. Others also alleged that they had been duped by NGOs for their money in exchange for assistance which were never realized. These respondents constituted about 9 households (0.9%).

3. Results

3.1 Introduction

This section presents the main results of the survey. This includes the demographic and socio-economic characteristics of households including age and sex composition, education, household assets and income. Farming characteristics are also presented in this section. The section then presents and discusses the MOCA project indicators, namely children in employment, children involved in child labor, hazardous child labor and children at high risk of child labor (CAHR). Information on work activities, working hours and education characteristics of children interviewed are presented. The estimations presented in this report are representative of households in the cocoa growing districts of Atwima Mponua, Atwima Nwabiagya, Sefwi Wiawso and Wassa Amenfi West. Child-level estimates are representative of the population of children, 5-17 years, living in these districts.

3.2 Demographic Characteristics of Households

This section presents a descriptive digest of demographic characteristics of households sampled for the survey. It covers household-specific characteristics such as sex, age, educational attainment, literacy levels, household size and household headship.

3.2.1 Age and Sex Structure of households

Table 3.1 presents data on household distribution by age, gender and district. Out of the 936 households surveyed, 5,788 members are domiciled in these households. Of this number, household membership is evenly split between males (50%) and females (49%). Comparing this result to national demographic data, the proportion of males in cocoa growing households in the project districts is slightly higher[9].

The results also show that households are dominated by children (below age 18). In particular, 40% of household members range from 5 to 17 years with 12% at the age of 4 years or under. This type of population structure may impose a heavy burden on the economic income and food consumption of the surveyed households. With regards to children between 5 to 17 years, the data shows that of the 2,362 children, there are more boys (53%) than girls (46%).

[9] According to GLSS 6, males constitute 48% of household members while females constitute 52%.

Table 3.1 Percent distribution of households by age, sex and district

	Atwima Mponua	Atwima Nwabiagya	Sefwi Wiawso	Wassa Amenfi West	Overall
Number (All HH)					
Male	623	356	948	995	2,922
Female	590	330	950	996	2,866
Total	1,213	686	1,898	1,991	5,788
Percentage distribution (%)					
Sex (All HH)					
Male	50.6	50.7	50.3	50.1	50.3
Female	49.4	49.3	49.7	49.9	49.7
Total	100.0	100.0	100.0	100	100.0
Age					
0 – 4 yrs	11.1	14.4	12.2	13.6	12.6
5-17 yrs	44.0	40.3	40.0	40.6	40.8*
18 – 24 yrs	9.8	12.6	12.6	13.6	12.4
25 – 34 yrs	11.1	11.4	11.6	11.0	11.4
35 – 44 yrs	9.9	10.4	9.7	10.2	9.9
45 – 54 yrs	7.7	5.3	7.6	5.5	6.9
55 yrs +	6.4	5.6	6.1	5.5	6.0
Number (5-17 years)					
Boys	297	155	403	413	1,268
Girls	233	120	351	390	1,094
Total	530	275	754	803	2,362
Percent distribution (5-17 years)					
Boys	55.6	55.0	53.7	50.9	53.5*
Girls	44.4	45.0	46.3	49.1	46.5*

In terms of the size of households, the results show household sizes greater than the national average with households in the Western Region (namely Wassa Amenfi West and to a little extent Sefwi Wiawso) recording relatively larger households than their counterparts in Ashanti Region (i.e. Atwima Mponua and Nwabiagya). The average household size in Ghana, that is, the average number of persons in a household, has been on the increase since 1960 when it stood at 3.8. This increased to 4.4 in 1980s and 4.78 in 2008 before stabilising at the current figure of 4[10]. Within the project communities, the recorded average household size of 7.3, which is well above the national average of 4.0 and rural average of 4.5. This higher household size is symptomatic of a high fertility rate prevailing in rural communities in Ghana (4.0 per woman)[11] and the practice of adult children with offspring staying with their parents.

Table 3.2 Average Household Size

	Atwima Mponua	Atwima Nwabiagya	Sefwi Wiawso	Wassa Amenfi West	Overall
Male- headed	6.7	6.6	7.1	7.8	7.2
Female- headed	6.2	5.8	7.5	8.3	7.3
Overall	6.5	6.2	7.3	8.1	7.3

In relation to age, the overall mean age of children between 5 and 17 years in the households is 10.9 years, with a median age of 11 years. As depicted in the Table 3.3, no marked differences were observed across sex and districts.

[10] GLSS 6

[11] The birth rate in Ghana 4.2 children per woman per the Ghana Demographic and Health survey 2014.

Table 3.3 Average Age of Children (5-17 years) in Households; by sex

	Atwima Mponua	Atwima Nwabiagya	Sefwi Wiawso	Wassa Amenfi West	Overall
Children(5-17yrs.)	10.4	10.8	11.0	10.9	10.9
Boys	10.3	11.0	11.1	10.9	10.9
Girls	10.5	10.5	10.9	10.9	10.8
Adult (18+ yrs.)	38.3	36.2	36.8	35.5	36.6
Male	38.0	35.3	36.9	36.0	36.7
Female	38.5	36.9	36.6	35.1	36.6

p=n.s.

Table 3.4 presents results on household headship. Traditionally, the head of household in a typical Ghanaian society is the one in charge of control and allocation of material and financial resources and also oversees the subsistence needs or wellbeing of household members. Heads of household in Ghana are generally the eldest male; women generally become heads of household in the absence of their husbands[12]. As such, female household heads are usually single, widowed or divorced. Households headed by women are likely to be poorer than households headed by men because of inequalities in access to economic resources. Data presented in Table 3.4 shows that more males were reported (70%) as household heads than females (29%). The results show a much higher existence of male household heads when juxtaposed with the national household head composition of 65.3% males[13].

Across districts, the proportion of male-headed households is highest in Wassa Amenfi West (77%) but lowest in Atwima Nwabiagya (63%). The proportion of female-headed households is highest in Atwima Nwabiagya (37%) but lowest in Wassa Amenfi West (22%).

Table 3.4 Percent Distribution of Household headship

	Atwima Mponua	Atwima Nwabiagya	Sefwi Wiawso	Wassa Amenfi West	Overall
Male- headed	67.8	63.0	70.1	77.3	70.6
Female- headed	32.2	37.0	29.9	22.7	29.4

3.2.2 Educational Level of Household members

Education is an important aspect of societal development. It is the process of acquiring knowledge, skills, values and attitudes to fully develop individual capacities for societal wellbeing. Statistics on educational attainment help in knowing the present educational levels of the adult population as well as availability of skilled manpower for various types of economic activity.

Table 3.5 shows the level of educational attainment of household members who are 5 years and older. The results suggest low educational attainment levels of household members with 70% of households with basic/elementary education[14]. The results also show that 14% of household members have never attended school. Only 12% of the population has attained a senior high level of education (Table 3.5).

Across sex, the data show that twice as male households' members than females have attained senior high school education. While 16% of male household members have attained senior high school education, only 8% of females have achieved the same feat.

[12] Gender, Equity and Rural Employment Division of FAO. (2012). *Gender Inequalities in Rural Employment in Ghana: An Overview.* Retrieved from www.fao.org/docrep/016/ap090e/ap090e00.pdf

[13] GSS, 2010 Population and Housing Census

[14] Basic Education includes pre-school, primary and JHS/middle school.

Table 3.5 Educational attainment of household members, by sex

	Atwima Mponua		Atwima Nwabiagya		Sefwi Wiawso		Wassa Amenfi West		Overall		
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Total
No education	9.7	21.4	10.4	23.2	8.1	18.0	10.5	19.0	9.1	19.2	14.2
Pre-scho	8.0	6.2	8.1	5.0	5.5	6.4	7.1	7.1	6.6	6.4	6.5
Primary	37.9	36.4	34.9	35.1	32.0	30.0	31.5	32.1	33.1	32.0	32.5
JSS/Midd	32.1	31.9	27.3	29.0	30.8	32.2	33.4	31.2	31.4	31.6	31.5
SSS/'O'-	11.9	3.5	17.7	7.2	18.9	10.9	13.9	8.8	16.4	8.9	12.7
University	0.2	0.4	1.6	0.0	4.1	2.4	2.8	1.2	2.9	1.6	2.3
Vocation	0.1	0.2	0.0	0.4	0.1	0.2	0.4	0.4	0.2	0.3	0.2
Technical	0.1	0.0	0.0	0.0	0.3	0.0	0.5	0.1	0.3	0.0	0.1
Non stan	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.1	0.1	0.0	0.1

Looking closely at children, the results show that majority of children aged 5-17 years (56%) have attended primary education. Close to one-fifth (22%) have attained junior high school education (Table 3.6).

Table 3.6 Educational Attainment of Household Children (5-17years)

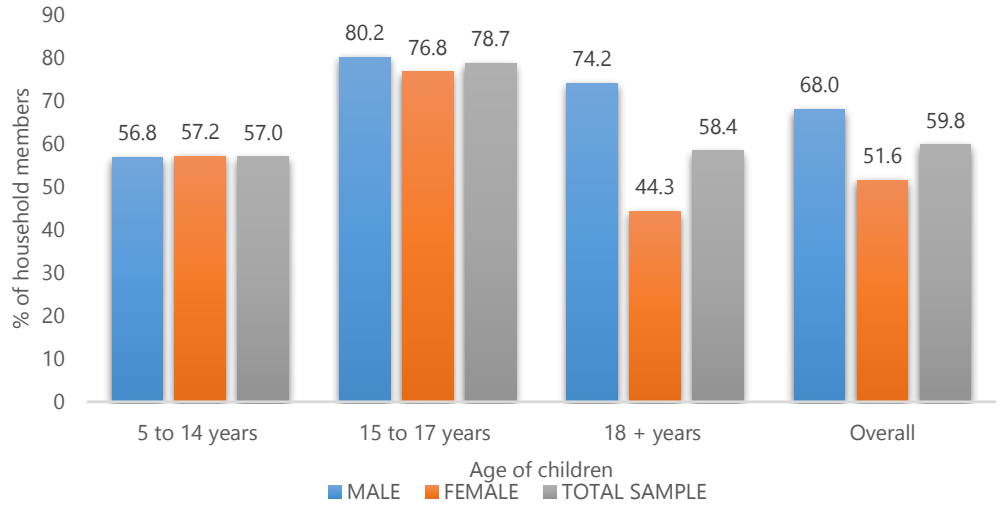
	Atwima Mponua		Atwima Nwabiagya		Sefwi Wiawso		Wassa Amenfi West		Overall		
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Total
No Education	2.6	2.6	5.1	36.1	3.4	2.2	1.1	2.0	2.9	2.4	2.6
Pre-school	14.6	13.0	15.7	11.0	11.2	15.2	14.9	15.5	13.1	14.6	13.8
Primary	62.1	59.7	54.3	61.0	58.5	53.4	55.3	56.3	58.0	55.9	57.0
JHS/Middle school	19.1	23.9	21.3	23.9	21.3	23.7	25.6	21.4	21.9	23.2	22.5
SSS/'O'-level/'A' level	1.4	0.8	3.7	0.0	4.6	5.3	3.2	4.7	3.6	4.0	3.8
Non-standard curriculum	0.2	0.0	0.0	0.0	0.5	0.2	0.0	0.0	0.3	0.1	0.2

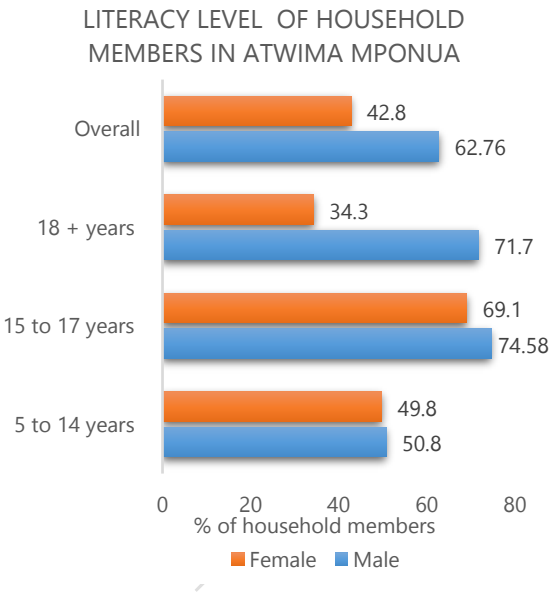
Information on literacy rates across the project district is presented in Figure 3.1. The ability to read and write is an important personal asset, allowing individuals increased opportunities in life. The MOCA project baselines assessed household members' ability to read by asking the respondents to indicate whether they could read or write in English or in any local language. The self-reported literacy rate[15] within households is 59%. The reported literacy rate for males (68%) is higher than females (51%). District differences are marked. Sefwi Wiawso (74%) has the highest proportion of men and women who reported being literate compared to the rest of the districts.

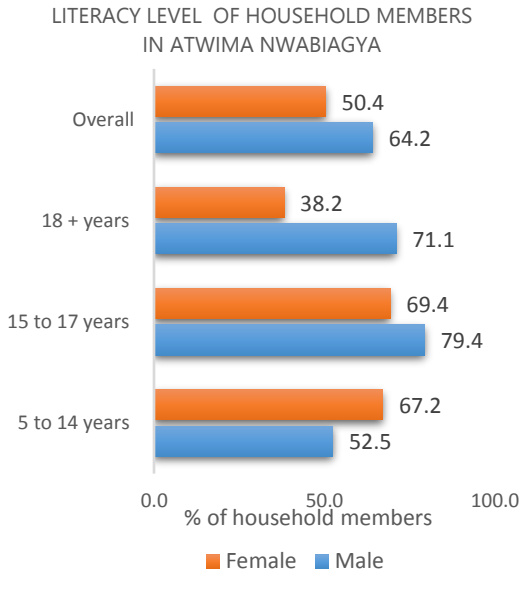
For children, the survey found that children between 15 to 17 years recorded the highest literacy rate of 78%. This could be attributed to the fact that they are older than the other age groups and have advanced educational level. The trend may be attributed to the introduction of Free, Compulsory Basic Education (FCUBE) in Ghana since 1992. Implementation of the program has resulted in increase in Basic School Enrollment across the country. Across gender, both boys and girls have similar literacy levels. Unlike adults (18+years) girls and boys reports the similar literacy rates (See Table 3.7).

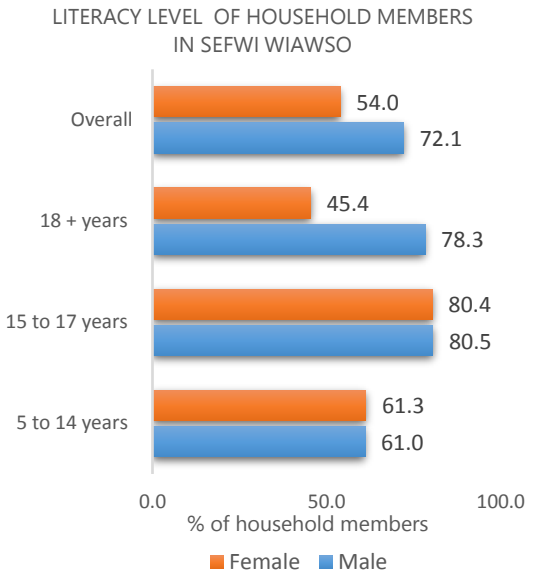
[15] Includes all household members age 5 years and above

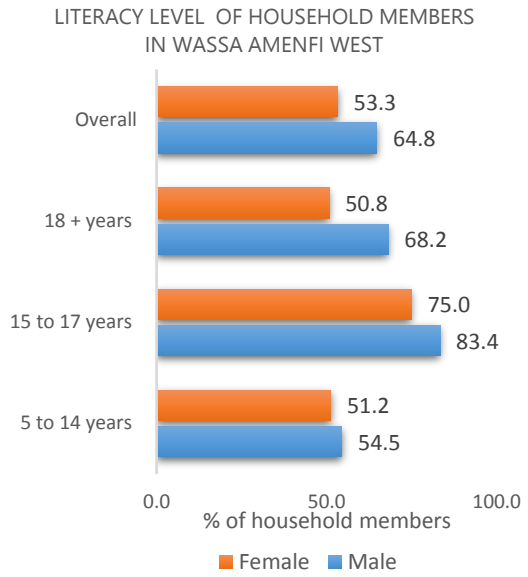
Figure 3. 3 Literacy Level of Household Membrs, by sex and age group











3.3 Socio Economic Characteristics of Households

Presented in this section is the socio-economic characteristic of households. This includes the types of dwellings the household resides, its ownership, sources of drinking water and fuel for cooking. Also, presented in this section, are household asset ownership characteristics and income.

3.3.1 Types of Dwelling of households

Considering the difficulty in measuring state of welfare such as income or expenditure in most developing countries, the quality of housing is often used as a proxy for a household's socio-economic status[16]. Table 3.7 presents data on the type of dwelling households occupy. The data shows that close to half (47%) of households live in small houses (that is, houses with two or fewer sleeping rooms) compared to other types of households. Less than one-fifth (22%) of households live in a large housing structure (with three or more sleeping rooms). Across districts, Atwima Nwabiagya has the highest proportion of households that reside in small houses, followed by Atwima Mponua and Wassa Amenfi West. Households in Sefwi Wiawso have the highest proportion of households that live in large houses compared to the other districts. The proportion of households who live in a compound house is highest in Atwima Nwabiagya but lowest in Atwima Mponua.

In terms of household headship, the majority of both male and female headed households live in small houses with the remaining spread across the various housing forms.

[16] Anyango, E., E. Esipisu, L. Opoku, S. Johnson, M. Malkamaki, and C. Musoke (2006). *Village Savings and Loan Associations in Zanzibar*. London: Department for International Development (DFID).

Table 3.7 Types of dwelling households live (Percentage)

	Atwima Mponua		Atwima Nwabiagya		Sefwi Wiawso		Wassa Amenfi West		Overall		Total
	Male-headed	Female-headed	Male-headed	Female-headed	Male-headed	Female-headed	Male-headed	Female-headed	Male-headed	Female-headed	%
Large house, separate	22.7	24.4	10.5	21.4	30.1	26.3	11.3	8.1	22.5	22.2	22.4
Small house, separate	59.5	53.6	58.2	33.8	43.1	38.0	51.9	51.4	49.3	42.8	47.4*
Compound house (rooms)	14.9	19.4	30.4	39.4	24.9	34.3	16.7	24.8	21.7	30.5	24.3
Huts/several small buildings (same compound)	2.8	2.7	0.9	5.4	0.9		17.5	12.4	5.3	3.4	4.8
Improvised home (kiosk, container, tent)					0.6	1.3	0.5		0.4	0.7	0.5
Other					0.5		2.1	3.3	0.8	0.6	0.7
Large house, separate	22.7	24.4	10.5	21.4	30.1	26.3	11.3	8.1	22.5	22.2	22.4

*p< 0.05

Dwellings occupied by households in the project districts are mainly owned by household members (51%) with household headed by males owning more of their dwellings compared to their female cohort. The data also show that about 16% of household members live in a family house suggesting non-payment of any rent for occupancy. About 14% of household members are renting with no significant differences between households headed by males and females.

Table 3.9 Type of ownership of dwelling (%)

	Atwima Mponua		Atwima Nwabiagya		Sefwi Wiawso		Wassa Amenfi West		Overall		
	Household ownership										Total
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	
Owned by a household member	56.7	47.3	50.5	48.1	51.8	39.5	61.7	46.1	55.0	43.2	51.5*
Co-owner in household	0.8	0.0	12.9	2.1	5.8	4.7	9.8	9.6	6.6	4.3	5.9
Provided free by employer/owner	5.4	6.4	4.5	4.2	2.4	3.2	2.5	4.1	3.1	4.1	3.4
Subsidized by employer	0.0	0.0	1.6	0.0	1.9	0.0	0.0	0.0	1.1	0.0	0.8
Rented from private owner	16.7	9.1	14.4	26.8	18.7	14.3	6.0	6.3	14.8	13.5	14.4
Family house	14.2	26.8	12.9	18.8	10.3	19.7	19.3	33.9	13.4	23.4*	16.3
Other	6.2	10.4	3.3	0.0	9.1	18.7	0.7	0.0	6.1	11.5	7.6

*p< 0.05

According to data presented in Table 3.10, almost all households in the 4 districts do not have pipe-borne water inside their houses. About 40% of household members rely on pipe-borne water outside their house, followed by borehole/tube well (33%). One out of every 10 households rely on wells for drinking water.

Except for Sefwi Wiawso, where most households rely on pipe-borne water outside their house as the main source of drinking water, households in the other three districts mainly rely on water from borehole/tube well for drinking. Although the proportion of households in Sefwi Wiawso and Wassa Amenfi West who use pipe-borne water inside the house is extremely low (5% or less), it is comparatively notable considering that no household in Atwima Mponua and Atwima Nwabiagya has access to pipe-borne water inside their house. A similar pattern is observed for households using bottled water for drinking (see Table 3.10).

Table 3.10 Main Source of drinking water for Households

	Atwima Mponua		Atwima Nwabiagya		Sefwi Wiawso		Wassa Amenfi West		Overall		
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Total
Pipe-borne outside house	38.7	48.2	15.2	22.6	47.7	57.5	26.0	29.2	37.9	46.4	40.4
Bore-hole/tube well	53.5	41.0	75.1	74.0	22.9	15.5	28.8	43.2	34.1	32.6	33.6
Well	1.4	6.8	9.7	3.4	12.6	11.4	15.3	10.0	11.2	9.3	10.6
River/stream	6.4	4.0			3.9	5.5	20.7	11.6	8.1	5.6	7.4
Bottled/sachet water					6.4	5.7	3.4		4.0	2.9	3.7
Pipe-borne inside house					6.3	4.4	3.1	1.8	3.9	2.6	3.5
Dug out/pond/ lake/dam							2.7	4.3	0.7	0.8	0.7
Other					0.2				0.1		0.1

The survey sought to ascertain the main source of fuel for cooking in households. The results show that a vast majority (82%) of households use wood as their main source of cooking fuel while 12% use charcoal as the main source of cooking fuel. Results in Table 3.11 also show that majority of male and female-headed households use wood as the main source of fuel for cooking. The data do not show any significant difference between male and female headed households.

Table 3.11 Main Source of cooking fuel for households

	Atwima Mponua		Atwima Nwabiagya		Sefwi Wiawso		Wassa Amenfi West		Overall		
	Household headship										Total
	Male headed	Female headed	Male headed	Female headed	Male headed	Female headed	Male headed	Female headed	Male headed	Female headed	
Wood	93.1	94.7	78.0	86.0	74.1	78.9	88.2	86.2	81.1	84.1	82.0
Charcoal	5.8	53.3	22.0	14.0	14.1	16.2	7.4	12.0	11.8	13.1	12.2
Gas	1.1				11.8	4.8	4.4	1.8	7.1	2.8	5.8

Table 3.12 presents the assets owned by households. An asset is a resource with economic value that a household or members of a household own or control with the expectation that it will provide current and future benefits[17]. An asset is a proxy for household wealth. The survey sought to determine the proportion of households that own various types of assets. As depicted in Table 3.12, the majority of households own a cell phone (85%), followed by radio (77%) and TV set (65%). Except for households in Atwima Mponua district, more than half of households in the three other project districts own a TV set. More households in Wassa Amenfi West own a cell phone than their cohorts in other districts.

With regards to type of household headship, in every asset category, more male-headed households have ownership of each item than female-headed households. This observed difference is statisitcally significant for radio, TV set, cell phone, bicycle, motorbike, and refrigerator.

[17] GLSS 6

Table 3.12 Household asset ownership

	Atwima Mponua		Atwima Nwabiagya		Sefwi Wiawso		Wassa Amenfi West		Overall		
	Male headed	Female headed	Male headed	Female headed	Male headed	Female headed	Male headed	Female headed	Male headed	Female headed	Total
Radio	80.3	57.8	86.4	54.5	83.8	56.7	81.1	53.4	82.8	56.0*	77.1
TV set	52.7	32.9	79.0	52.3	72.6	53.8	62.5	50.0	67.4	49.0*	65.0
Computer	0.6	0.0	2.8	0.0	11.3	5.54	4.7	5.4	7.1	3.8	6.6
Cell phone	85.8	75.2	93.9	77.9	84.1	68.1	95.6	82.4	88.1	73.2*	85.5*
Bicycle	26.9	14.7	21.4	10.2	23.8	15.0	24.2	13.1	24.2	14.0*	23.2
Motor bike	11.7	3.8	5.9	3.0	12.5	2.7	22.6	5.4	14.3	3.4*	12.8
Car	2.7	0.0	1.2	5.1	8.3	4.0	8.5	5.4	6.8	3.6	7.3
Refrigerator	13.9	9.5	28.2	14.4	46.3	24.4	21.3	26.4	33.1	20.7*	31.8
Sewing machine	7.2	14.1	4.7	8.3	20.1	13.3	17.8	22.5	16.0	14.4	17.0

*p< 0.05

3.3.2 Household Income

Household income is a proxy of household wealth. Household income measures the economic health of a household. This income comprises income from cocoa production, other crops, wage employment, and other sources, such as non-farm activities, rent, remittances, etc. Data from the MOCA Baseline Survey indicate that 82% of households derive their income from cocoa production, while 36% also generate income from the sale of other crops. Income from petty trade is the third most frequent contributor to household income (26%) (Table 3.13).

By sex of head, the results show that male-headed households are more likely to sell cocoa beans and other crops compared to female headed households. However, more households headed by females engage in the petty trade business relative to their male cohorts. The data further reveals that more households in Wassa Amenfi West and Sefwi Wiawso derive their income from cocoa than their counterparts in Atwima Mponua who are more likely to sell other crops.

Table 3.13 Sources of income for the household in the last 12 months

	Atwima Mponua		Atwima Nwabiagya		Sefwi Wiawso		Wassa Amenfi West		Overall		
	Male-headed	Female-headed	Male-headed	Female-headed	Male-headed	Female-headed	Male-headed	Female-headed	Male-headed	Female-headed	Total
Sources of HH income in past 12 months (multiple response)											
Selling cocoa beans	77.7	64.4	54.3	51.5	84.4	75.1	90.9	77.5	82.2	70.5*	82.4*
Selling other crops	40.9	39.1	67.1	37.9	41.3	26.5	21.5	13.2	38.6	28.0*	36.0
Petty trade	17.9	26.6	22.5	24.3	27.1	33.3	26.3	42.5	25.0	32.5*	26.8
Other self-employment	15.0	11.0	10.0	9.4	13.9	7.3	15.2	14.3	14.1	9.5	12.3
Other	6.2	0.8	5.6	11.3	12.7	5.6	6.7	6.5	9.5	5.6	7.5
Regular wage employment	1.2	0.0	9.6	2.1	7.4	2.1	2.8	2.5	5.4	1.8	4.0
Agricultural labor	5.0	5.8	6.5	1.2	3.1	0.7	1.6	0.0	3.3	1.6	3.0
Transportation	1.8	0.0	2.4	2.1	2.3	0.0	3.5	0.9	2.5	0.4	1.9
Remittances	0.0	2.8	0.0	3.4	1.9	5.3	1.2	3.2	1.2	4.2	2.2
Pensions, dividends, interest, property rent	0.0	0.0	0.0	0.0	3.4	1.3	0.7	0.0	1.9	0.7	2.1

*p< 0.05

The average annual household income from the survey districts is GH¢7,183.5[18] (Table 3.14). This is far lower than the national gross household income of GH¢16,645 (Exchange rate was GH₵1 = US$0.21937 in 2014). The self-reported annual household income in the project districts is however consistent with the average annual household income for the poorest households in Ghana (GH¢6,571.80)[19]. We also see from the results that the average household income and income from agriculture and cocoa for Sefwi Wiawso and Wassa Amenfi West are significantly higher than Atwima Mponua. Overall,the results also suggest that households in the project districts are among the poorest in Ghana.

Table 3.14 Average income of HH in the past 12 months (GH¢)

	Atwima Mponua	Atwima Nwabiagya	Sefwi Wiawso	Wassa Amenfi West	Overall
Average income from HH	4713.7*	6990.9	7709.2*	7999.8*	7183.5
Average HH income from agric	3472.0*	3530.2	4590.9*	5895.4*	4596.9
Average HH income from cocoa	2856.9	1317.6	3937.5	5547.4	3848.0

*p< 0.05

Results from Table 3.14.1 shows that male-headed households have higher income compared to female-headed households. Generally, households in cocoa growing areas, on average, appear to earn higher levels of income from agricultural production other than cocoa production (p=0.0001). Although households are involved in cocoa, they raise other food crops and participate in other economic activities which if put together contribute significantly to their income.

Table 3.14.1 Average income of HH in the past 12 months by household headship (GH¢)

	Atwima Mponua		Atwima Nwabiagya		Sefwi Wiawso		Wassa Amenfi West		Total		Overall
	Male-headed	Female-headed	Male-headed	Female-headed	Male-headed	Female-headed	Male-headed	Female-headed	Male-headed	Female-headed	
Average income from HH	5,748.8	2,530.7	8,817.6	3,121.0	9348.8	3842.1	8675.3	5552.6	8512.5	3832.6*	7183.5
Average HH income from agric.	4,181.9	1,959.2	4,855.6	1279.9	5425.9	2600.4	6450.2	3960	5426.6	2563.3*	4,596.9
Average HH income from cocoa	3,493.5	1,500.5	1,686.5	682.2	4636.3	2258.7	6110.8	3638.7	4541.8	2156.4*	3,848.0

*p< 0.05

3.4 Farming Characteristics of Households

3.4.1 Type of Agricultural Production

The majority of the households in the MOCA project districts (83%) are dependent on cocoa farming as the main cash crop (see Table 3.15). Overall, production of food crops is the second most frequent type of agricultural production as about 49% of households are engaged in it for income. Wassa Amenfi district and Sefwi Wiawso have the highest proportion of households engaged in livestock compared to other districts. It might be also worth noting that the pattern of higher livestock ownership in Sefwi Wiawso and Wassa Amenfi West corresponds with their highter level of household asseets. This makes sense since livestock is often a means of savings/asset building.

[18] The exchange rate as at the time of data collection was GH₵1 = US$0.21937

[19] See Ghana Living Standard Survey (GLSS 6) Sixth Round, (2014)

Table 3.15 Types of Agricultural Production

	Atwima Mponua		Atwima Nwabiagya		Sefwi Wiawso		Wassa Amenfi West		Overall		
	Male-headed	Female-headed	Male-headed	Female-headed	Male-headed	Female-headed	Male-headed	Female-headed	Male-headed	Female-headed	Total
Cocoa farming	88.3	70.8	65.1	56.3	88.0	77.6	93.3	82.7	87.3	74.5	83.6*
Other commercial crops or agric. products	5.0	8.2	4.2	0.0	9.8	3.8	2.8	2.4	6.8	3.9	6.0
Food crop farming	56.5	42.1	77.1	54.9	46.9	42.6	50.0	33.3	51.9	42.5	49.2*
Livestock	6.6	0.0	2.7	2.7	20.4	6.2	21.8	7.7	16.9	4.9	13.4
Other	0.9	2.8	0.0	0.0	3.1	4.4	1.0	3.3	2.0	3.4	2.4

The MOCA Baseline Survey also solicited information on household output from cocoa in the 12 months prior to the survey. The results show that households produced an average of 1,132.6 kilogram[20] of cocoa with male–headed households recording much higher output relative to their female counterparts. Across districts, households in Wassa Amenfi West recorded the highest output with Atwima Nwabiagya having the lowest.

Table 3.16 Average household cocoa production

	Atwima Mponua		Atwima Nwabiagya		Sefwi Wiawso		Wassa Amenfi West		Overall		
	Household Headship										Total
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	
Output from cocoa production (Kg)	1,181.3	390.5	412.3	159.3	1,218.2	618.6	1,751.2	1,317.5	1,298.3	650.4*	1,132.6

*$p < 0.05$

Data from the survey indicate that few households are engaged in production of other cash crops such as palm, rubber, or timber (among others) on a commercial scale.

Table 3.17 Types of cash crops produced by households apart from cocoa

	Atwima Mponua		Atwima Nwabiagya		Sefwi Wiawso		Wassa Amenfi West		Overall		
	Household Headship										Total
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	
Palm Oil		1.9					0.5		0.1	0.4	0.3
Rubber	0.9	0.9								0.2	0.1
Timber	1.7				1.6		0.7	1.5	1.3	0.3	
Other commercial crops	2.8	6.3	1.7		7.2	3.8	0.3	2.4	4.3	3.6	0.8

The survey solicited information on the extent of cultivation of food crops. The food crops include corn, grains, cassava, other roots, plantain, vegetables, palm fruit and other fruits. Respondents were asked to indicate which of the selected crops they cultivated during the last farming season. As illustrated in Table

[20] At face value, this reported yield should correspond to an GHC 7,200 income from cocoa and therefore seems inconsistent. The average price of cocoa in the past 12 moths is GHC7,200/tone *[should this be "ton"?]* (i.e. average of 2015/16 (GHC6800/tone) (ton?) and 2,016/17 (GHC7600/tone) in the past two crop seasons). However we need to exercise caution as not all the reported output goes to the household interviewed. Part of the harvest is given to the (land?) owner (i.e between ½ and 1/3 as reported in Table 3.19). If half of the yield is given to the owner, then, reported income of GHC3,848 from cocoa is consistent with the reported yield

3.18, plantain is the key food crop across the board cultivated by overall 42% of households. Cassava is the second major food crop cultivated by households across the board. Across districts, corn is the third key food crop cultivated by households.

Table 3.18 Types of food crops cultivated by households (in percents)

	Atwima Mponua		Atwima Nwabiagya		Sefwi Wiawso		Wassa Amenfi West		Overall		
	Household Headship										Total
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	
Corn	21.3	6.0	53.6	32.1	18.4	20.4	23.9	16.6	23.4	17.5*	22.0
Other Grains	7.3	2.7	26.3	7.9	5.2	4.6	2.1	0.0	6.7	2.4	5.4
Cassava	29.9	25.0	52.3	32.1	41.4	38.6	47.0	33.3	41.8	35.3*	40.7
Other root crops	2.0	3.0	1.7	1.5	4.2	4.1	8.9	5.3	4.8	3.4	4.8
Plantain	43.3	31.9	44.6	28.3	42.4	39.3	47.2	30.8	43.7	34.7*	42.8
Vegetables	19.4	8.2	19.7	8.8	8.7	10.8	13.7	15.5	12.7	8.9	12.2
Palm fruits	1.8	0.0	4.9	2.7	4.8	2.7	2.7	0.0	3.8	1.6	3.5
Yam	3.8	3.0	1.7	4.1	14.4	11.5	7.9	0.0	9.9	13.1	12.3
Other fruits	0.6	0.8	2.0	0	1.6	1.4	1.5	0.0	1.5	1.2	1.5

*$p < 0.05$

3.4.2 Household Ownership and Use of Land

In the areas surveyed for the baseline report, the average land size (own land) is 8.3 acres (Table 3.19). As expected, the average farm size owned by male headed household is higher than female headed households. This is not surprising given the greater vulnerability women have in controlling lands and their fewer resources to deploy in acquiring lands. There are no marked variations in the land size owned by households across districts. The average farm size used for cocoa cultivation across all the districts is 6.7 acres and this is quite consistent across the focus districts. The vast majority of Ghanaian cocoa farmers operate at a very small scale.

As illustrated in Table 3.19, the dominant land tenure arrangement is household ownership (61%). Prevalence of share cropping is also high in the sampled cocoa growing areas. Households' ownership of land is highest in Sefwi Wiawso district and lowest in Atwima Nwabiagya district. This finding is consistent with the pattern observed in household asset ownership. In contrast, rent/share cropping is highest in Atwima Nwabiagya district and lowest in Sefwi Wiawso district. As illustrated in Table 3.20, the proportion of male headed households who rent land or engage in share cropping is high in Atwima Mponua and Atwima Nwabiagya districts compared to their counterparts in Sefwi Wiawso and Wassa Amenfi West districts. In contrast, the proportion of female headed households who rent land or engage in share cropping is high in Sefwi Wiawso and Wassa Amenfi West districts compared to their counterparts in Atwima Mponua and Atwima Nwabiagya districts.

Sharecropping arrangements are common in the target districts. Many poor families, both landless and those with only little land, work as sharecroppers. Those who contribute only labor, with the landlord providing all other inputs, usually receive a percentage of the yield. The MOCA baseline survey further solicited information about the sharecropping arrangements regarding harvest that households use. As shown in Table 3.19, most households who engage in sharecropping mostly either receive half or one-third of the yield.

Table 3.19 Ownership and use of land by sex of household

	Atwima Mponua		Atwima Nwabiagya		Sefwi Wiawso		Wassa Amenfi West		Total		
	Male-headed	Female-headed	Male-headed	Female-headed	Male-headed	Female-headed	Male-headed	Female-headed	Male-headed	Female-headed	Over all
Average acreage of land owned by households	9.54	6.17	9.46	5.80	10.59	5.70	9.84	7.36	10.13	6.10	9.05*
Average acreage of land used for cocoa cultivation	8.08	5.46	8.16	5.17	7.64	5.10	7.39	5.08	7.68	5.17	7.02*
Types of land Ownership (percents)											
Household ownership	48.2	46.4	35.0	29.7	74.8	73.2	69.8	70.7	61.8	60.8	61.3
Extended family ownership	3.6	9.1	3.1	0.0	3.2	7.1	5.9	9.7	3.9	6.2	5.1
Joint household ownership	66.1	63.6	75.0	61.0	45.2	35.7	55.9	71.0	61.4	59.0	60.3
Rented/ share cropping	7.1	2.3	6.2	19.5	6.5	7.1	0.0	0.0	5.2	7.6	6.4
Employer	0.0	2.3	3.1	2.4	0.0	3.6	5.9	0.0	2.0	2.1	2.0
Community	16.1	20.5	12.5	9.8	19.4	14.3	17.6	6.5	16.3	13.2	14.8
Don't know	0.0	0.0	0.0	0.0	6.5	14.3	0.0	0.0	1.3	2.8	2.0
Other	8.9	4.5	3.1	12.2	19.4	21.4	20.6	12.9	12.4	11.8	12.1
Proportion of harvest given out to the owner											
½ of harvest	37.8	41.2	52.9	46.7	47.6	40.0	52.0	43.5	45.4	43.1	44.3
1/3 of harvest	42.2	47.1	35.3	46.7	47.6	53.3	40.0	52.2	41.7	49.0	45.2
Other percentage	2.2	0.0	0.0	0.0	0.0	0.0	8.0	4.3	2.8	1.0	1.9
Don't know	0.0	2.9	0.0	0.0	0.0	6.7	0.0	0.0	0.0	2.0	1.0
Other arrangement	17.8	8.8	11.8	6.7	4.8	0.0	0.0	0.0	10.2	4.9	7.6

3.4.3 Agricultural inputs and Labor

Usage of farm tools and machinery is fundamental to cocoa production. In this regard, farmers were asked whether they used farm tools and machinery on their farms during the last farming season. As shown in Table 3.20, the farmers are still using traditional farm tools such as cutlasses and hoes. A significantly large proportion of farmers (93%) use machetes/cutlasses compared to other agro equipments. Also 48% of farmers also used spraying machines consistently across target districts.

The data also show that fertilizer is applied by 39% of households while herbicide is used by 49% of the households. Pesticide usage is significantly higher than herbicide or fertilizer usage across the four districts with 74% of households reporting their use in their farming activities (Table 3.20).

The data also shows that agrochemicals are mostly applied by adults (29%). About 3% of households reported children applying agrochemicals

The survey also examines the usage of protective gear among agricultural households. Overall, a significantly higher number of households use protective gear (78%). A significantly high number of farmers use boots (93%) followed by overcoats (72%) and gloves (62%). Goggles are used in relatively fewer agricultural households (39%).

Table 3.20 Distribution of agricultural inputs and labor by sex of HH head and districts

	Atwima Mponua		Atwima Nwabiagya		Sefwi Wiawso		Wassa Amenfi West		Total		
	Male-headed	Female-headed	Male-headed	Female-headed	Male-headed	Female-headed	Male-headed	Female-headed	Male-headed	Female-headed	Overall
Type of Machinery used on agricultural farms											
Machete/cutlass	90.9	82.1	92.2	78.1	93.9	84.6	96	86.78	93.8	83.6	93.1*
Bullock	0.0	0.0	0.0	0.0	1.4	1.8	0.0	0.8	0.4	0.9	1.1
Hoes	50.4	44.4	66.0	34.0	43	30.0	40.4	16.9	45.5	31.1	43.6
Wheel barrow	0.9	1.0	8.0	0.0	4.1	0.7	2.3	0.0	3.5	0.6	2.8
Tractor	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.1	0.0	0.1
Animal cart	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.1	0.0	0.1
Spraying machine	30.7	20.4	47.8	10.2	56.9	28.9	66.0	38	54.1	26.6	48.6
Weighing scales for produce	5.4	1.0	3.3	1.6	1.4	3.0	1.9	1.5	2.7	1.9	2.4
Other	25.7	24.9	2.3	8.4	11.0	4.6	15.0	6.9	13.7	9.3	12.4
Proportion of farmers' usage of Fertilizers, herbicides and pesticide in the last 12 months											
using fertilizer	42.8	24.1	56.5	44.1	33.5	33.3	50.0	45.6	41.0	35	39.4
using herbicide	43.4	45.7	77.0	38.5	43.0	29.3	75.0	62.0	54.1	39.4	49.7
using pesticide	79.4	61.8	68.5	49.5	78.2	68.1	84.0	68.6	79.0	64.6	74.8*
Persons responsible for application of pesticides											
Self (Caregiver)	38.7	14.7	55.2	12.4	45.5	27.7	67.3	32.1	50.9	24.7	44.2
Adult HH member	23.2	20.7	46.3	39.4	21.7	34.6	32.1	24.3	26.6	30.6	27.6*
Children (5-17years)	0.0	0.0	0.0	3.1	0.0	0.0	13.8	7.0	3.6	1.6	3.1
Government agent	11.9	10.6	0.0	8.5	1.7	0	8.5	11.8	5.1	4.9	5.0
Households Reporting usage of protective gear	82.1	74.0	75.3	86.2	81.6	78.0	72.9	65.5	78.9	75.8	78.1
Type of protective gear used by HHs											
Gloves	77	85	41.5	63.5	66.1	77.7	35.5	50.3	58.8	73.1	62.3
Overcoat	78.0	82.8	73.3	88.5	70.6	72.1	65.6	74.1	70.9	76.1	72.2
Goggles	54.0	61.1	14	41	39.2	45.7	27.1	29.4	36.9	45.3	39.0
Boot	95.6	98.6	79.1	92.3	94.3	90.5	95.2	93.3	93.6	92.6	93.3*
Nose Mask	77.2	80.6	53.0	70.9	74	84	62.0	73.8	70.1	80.6	72.7
None	2.7	0.0	3.0	0.0	2.1	1.1	1.1	1.3	2.1	0.8	1.5
Other	1.3	0.0	0.0	0.0	3.2	2.2	1.1	0.0	1.7	0.8	1.3

Table 3.21 shows the proportion of households hiring labor on their farm during the past 12 months. As illustrated in the table, 72% of households reported hiring labor (whether adults, children or both) in the last 12 months. Use of hired labor is higher in Atwima Mponua district than in other districts.[21] The results also show that 49% of the surveyed households hired adult labor compared to 4% who hired children. Hiring of adult labor for farm activities is consistent across districts, but hiring of children for farm operations is particularly high in Atwima Nwabiagya compared to other districts. The high level of employment of children can be explained by the high-income levels in the household as shown in correlation results in Annex 5. Thus, there is a positive correlation between household income and children workers employed. This would mean that households with higher income hire more children for work. However, the previous analyses (see Table 3.13 and Table 3.14) seem to suggest that Atwima Mponua and Atwiman Nwabiagya are poorer than

[21] Figures presented for child labor prevalence by district should be interpreted with caution, as the sample size per district Is not large enough to measure prevalence with reliability.

the other two districts (i.e. less HH assets) and Atwima Mponua seems to have a relatively low percetnage of households employing children. There appear to be some unique factors in Atwima Nwabiagya that leads to high employment of children which may require further probing.

Table 3.21 Distribution of agricultural households employing children and adults

	Atwima Mponua		Atwima Nwabiagya		Sefwi Wiawso		Wassa Amenfi West		Overall		
	Male-headed	Female-headed	Male-headed	Female-headed	Male-headed	Female-headed	Male-headed	Female-headed	Male-headed	Female-headed	Total
Households employing adults and children workers in the last 12 months[22]	57.4	62.9	67.9	49.5	50.4	43.0	41.3	39.5	50.9	47.0	49.7
% of HH employing Adults	56.1	62.9	67.9	48.4	50.1	43.0	40.8	39.5	50.4	46.9	49.4
% of HH employing children (5-17years)	3.6	2.0	11.1	10.4	3.8	7.4	0.9	2.7	3.7	5.9	4.4

*p< 0.05

3.5 Children's Activities

3.5.1 Children Engaged in Household Work

Household chores undertaken by children in their own homes, in reasonable conditions, and under the supervision of adult household members are an integral part of family life and of growing up, therefore something positive. However, in some cases excessive household chores can interfere with children's education and other activities, affecting children's development. While household work is not part of the MOCA project definitions this survey asked respondent children whether they were involved in household tasks at least one hour in a week during the past 12 months.

The results reveal that 88% of children aged 5-17 are engaged in household chores. Most household children in the MOCA project districts are involved in cleaning utensils/house (66%), washing clothes (62%) and cooking (43%). Usually these children mostly work for their mother (70%) and to some extent their father (31%). It is also notable that children 13 and older are almost universally engaged in HH chores (99%). The results also show that more girls reported doing houseohold work in the past 12 months than boys. This relationship is statistically significant.

The report also shows that 20% of children reported working for themselves when undertaking household chores with children in Wassa Amenfi West dominating the sample with 30%. Perhaps children perceive, washing of own clothing, cleaning of their rooms as working for themselves rather than their parents.

[22] Households employing adult and children is 49.7%. This computation is not based on the addition of '% of HH employing adults' and '% of HH employing children' since they overlap. A household is therefore counted once if it satisfies both conditions.

Table 3.22 Children engaged in household work

	Atwima Mponua	Atwima Nwabiagya	Sefwi Wiawso	Wassa Amenfi West	Overall
Percent of Children engaged in HH work in past 12 months	90.8	90.9	85.2	91.0	88.1
5-12 years	87.4	86.2	77	86.2	82.0
13-14 years	99.2	100	98.9	100	99.3
15-17years	98.3	100	100	99.0	99.5
Boys	90.3	89.3	81.9	90.6	86.1*
Girls	91.4	92.9	88.8	91.3	90.2*
Type of HH work children are engaged in at least 1-hour in a week in past 12 months					
Shopping for households etc.	34.5	39.9	23.8	51.8	33.7
Repairing any household equipment	0.7	3.7	1.1	1.2	1.3
Cooking	39.7	36.5	44.4	46.3	43.3
Cleaning Utensils/house	63.3	77.3	66.1	67.3	66.9
Washing clothes	59.2	61.2	65.4	61	62.9
Other household tasks	11.6	13	11.6	33.3	16.8
Individuals whom children worked for in past 12 months doing HH work					
Father	18.7	40.4	31.6	36	31.2
Mother	70.9	70.5	69.6	69.8	70.0
My relative	6.9	23.6	8.5	14.4	11.0
A friend of my mother and father	0.1		0.7	0.5	0.5
My friend		0.5	0.2	0.2	0.2
A man who owns the farm of field				0.3	0.1
A contractor who rents the farm or field				0.3	0.1
Myself	7.8	16.1	20.3	30.2	20.0
others	0.3	0.4	0.7	0.5	0.6

*p< 0.05

3.5.2 Children engaged in agricultural activities

The survey also assessed the involvement of children in agricultural activities (See Table 3.23). The results indicate that 63% of children in the MOCA project target districts have worked in agriculture for at least one hour in a week in the past 12 months with more children aged 15-17 years engaged in agriculture than children in other age cohorts. The finding compares favorably with the country average of 69.9%[23]

By sex, the data show that a higher proportion of boys (69%) than girls (57%) are engaged in agriculture. By district , Wassa Amenfi West had the highest propotion of children working in agriculture (71%) compared to their counterparts in the other districts.

Table 3.23 Children engaged in Agricultural activities by age and district

	Atwima Mponua	Atwima Nwabiagya	Sefwi Wiawso	Wassa Amenfi West	Overall
% of children working in agriculture in past 12 months	63.8	57.0	61.2	71.1*	63.6
Boys	65.5	55.2	68.5	79.4	69.1*
Girls	61.8	59.3	53.0	63.0	57.6*
5-12 years	55.6	43.9	50.2	61.6	53.3
Boys	59.4	37.5	60.1	72.4	60.5
Girls	50.8	51.1	39.3	51.1	45.3

[23] See School of Public Health, Tulane University (2015), op.cit.

	Atwima Mponua	Atwima Nwabiagya	Sefwi Wiawso	Wassa Amenfi West	Overall
13-14 years	88.8	79.6	70.9	87.6	78.7
Boys	84.1	88.2	72.9	89.1	79.8
Girls	92.9	68.5	68.3	86.2	77.5
15-17years	77.0	85.4	88.5	88.4	86.5
Boys	80.3	83.0	91.9	93.9	89.9
Girls	74.0	89.3	84.9	82.4	82.8

*p< 0.05

The survey also assessed the age at which children begun working in agriculture. From Table 3.24, we observe that the average age at which children start work in agriculture is 8.6 years old with a similar pattern across the districts. We also observe from the table that younger children (5-12 years) indicated their initial agricultural working age as 7.4 years while older children (15 -17 years) reported their initial working age as 10.7 years. This is an indication that households are increasingly involving their children in agriculture at an earlier age. This is confirmed by liner correlation analysis which shows significant correlation between the current age of the children and the age at which they started working in agriculture for the first time

Table 3.24 Average age at which children started working in Agriculture

	Atwima Mponua	Atwima Nwabiagya	Sefwi Wiawso	Wassa Amenfi West	Overall
(Overall)	8.3	8.1	8.9	8.6	8.6*
Overall Boys	8.1	8.4	8.5	8.4	8.6*
Overall Girls	8.5	7.7	9.5	8.8	8.7
5 -12 years	7.3	7.3	7.5	7.1	7.4
Boys	7.2	7.5	7.4	7.1	7.3
Girls	7.4	7.2	7.7	7.1	7.5
13-14years	8.9	8.6	9.4	9.3	9.2
Boys	8.6	9.0	8.8	9.1	8.9
Girls	9.3	7.8	10.3	9.5	9.6
15-17years	10.4	9.0	10.8	10.9	10.7
Boys	10.6	9.0	10.5	10.7	10.4
Girls	10.1	9.0	11.2	11.3	10.9

*p< 0.05

The survey also enquired from children whom they worked for in their involvement in agriculture. Information from Table 3.25 shows that similar to household chores, most of these children worked for their mother (58.5%) and father (56.7%) and to a smaller extent family relatives (12.4%). Only a very small proportion of households working in agriculture indicated that they work for themselves (2.9%).

Table 3.25 Whom children worked for in past 12 months working in agriculture

	Atwima Mponua		Atwima Nwabiagya		Sefwi Wiawso		Wassa Amenfi West		Overall		
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Total
My father	53.4	42.6	61.9	63.1	60.8	51.6	63.4	54.9	60.3	51.8	56.7
My mother	51.3	66.7	47.3	58.2	59.7	65.8	52.4	55.4	55.4	62.5	58.5
My relative	6.2	9.8	18.6	17.8	11.3	12.6	11.5	18.3	11.1	14.1	12.4
A friend of my mother and father	1.1	0.0	0.0	0.0	0.0	0.0	0.2	0.8	0.2	0.2	0.2
My friend	0.0	0.0	0.0	0.0	2.3	1.1	2.0	0.0	1.7	0.5	2.2

A man who owns the farm or field	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.8	0.2	0.2	0.2
A contractor who rents the farm or field	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1
Myself	0.0	0.0	0.9	0.0	7.1	3.0	1.7	0.5	4.0	1.5	2.9
Other	0.5	0.0	0.0	0.0	0.0	0.7	0.4	0.3	0.2	0.4	0.3

On average the number of hours children work in agriculture is 6.5 hours per week (observed in Table 3.26) with children in Atwima Nwabiagya district working more hours (10.6 hours) in agriculture than their counterparts in Atwima Mponua (3.4 hours) although the difference is not statistically significant. The results seem to be consistent with the findings for households employing children in this district (See Table 3.21).. Analysis by age groups shows that older children (15-17 years) work significantly longer hours than their younger counterparts.

Table 3.26 Average No. of hours' children worked in Agriculture in the past 12 months

	Atwima Mponua	Atwima Nwabiagya	Sefwi Wiawso	Wassa Amenfi West	Total
Overall	3.4*	10.6*	5.7	6.2	6.5
Overall Boys	4.4	11.0	5.0	5.3	6.4
Overall Girls	2.4	10.2	6.4	7.0	6.5
5 -12 years	3.3	4.2	4.4	4.3	4.1
Boys	3.6	4.6	4.6	4.7	4.4
Girls	3.3	4.3	4.5	4.4	4.1
13-14 years	3.6	4.4	4.5	4.8	4.3
Boys	3.2	7.3	6.0	5.7	5.6
Girls	3.0	6.6	4.4	4.6	4.7
15-17 years	5.1	9.0	8.1	6.1	7.1*
Boys	6.4	8.8	10.4	6.9	8.1
Girls	3.8	9.1	5.8	5.2	6.0

*$p < 0.05$

The majority of children in the survey households work on different time periods (36%) within the week and during weekends (32%) when schools are not in session, as can be seen in Table 3.27. Children who work in the morning constitutes 19% of respondents. In Ghana, public school starts at 8am and closes officially at 2pm. Private schools however have different start and closing times with some closing as late as 4pm. The shift system has been cancelled and as such children attend school only in the morning.

Table 3.27 Time period children engaged in agriculture

	Atwima Mponua	Atwima Nwabiagya	Sefwi Wiawso	Wassa Amenfi West	Overall
All day (6am- 6pm)	1.5	14.8	3.9		3.4
In the morning (6am-11am)	13	29.7	25.4	10.8	19.7
In the afternoon (12 noon- 6pm)	1.1	2.1	6.3	0.4	3.5
Late night (6pm-3am)	0.3	0	0	0.4	0.2
On the weekends	27.1	37.5	33.1	34.9	32.9
During school holidays	13.9	9.5	10	4.6	9.3

Other periods	46.5	23.3	30.1	45.1	36.4
Don't know	11.9	6.4	4.8	8.2	7.1
I usually don't do this kind of work	1.8		2.4	0.8	1.7

3.5.3 Children engaged in cocoa activities

The survey also assessed the involvement of children in cocoa farm activities (see Table 3.28). The results indicate that 85% of children interviewed have worked in cocoa farming for at least one hour in a week in the past 12 months.In terms of age, older children (aged 15-17 years) represent the majority of children engaged in cocoa farming (90%) compared to their younger counterparts. The proportion of children working in cocoa reported in this study is higher than figures reported by the Tulane study of 2008/9 (46%) and the 2013/14 study (42%)[24].

Table 3.28 Proportion of children working in cocoa production in past 12 months

	Atwima Mponua	Atwima Nwabiagya	Sefwi Wiawso	Wassa Amenfi West	Overall
Overall	80.1	69.6	85.9	92.8	85.3
Boys	81.4	73.7	87.8	93.7	87.1
Girls	78.6	65.0	83.1	91.7	83.0
5-12 years	77.0	59.9	82.7	89.5	81.6
Boys	78.1	67.0	84.1	91.8	83.9
Girls	75.4	54.1	80.3	86.4	78.3
13-14 years	83.7	78.8	88.4	96.7	88.8
Boys	85.1	76.0	91.9	96.2	90.0
Girls	82.7	83.5	83.5	97.1	87.4
15-17years	86.3	80.2	90.1	97.0	90.5
Boys	90.3	81.6	92.7	96.4	92.4
Girls	82.3	78.1	87.1	97.6	88.3

The survey also assessed the age at which children begun working in cocoa farming. From Table 3.29, we observe that the average age at which children start work in cocoa farming is similar to the agriculture working age of 8.9 years. We also observe from the table that younger children (5-12 years) indicated their initial cocoa farming work as 7.4 years while older children (15 -17 years) reported their initial working age as 11 years, this is an indication that households are increasingly involving their children in agriculture at an earlier age.

Table 3.29 Average age at which children started working in cocoa for the first time

	Atwima Mponua	Atwima Nwabiagya	Sefwi Wiawso	Wassa Amenfi West	Overall
Overall	8.5	8.4	9.0	8.9	8.9

[24] Survey Research on Child Labour in West Africa Cocoa growing areas

	Atwima Mponua	Atwima Nwabiagya	Sefwi Wiawso	Wassa Amenfi West	Overall
Overall Boys	8.4	8.5	8.7	8.9	8.7
Overall Girls	8.7	8.1	9.5	9.0	9.1
5-12 years	7.3	7.2	7.5	7.3	7.4
Boys	7.2	7.2	7.4	7.4	7.4
Girls	7.5	7.3	7.4	7.2	7.5
13-14 years	9.2	8.8	9.5	9.5	9.4
Boys	8.8	9.1	9.1	9.3	9.1
Girls	9.5	8.2	10.2	9.7	9.7
15-17 years	10.8	9.4	11.1	11.4	11.0
Boys	11.3	9.4	10.8	11.3	11.0
Girls	10.2	9.5	11.4	11.6	11.2

On the number of hours children work in cocoa farming as observed in Table 3.30, children reported working an average of 5.8 hours in a week. Children in Awima Nwabiagya reported the most working hours a week while children in Atwima Mponua reported the lowest number on average. The results show that overall, boys significantly worked more hours than girls (p=0.012). Analysis by age groups also shows that older children (15-17 years) work significantly longer on average in a week compared to younger children (p=0.001).

Table 3.30 Average No. of hours' children worked in cocoa in the past 12 months

	Atwima Mponua	Atwima Nwabiagya	Sefwi Wiawso	Wassa Amenfi West	Total
Overall	4.0	7.6	6.4	5.3	5.8
Boys	4.9	7.6	6.8	5.7	6.2*
Girls	3.4	7.6	5.7	4.7	5.2*
5-12 years	3.8	7.4	5.1	4.9	4.9
Boys	4.2	7.3	4.6	5.0	4.8
Girls	3.1	7.6	6.0	4.6	5.1
13-14 years	3.3	6.7	5.7	5.2	5.3
Boys	3.4	7.2	6.3	5.7	5.9*
Girls	3.1	6.0	4.8	4.6	4.5*
15-17 years	5.3	8.7	8.6	6.2	7.6
Boys	6.5	8.4	11.2	7.1	9.2*
Girls	4.3	9.2	5.9	5.1	5.7*

*p <0.05

Majority of children in cocoa work on different time periods (31%) within the week and during weekends (28%) when schools are not in session, as can be seen in Table 3.31.

Table 3.31 Time period children are engaged in cocoa

	Atwima Mponua	Atwima Nwabiagya	Sefwi Wiawso	Wassa Amenfi West	Total
% of children working in cocoa					
All day	1.8	12.8	3.9		3.3*
In the morning	12.8	20.2	23.4	11.6	18.2
In the afternoon	1.1	1.4	4.3	0.4	2.5*
Late night	0.3			0.4	0.2
On the weekends	19.9	30.5	29.1	32.2	28.4
During school holidays	11.9	6	8.1	5.2	7.9
No specific time period	35.3	16.2	26.7	41.7	31.3*

	Atwima Mponua	Atwima Nwabiagya	Sefwi Wiawso	Wassa Amenfi West	Total
% of children working in cocoa					
All day	1.8	12.8	3.9		3.3*
In the morning	12.8	20.2	23.4	11.6	18.2
I usually don't do this kind of work	15.2	23.2	10.7	5.6	11.2

*p <0.05

3.5.4 Children engaged in other economic activities

The survey also assessed the engagement of children in other economics activities (see Table 3.32). The results indicate that 18% of children interviewed in the households have worked in other economic activities for at least one hour in a week in the past 12 months; more girls (20%) than boys (16%) reported this but the difference is not significant. In terms of age, older children (aged 15-17 years) represent the majority of children engaged in other economic activities (30%) compared to younger children.

Table 3.32 Children engaged in other economic activities

	Atwima Mponua	Atwima Nwabiagya	Sefwi Wiawso	Wassa Amenfi West	Overall
% of children working in other economic activities in the past 12 months	16.0	13.3	17.0	24.6	18.2
Boys	12.8	8.0	17.4	20.2	16.3
Girls	19.6	19.9	16.5	28.9	20.4
5-12 years	9.7	10.6	11.4	19.2	12.8
Boys	7.3	5.6	10.8	13.6	10.2
Girls	12.8	16.1	12.0	24.7	15.6
13-14 years	24.2	19.0	26.2	29.0	25.8
Boys	20.0	6.2	29.6	25.0	24.6
Girls	28.0	35.7	21.8	32.6	27.2
15-17years	35.9	18.4	27.3	38.7	30.6*
Boys	34.6	18.3	28.0	37.1	30.2
Girls	37.0	18.4	26.6	40.4	31.1

*p <0.05

The survey also assessed the age at which children begun working in other economic areas. From Table 3.33, we observe that the average age at which children start work in other economic activities is 11 years. Although not significant, the study found that younger children (5-12 years) spend less time working in other economic areas compared to older children.

Table 3.33 Average age at which children started working in other economic activities

	Atwima Mponua	Atwima Nwabiagya	Sefwi Wiawso	Wassa Amenfi West	Total
(Overall)	10.9	11.4	11.2	10.5	10.9
Overall Boys	11.0	12.5	11.1	11.0	11.1
Overall Girls	10.8	10.9	11.3	10.1	10.8
5 -12 years	8.5	9.1	8.9	8.3	8.6
Boys	8.4	8.9	9.1	8.1	8.8
Girls	8.6	9.2	8.6	8.4	8.6
13-14years	10.6	11.5	11.4	11.9	11.4
Boys	10.8	12	11.4	12.0	11.5
Girls	10.5	11.4	11.4	11.8	11.3

15-17years	13.5	15	13.6	13.0	13.5
Boys	13.7	15	13.2	13.6	13.5
Girls	13.4	14.9	14.1	12.3	13.5

On average the number of hours children work in other economic activities is 3.4 hours. The number of hours children used for working in other economic activities is significantly higher in Awima Nwabiagya compared to Atwima Mponua and Wassa Amenfi West (p=0.000). Both Boys and girls used similar hours for working in other economic activities across districts.

Table 3.34 Average No. of hours' children worked per day in other economic activities in the past 12 months

	Atwima Mponua	Atwima Nwabiagya	Sefwi Wiawso	Wassa Amenfi West	Total
(Overall)	2.6*	4.4*	3.8	2.6*	3.4
Overall Boys	2.3	4.5	3.7	3.0	3.4
Overall Girls	2.8	4.3	3.8	2.4	3.2
5 -12 years	2.1	2.9	3.3	2.0	2.6
Boys	1.8	3.1	2.9	2.2	2.5
Girls	2.4	2.9	3.7	1.9	2.7
13-14years	2.0	6.1	4.2	3.0	3.8
Boys	1.5	8	4.8	3.4	4.3
Girls	2.4	5.7	3.2	2.7	3.2
15-17years	3.3	4.5	3.9	3.3	3.6
Boys	3.3	4.2	3.5	3.4	3.5
Girls	3.4	5	4.3	3.1	3.8

3.6 Children in Employment

The MOCA project seeks to provide services to children engaged in child labor and children at high risk of engaging in child labor. Children may enter in and out of being engaged in child labor, but once engaged in child labor, they will always be at high risk of going back into child labor. Children found to be in child labor, may be categorized as engaged in child labor, in hazardous child labor or in the worst forms of child labor. The child labor prevalence survey is therefore guided by MOCA definitions to determine when a child is considered to be a child in employment, engaged in child labor (see Box 1), hazardous child labor (see Box 2), the worst forms of child labor (WFCL) or is a child at high risk (see Box 3) of engaging in child labor.

According the MOCA project definitions, a child is considered to be in employment if the child is between 5 to 17 years old and working for at least 1 hour per week. These include children engaged in child labor; children 13 and 14 years old in permissible light work[25]; and adolescents between 15 and 17 years old who are engaged in work not designated as one of the worst forms of child labor. All work status estimates for children (Children in employment, CL, and HCL) are presented with the 95% confidence interval (lower and upper limits).

Table 3.35 presents the results of children in employment across the four districts. The results show that 76% of children are in employment across the MOCA project districts with more children in Wassa Amenfi district in employment (81%) than their cohort in the other three districts. Across age, the data reveals

[25] Permissible **light work** can be conducted no more than 14 hours/week by children 13 and 14 years of age provided it does not affect the child's attendance at school or the capacity of the child to benefit from school work.

likelihood of engagement in employment increases with age with older children (15-17 years) engaged in employment (98%) relative to younger children aged 5 to 12 years (66%).

Table 3.35 Percentage of children in employment in survey households by district, sex, and age

	Atwima Mponua	Atwima Nwabiagya	Sefwi Wiawso	Wassa Amenfi West	Total	[95% Conf. Interval]	
(Overall)	73.8	75.5	76.0	81.8	76.9	*73.9*	*79.6*
Overall Boys	75.3	73.3	76.5	82.6	77.3	*73.6*	*80.6*
Overall Girls	72.1	78.2	75.5	81.0	76.5	*73.0*	*79.7*
5 -12 years	63.8	63.2	64.2	72.7	66.0	*62.2*	*69.6*
Boys	68.1	57.8	64.7	74.3	66.8	*61.7*	*71.6*
Girls	58.3	69.3	63.6	71.2	65.1	*60.0*	*69.8*
13-14years	99.2	98.5	94.4	96.9	96.2	*92.6*	*98.1*
Boys	98.3	99.6	94.0	93.6	95.2	*89.3*	*97.9*
Girls	99.6	96.5	94.9	99.6	97.3	*91.5*	*99.2*
15-17years	94.7	99.6	98.8	98.8	98.2	*96.3*	*99.1*
Boys	91.9	99.0	99.0	99.9	98.4*	*95.2*	*99.5*
Girls	97.2	99.9	98.5	97.2	98.1	*94.8*	*99.3*

*p <0.05

Table 3.36 provides the prevalence of children in employment in each category for target children as shown in Table 3.35. The survey finds that the prevalence of children in employment is 72% of adolescents 15-17 years old who are engaged in work not designated as one of the worst forms of child labor, 67% for children aged 13-14 years engaged in permissible light work and 58% of children engaged in child labor. The total prevalence for children aged 5-17 in employment is 74%[26] .

Table 3.36. Elements measuring prevalence of children in employment in various categories

Elements measuring children in employment	Atwima Mponua	Atwima Nwabiagya	Sefwi Wiawso	Wassa Amenfi West	Total
Children (5-17 years) in child labor	58.1	54.3	54.1	68.9	58.3
Children (13 to 14 years) in permissible light work in employment	70.5	74.1	58.1	81.3	67.4
Adolescents between 15 -17 years old who are engaged in work not designated as one of the worst forms of child labor)	60.1	73.5	73	78.3	72.3

*p <0.05

3.7 Estimation of Children Engaged in Child labor (CL)

In this survey child labor refers to any type of work that is mentally, physically, spiritually, socially and/or morally harmful to children, and interferes with children's education by denying them an opportunity to attend school, forcing them to leave school prematurely, or limiting their capacity to benefit from instruction[27]. It also refers to any work that when performed by the child unduly reduces their present welfare or their future income earning capabilities. This definition applies to both male and female children. A child was considered to be in child labor if she/he meets any one of the following criteria in Box 1.

[26] Please note that the elements contributing to children in employment are not mutually exclusive.
[27] MOCA Child Labour Definitions

Box 1. The MOCA project definition of child labour

a. Less than 13 years of age and worked more than 1 hour per week (per definition of children in employment above);

b. Between 13 and 14 years old and engaged in work other than light work for more than 1 hour per week (per definition of children in employment above)

c. Between 13 and 14 years old and worked more than 14 hours per week

d. Any age, Hazardous Child Labor

Table 3.37 presents results of children involved in child labor in the four project districts. The result reveals that 58% of all children are engaged in child labor activities, with children in Wassa Amenfi West leading the sample (68%). The prevalence rate of children involved in child labor in the project districts is below the national average of 66.8% recorded during the 2013/14 study conducted by Tulane University. By sex, the results show slightly more boys (63%) than girls (52%) engaged in child labor. The results also show that children (13-17 years) are more often involved in child labor compared to younger children (5-12 years) (p=0.000).

The composition of child labor in the project districts is driven by child labor in agriculture including cocoa (56%). Children involved in child labor in other economic activities constitute 15% of the sampled children.

Table 3.37 Children engaged in child labor

	Atwima Mponua	Atwima Nwabiagya	Sefwi Wiawso	Wassa Amenfi West	Total	[95% Conf. Interval]	
Children aged 5-17 engaged in CL (Overall)	58.1	54.3	54.1	68.9	58.3	*54.5*	*62.0*
Overall Boys	59.5	54.8	61.3	75.8	63.6	*59.6*	*67.3*
Overall Girls	56.5	53.7	45.9	62.0	52.4	*47.2*	*57.6*
Aged 5-12	48.8	39.7	43.6	58.4	47.6	*43.6*	*51.7*
Boys	51.8	36.9	51.0	68.9	53.7	*48.9*	*58.4*
Girls	44.9	42.9	35.3	48.1	40.8	*35.2*	*46.8*
Aged 13-14	85.0	83.2	65.4	88.5	76.0	*68.5*	*82.2*
Boys	82.2	88.2	69.4	82.8	76.2	*65.0*	*84.7*
Girls	87.5	76.7	60.3	93.8	75.7	*62.6*	*85.3*
Aged 15-17	74.8	81.4	78.4	86.5	80.0	*75.2*	*84.1*
Boys	78.8	83.0	87.7	92.1	87.0	*80.2*	*91.7*
Girls	71.2	78.8	68.6	80.4	72.5	*64.4*	*79.4*
Children aged 5-17 engaged in CL in agriculture including cocoa)	57	52.4	51.4	66.8	56.1	*52.4*	*59.7*
Children aged 5-17 engaged in CL in other economic activities	12.8	9.6	14.4	21.5	15.3	*12.5*	*18.7*

The survey also assessed the prevalence rate of households with at least one child engaged in child labor. The results show that 71% of households have at least one child engaged in child labor in the past 12 months with households headed by females slightly above their male counterpart though not significantly.

Across districts, a higher proportion of households in Wassa Amenfi West (82%) have at least one child engaged in child labor, with Sefwi Wiawso recording the lowest (66%) (See Table 3.38).

Table 3.38 Percentage of households with children engaged in child labor

	Atwima Mponua	Atwima Nwabiagya	Sefwi Wiawso	Wassa Amenfi West	Total	[95% Confidence Interval}	
% of households with children engaged in CL	71.2	72.8	66.4	82.9	71.5	*66.9*	*75.6*
Male headed	66.8	79.2	65.0	83.0	70.9	*65.6*	*75.6*
Female headed	80.5	60.4	69.6	82.5	72.9	*66.1*	*78.8*

*p <0.05

The next section provides detailed analysis on the specific components/elements of child labor namely, child labor in agriculture including cocoa and child labor in other economic activities. Table 3.39 presents the results of households involved in child labor in agriculture. The results reveal that 56.1% of children across the districts are involved in activities in the agriculture sector classified as mentally, physically, spiritually, socially and/or morally harmful. These activities interfere with children's education by denying them an opportunity to attend school, forcing them to leave school prematurely, or limiting their capacity to benefit from instruction. Across sex, the results reveal that boys are more involved in child labor (62%) than girls (49%). The prevalence rate of child labor in Wassa Amenfi West (66%) is highest across the four districts with children in Sefwi Wiawso being the least involved in child labor (51%). Across age, children 15-17 years are the most involved in child labor (80%) compared to children aged 5-12 years (45%). The results suggest that child labor in agriculture is very prevalent in the targeted project districts, an indication of good targeting by the MOCA project.

Table 3.39 Children engaged in child labor in agriculture (including cocoa)

	Atwima Mponua	Atwima Nwabiagya	Sefwi Wiawso	Wassa Amenfi West	Total
Children aged 5-17 engaged in CL (Overall)	57	52.4	51.4	66.8	56.1
Overall Boys	58.4	53.6	59.7	75.6	62.4*
Overall Girls	55.3	50.8	42.2	58.1	49.2*
Aged 5-12	47.6	37.7	40.7	56	45.2
Boys	51.2	35	49.4	68.6	52.5*
Girls	43	40.8	31.1	43.7	37.2*
Aged 13-14	82.6	79.6	60.5	85.4	72.1
Boys	77.1	88.2	65.9	82.8	73.7
Girls	87.5	68.6	53.6	87.9	70.3
Aged 15-17	74.8	81.4	78.4	86.5	80.0
Boys	78.8	83	87.7	92.1	87.0*
Girls	71.2	78.8	68.6	80.4	72.5*

*p <0.05

The study further assessed the various elements constituting the child labor in agriculture (including cocoa) to see which factors drive the prevalence rate. The data show that children engaged in hazardous child labor activities is explaining the high incidence of child labor in the project districts. This is followed by children aged 13 to 14 years working more than one hour per week

Table 3.40 Distribution of element contributing to child labor in agriculture (including cocoa) by sex and districts

	Atwima Mponua	Atwima Nwabiagya	Sefwi Wiawso	Wassa Amenfi West	Total
Less than 13 years and worked more than 1 hours per week	17.5	12.7	19.3	25.0	19.7
Boys	20.3	11.4	24.7	30.6	23.9*
Girls	14.3	14.2	13.3	19.4	15.1*
Between 13 and 14 years old and working in areas other than light work for more than one hr per week	2.5	8.8	8.9	9.4	8.0
Boys	2.9	2.7	8.6	8.7	7.2
Girls	2.2	16.8	9.3	9.9	8.9
Between 13 and 14 years old and worked in more than 14 hours per week		0.9	0.4	0.2	0.3
Boys		1.2	0.5	0.3	0.5
Girls		0.6	0.3		0.2
All age, Children in hazardous child labor					
(Overall)	55.6	51.8	49.2	66.0	54.5
Boys	56.5	53.6	57.3	75.3	60.8*
Girls	54.6	49.6	40.1	56.8	47.6*
Aged 5-12	45.7	37.7	37.6	55.1	43.2
Boys	48.7	35.0	46.0	68.1	50.3*
Girls	41.9	40.8	28.4	42.4	35.3*
Aged 13-14	82.0	76.6	58.6	83.9	70.3
Boys	75.7	88.2	64.2	82.8	72.6
Girls	87.5	61.7	51.4	85.0	67.8
Aged 15-17	74.8	81.4	78.4	86.5	80.0
Boys	78.8	83.0	87.7	92.1	87.0*
Girls	71.2	78.8	68.6	80.4	72.5*

Table 3.41 presents the proportion of children involved in child labor in other economic activities across the four project districts. The results reveal that 15% of children are involved in child labor in other economic activities in the MOCA project districts. Across sex, the results show that girls are more involved in child labor in other economic activities (24%) than boys (17%) although the difference is not significant. The prevalence rate of children involved in child labor in other economic activities appears high in Wassa Amenfi West (21%) compared to other districts. Across age, children aged 15-17 years are more involved in child labor in other economic activities compared to younger children.

Table 3.41 Children engaged in child labor in other economic activities

	Atwima Mponua	Atwima Nwabiagya	Sefwi Wiawso	Wassa Amenfi West	Total
Children aged 5-17 engaged in CL (Overall)	12.8	9.6	14.4	21.5	15.3
Overall Boys	9.8	5.7	15.2	17.9	13.9
Overall Girls	16.2	14.4	13.4	24.9	16.9
Aged 5-12	8.7	8.2	9.6	17.7	11.1
Boys	6.4	5.6	8.5	12.3	8.6
Girls	11.5	11.1	10.8	22.8	13.9
Aged 13-14	20.0	19.0	23.3	24.1	22.5
Boys	16.5	6.2	27.6	19.4	21.8

Girls	23.0	35.7	17.8	28.4	23.3
Aged 15-17	24.2	4.6	22.8	31.9	23.7
Boys	20.9	5.2	26.2	34.6	25.5
Girls	27.3	3.6	19.1	29.1	21.8

3.8 Estimation of Children Engaged in Hazardous Child Labor (HCL) in Agriculture

Hazardous Child Labor, a subset of the Worst Forms of Child labor, refers to employment in industries and occupations designated as hazardous or work for long hours and/or at night in industries and occupations not designated as hazardous. Per ILO Recommendation 190, work that possibly falls under the definition of HCL is:

- work which exposes children to physical, psychological, or sexual abuse;
- work underground, under water, at dangerous heights or in confined spaces;
- work with dangerous machinery, equipment and tools, or which involves the manual handling or transport of heavy loads;
- work in an unhealthy environment which may, for example, expose children to hazardous substances, agents or processes, or to temperatures, noise levels, or vibrations damaging to their health; work under particularly difficult conditions such as work for long hours or during the night or work where the child is unreasonably confined to the premises of the employer.

Section 58 (1) of the Labour Act stipulates that "a young person shall not be engaged in any type of employment or work likely to expose the person to physical or moral hazard". Section 91 of the Children's Act of 1998 stipulates that hazardous employment is proscribed for all children under 18 years of age and Section 87 forbids the engagement of a child in "exploitative child labor" that "deprives the child of its health, education or development", under all circumstances. As such it supplements ILO Convention 182 and Recommendation 190. Ghana's Hazardous Child Labour Framework for the Cocoa Sector, published by the Ministry of Manpower, Youth and Employment in June 2008, is specific to the cocoa sector whereas the 2012 Hazardous Child Labour Framework adds to the hazardous tasks specific to cocoa to include other hazardous tasks in all types of crop agriculture.

In this survey, hazardous child labor is defined as a child, 5-17 years engaged in any of the following work activities on a cocoa farm or in other types of crop agriculture for at least one hour in a week over the past 12 months (See Box 2 below). The study decided to focus on hazardous activities in agriculture/cocoa because we deemed that any other non-agriculture hazardous activities are infrequent in the target area and not relevant for the project, either.

Box 2. The MOCA project definition of Hazardous child labour

1) Children working in cocoa and other crop agriculture involved in land clearing:
- Clearing of forest and/or felling of trees;
- Bush burning;
- Clearing tree stumps

2) Children working in cocoa and other crop agriculture carrying heavy loads:
- Carrying heavy load beyond permissible carrying weight, i.e. above 30% of body weight for more than 2 miles (3km);

3) Children working in cocoa and other crop agriculture exposed to agro-chemicals:
- Working with agrochemicals, i.e. purchasing, transport, storage, use (mixing, loading and spraying/applying), washing of containers and spraying machine, and disposal;
- Being present or working in the vicinity of farm during pesticide spraying, or re-entering a sprayed Farm within less than 12 hours of spraying;

4) Children working in cocoa and other crop agriculture using sharp tools
- Using machetes/long cutlasses for weeding;
- Climbing trees higher than 3 meters (9 feet) to cut mistletoe with cutlass;
- Working with a motorized mist blower, knapsack sprayer, and/or chainsaw
- Harvesting overhead cocoa pods palm fruits, orange or rubber with harvesting hook, with Malayan knife, axe or other implements;
- Breaking cocoa pods with breaking knife, stripping palm fruit from stem bunches with sharp axe or cutlass;
- Grafting in citrus and rubber farming

5) Children working in cocoa and other crop agriculture exposed to long working hours:
- Working on the farm for more than 42 hours per week for children of all ages

6) Children working in cocoa and other crop agriculture exposed to night work:
- Going to or returning from the farm alone or working on farm between 6.00 p.m. and 6.00am

7) Children working in cocoa and other crop agriculture not attending school regularly
- Working full time on farm and not attending formal / non-formal school *(applicable to children under 15 years).*

8) Children working in cocoa and other crop agriculture which interferes with schooling
- For children in school, working more than 2 hours/day on a school day; Working on the farm for more than 3 hours per day or more than 18 hours per week (for children on weekends, holidays and/or have completed school);
- A child withdrawn from school during harvest season to do farm work; and working full time on farm and not attending formal / non-formal school (applicable to children under 15 years).

Table 3.44 depicts the proportion of children in agricultural households involved in hazardous child labor. The data reveals that 54% of children in the project districts are involved in hazardous activities with significantly more boys (60%) working than girls (47%). The estimates in the target districts do not compare favorably to the country average in 2013/2014 national prevalence survey of children in hazardous work in agriculture in Ghana[28]. Similar to the prevalence rate for child labor in the project districts, children aged 15-17 years are most involved in hazardous child labor relative to their counterparts aged 5-12 years. In terms of districts, the prevalence of children in hazardous labor is highest in Wassa Amenfi West (66%) and lowest in Sefwi Wiawso (49%). The result suggests very high prevalence rate of HCL in the MOCA project districts.

The survey further assessed the percentage of households with at least one child engaged in hazardous child labor. The results show that 68% of households have at least one child engaged in hazardous child labor in the past 12 months. Across districts, a higher proportion of households in Wassa Amenfi West (81%) have at least one child engaged in hazardous child labor, with Sefwi Wiawso recording the lowest (62%) (See Table 3.44). The findings in this survey suggest that most children in child labor in agriculture (56.1%) are also involved in activities defined as hazardous. Thus, of the 58% of children in child labor, 54% are in hazardous child labor in agriculture.

[28] The 2013/14 national study conducted by Tulane University found 39.3% of children in hazardous work in agriculture in Ghana

Table 3.44 Proportion of children in household engaged in hazardous child labor in agriculture

	Atwima Mponua	Atwima Nwabiagya	Sefwi Wiawso	Wassa Amenfi West	Total	[95% Confidence Interval]	
All age, Children in hazardous child labor							
(Overall)	55.6	51.8	49.2	66.0	54.5	*51.0*	*57.9*
Boys	56.5	53.6	57.3	75.3	60.8	*56.8*	*64.6*
Girls	54.6	49.6	40.1	56.8	47.6	*42.9*	*52.3*
Aged 5-12	45.7	37.7	37.6	55.1	43.2	*39.5*	*47.0*
Boys	48.7	35	46	68.1	50.3	*45.7*	*55.0*
Girls	41.9	40.8	28.4	42.4	35.3	*30.2*	*40.9*
Aged 13-14	82	76.6	58.6	83.9	70.3	*63.8*	*76.1*
Boys	75.7	88.2	64.2	82.8	72.6	*62.1*	*81.1*
Girls	87.5	61.7	51.4	85	67.8	*56.2*	*77.6*
Aged 15-17	74.8	81.4	78.4	86.5	80.0	*75.2*	*84.1*
Boys	78.8	83	87.7	92.1	87	*80.2*	*91.8*
Girls	71.2	78.8	68.6	80.4	72.5	*64.4*	*79.4*
% of households with children engaged in HCL	68.1	67.9	62.9	81.6	68.4	*63.8*	*72.7*
Male headed households	65.4	75.8	62.6	81.3	68.7	*63.7*	*73.3*
Female headed household	74.0	52.7	63.6	82.5	67.6	*59.8*	*74.6*

Table 3.45 explains the high prevalence rate of child labor in agriculture within the MOCA project districts. The results reveal that 34% of children in the project districts working in cocoa and other crop agriculture uses sharp tools particularly machetes/long cutlasses for weeding. Similarly, 32% of children have been breaking cocoa pods with breaking knife, stripping palm fruit from stem bunches with sharp axe or cutlass while 14% of children have been involved on the harvesting of overhead cocoa pods, palm fruits, orange or rubber with harvesting hook, with Malayan knife, axe or other implements. The results further show that 27% of children in school have been working more than 2 hours/day on a school day and have been working on the farm for more than 3 hours per day or more than 18 hours per week during weekends These activities engaged by children are hazardous and harmful to their wellbeing.

Table 3.45 Factors explaining children engagement in HCL in Agriculture by sex and district

	Atwima Mponua (%)		Atwima Nwabiagya (%)		Sefwi Wiawso (%)		Wassa Amenfi West (%)		Overall		Total
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	
Children working in cocoa and other crop agriculture involved in land clearing	3.4	3.4	15.0	5.5	8.2	3.3	8.4	5.5	8.0	4.4	6.2
5-12 years	2.2	5.0	15.2	3	5.2	3.6	5.1	3.6	5.3	3.9	4.6
13-14 years	4.0	3.1	12	9.1	10.3		13.6	8.2	10.5	5.2	7.9
15-17 years	7.1		18.2	9.1	11.7	5.0	12.3	6.0	12	4.7	8.4
Clearing of forest and/or felling of trees;	2.8	2.5	15.0	5.5	6.7		6.3	4.9	6.7	3.1	4.9
Bush burning;	0.7				0.5		3.3		1.5		1.5

	Atwima Mponua (%)		Atwima Nwabiagya (%)		Sefwi Wiawso (%)		Wassa Amenfi West (%)		Overall		Total
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	
Clearing tree stumps	0.7	0.8			1.5	3.3	3.3	1.1	1.8	1.5	1.7
Children working in cocoa and other crop agriculture carrying heavy loads	0.7	3.4	10.0	16.4	11.8	12.5	5.0	6.6	6.7	8.4	7.6
5-12 years	1.1	1.7	6.1	15.2	15.6	7.1	4.3	8.3	6.7	7.3	7.0
13-14 years		9.4	12.0	18.2	10.3	16.7	9.1	4.1	8.3	9.5	8.9
15-17 years			13.6	18.2	6.7	17.5	3.5	6	5.4	9.4	7.4
Carrying heavy load beyond permissible carrying weight, i.e. above 30% of body weight for more than 2 miles (3km);	0.7	3.4	10.0	16.4	11.8	12.5	5.0	6.6	6.7	8.4	7.6
Children working in cocoa and other crop agriculture exposed to agro-chemicals:	4.1	4.2	11.3	20	2.1	3.3	21.8	11.5	10.8	8.6	9.7
5-12 years	4.3	5.0	12.1	15.2		5.4	20.3	15.5	10	10.3	10.2
13-14 years	4.0	3.1	4	18.2	2.6		22.7	8.2	9.8	6.0	7.9
15-17 years	3.6	3.7	18.2	36.4	5.0	2.5	24.6	8.0	13.2	7.8	10.5
Working with agrochemicals, i.e. purchasing, transport, storage, use (mixing, loading and spraying/applying), washing of containers and spraying machine, and disposal;		0.8	6.3	5.5	2.1	1.7	0.4		1.5	1.3	1.4
Being present or working in the vicinity of farm during pesticide spraying, or reentering a sprayed farm within less than 12 hours of spraying;	4.1	3.4	7.5	20.0	0.5	1.7	21.8	11.5	9.9	8.0	9.0
Children working in cocoa and other crop agriculture using sharp tools	55.9	47.1	63.7	38.2	67.7	58.3	63.6	56.8	63.1	52.6	57.9
5-12 years	45.7	45	51.5	18.2	60.4	46.4	48.6	46.4	51.3	42.1	46.7
13-14 years	72	50	72	63.6	74.4	62.5	81.8	55.1	75.9	56	66.0
15-17 years	75	48.1	72.7	72.7	75	72.5	86	76	78.4	68.8	73.6
Using machetes/long cutlasses for weeding;	40.7	31.9	41.3	21.8	39.5	34.2	46.9	39.3	42.6	34.2	38.4
Climbing trees higher than 3 meters (9 feet)7 to cut mistletoe with cutlass;					1.0	0.8	3.3		1.5	0.2	0.9
Working with a motorized mist blower, knapsack sprayer, and/or chainsaw	1.4		3.8		0.5		0.8		1.2		1.2

	Atwima Mponua (%)		Atwima Nwabiagya (%)		Sefwi Wiawso (%)		Wassa Amenfi West (%)		Overall		Total
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	
Harvesting overhead cocoa pods palm fruits, orange or rubber with harvesting hook, with Malayan knife, axe or other implements;	17.2	15.1	32.5	21.8	19.0	5.8	18.4	7.1	20.0	10.5	15.3
Breaking cocoa pods with breaking knife, stripping palm fruit from stem bunches with sharp axe or cutlass;	22.8	21.0	41.3	27.3	49.7	37.5	43.1	37.2	40.4	32.1	36.3
Grafting in citrus and rubber farming					0.4		7.5	6.8	2.7	2.5	2.6
Children working in cocoa and other crop agriculture exposed to long working hours					0.6				0.3		0.2
15-17 years					3.3				1.6		0.8
Working on the farm for more than 14 hours per week for children 13-14 years old, more than 42 hours per week for children 15 – 17 year olds;			2.5	1.8	2.1	0.8	0.4		1.1	0.4	0.8
Children working in cocoa and other crop agriculture exposed to night work:	2.1	2.5	3.8	3.6	7.7	7.5	0.4	1.1	3.3	3.4	3.4
5-12 years	3.3	1.7	3.0	6.1	7.3	7.1	0.7	1.2	3.3	3.4	3.4
13-14 years		3.1			12.8			2.0	3.8	1.7	2.8
15-17 years		3.7	9.1		5.0	12.5			3.0	4.7	3.9
Going to or returning from the farm alone or working on farm between 6.00 p.m. and 6.00am	2.1	2.5	3.8	3.6	7.7	7.5	0.4	1.1	3.3	3.4	3.4
Children working in cocoa and other crop agriculture not attending school regularly		0.8	1.3		0.5	0.8			0.3	0.4	0.4
5-12 years					1.0	1.8			0.3	0.4	0.4
13-14 years		3.1	4.0						0.8	0.9	0.9
15-17 years											
Working full time on farm and not attending formal / non-formal school (applicable to children under 15 years).		0.8	1.3		0.5	0.8			0.3	0.4	0.4
Children working in cocoa and other crop agriculture which interferes with schooling	35.9	29.4	50	45.5	47.7	52.5	62.8	49.7	50.8	44.9	47.9

	Atwima Mponua (%)		Atwima Nwabiagya (%)		Sefwi Wiawso (%)		Wassa Amenfi West (%)		Overall		Total
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	
5-12 years	38	28.3	48.5	45.5	51	50	57.2	44.0	49.9	41.6	45.8
13-14 years	32	28.1	44	45.5	51.3	45.8	75.0	69.4	54.1	50.9	52.5
15-17 years	32.1	33.3	59.1	45.5	40.0	60.0	66.7	40.0	50.3	45.3	47.8
For children in school, working more than 2 hours/day on a school day; Working on the farm for more than 3 hours per day or more than 18 hours per week (for children on weekends, holidays and/or have completed school);	35.9	29.4	50.0	45.5	47.2	52.5	62.3	49.7	50.5	44.9	47.7
A child withdrawn from school during harvest season to do farm work; and working full time on farm and not attending formal / non-formal school (applicable to children under 15 years)					0.5		0.4		0.3		0.3

3.9 Children at High Risk of Child Labor (CAHR)

Per the MOCA project definitions, children at high risk of involvement in child labor (CAHR), refers to children not currently in child labor, but who experience or are exposed to a set of conditions or living conditions that make them more likely to be working in child labor or those living in vulnerable households and proximity to economic activities prone to employ children. In particular; children at high risk of child labor is defined as:

Box 3. The MOCA project definition of Children at High Risk of child labour

1. Any child who was at one time engaged in child labor, but is no longer engaged in any form of child labor will be considered a CAHR of engaging in child labor.
2. Any child aged 5-17 who meets at least one of the following criteria:
   - Child has a sibling/ peer of current/ engaged in child labor or former working child
   - Child belongs to a child-headed household
   - Child is not attending school or has low attendance rate (misses more than 5 days of school
   - per month)
   - Child is deficient in basic literacy skills
   - Child who has given birth
   - Child's guardian or parent, or child has a disability or chronic illness
   - Child is an orphan or is being fostered/adopted
   - Close to workplaces that employ children
   - Child belongs to a household which relies primarily on income from cocoa production activities or other sectors which include hazardous activities

Table 3.46 presents results on children at high risk of child labor. The results indicate that 39% of children in the four project districts are at high risk of involving in child labor with children in Atwima Nwabiagya receiving the highest exposure (43%) and Wassa Amenfi West receiving the lowest exposure (30%). Across sex, the portion of girls (44%) found to be at risk of involvement in child labor is higher than boys (34%). The results also show that children aged 5-12 years are more at risk of involvement than their cohort aged 13-17 years.

Table 3.46 Children at high risk of child labor

	Atwima Mponua	Atwima Nwabiagya	Sefwi Wiawso	Wassa Amenfi West	Total	[95% Confidence Interval]	
% of CAHR of CL	41.1	43.2	41.8	30.7	39.2	36.0	42.4
Boys	40.5	44.5	34.9	24.2	34.5	*31.2*	*37.9*
Girls	41.8	41.5	49.4	37.1	44.4	*39.6*	*49.2*
Aged 5-12	50.9	57.0	52.3	41.3	49.9	*46.3*	*53.6*
Boys	48.2	62.1	46.2	31.1	44.8	*40.4*	*49.3*
Girls	54.2	51.4	59.0	51.1	55.6	*50.1*	*60.9*
Aged 13-14	15.0	16.8	27.1	11.5	20.3	*15.3*	*26.5*
Boys	17.8	11.8	22.0	17.2	19.2	*14.3*	*25.3*
Girls	12.5	23.3	33.7	6.2	21.5	*12.4*	*34.8*
Aged 15-17	22.1	16.2	20.0	12.6	18.2	*14.3*	*22.9*
Boys	21.2	17.0	9.7	7.9	11.6	*7.1*	*18.6*
Girls	22.8	14.8	30.7	17.6	25.3	*18.7*	*33.3*

The survey also analyzed the CAHR of child labor by the number of households with at least one child at risk of child labor. Similar to the findings on the proportion of CAHR, 65% of households in the survey districts have at least one child at high risk of involvement in child labor (Table 3.47). Although not significant, children in households in Atwima Nwabiagya (65%) are more exposed than their counterparts in Wassa Amenfi West (53%).

Table 3.47 Households with children at high risk of child labor

	Atwima Mponua	Atwima Nwabiagya	Sefwi Wiawso	Wassa Amenfi West	Total	Confidence interval	
Percentage of households with children at high risk	60.0	65.5	62.9	53.7	60.6	*55.6*	*65.4*
Male headed	61.6	66.3	64.3	56.2	62.1	*56.3*	*67.5*
Female headed	56.5	63.9	59.6	45.2	57.0	*49.7*	*64.0*

Table 3.48 presents the elements explaining the prevalence of CAHR of child labor in cocoa communities. The results show that prevalence rate for CAHR of child labor is mainly explained by the 53% of children belonging to households where the sibling/ peer are engaged in child labor. Orphan children and children living close to workplaces that employ children also explain the prevalence rate of CAHR.

Table 3.48 Distribution of element contributing to CAHR of child labor

	Atwima Mponua	Atwima Nwabiagya	Sefwi Wiawso	Wassa Amenfi West	Total
Child has a sibling/ peer of current/ engaged in child labor or former working child	52.6	49.4	50.6	60.7	53.2
Child is an orphan or is being fostered/adopted	14.2	14.3	11.9	15.8	14
Close to workplaces that employ children	0.4	11.2	15.4	16.6	11.8

Child's guardian or parent, or child has a disability or chronic illness	0.9	0.4	1.2	0.9	0.9
Child belongs to a child-headed household	0.2	1.2	1.1	0.5	0.7
Child who has given birth	0.2		0.8	0.2	0.3
Child is not attending school or has low attendance rate (misses more than 5 days of school per month)	0.2	0.4	0.3		0.2

3.10 Additional details on working hours, children exposure to agro-chemicals, environmental hazards, injuries and carrying of heavy loads

Number of hours worked are important indicators of work intensity, and provide insight into the possible health and educational consequences of engaging in work (Table 3.49). Children performed an average of almost 5.8 hours of agricultural activity a week in the past 12 months. Male children significantly performed more hours of agricultural activity a week in the past 12 months than their female counterparts. The results also reveal that children aged 15 to 17 years are among the worst-off working children, as they worked 7.6 hours a week within the past 12 months. Children in Atwima Nwabiagya performed more hours of agricultural activity a week in the past 12 months than their female counterparts. These work activities are consistent with the high prevalence of child labor in agricultural activities.

Table 3.49 Average number of hours children worked in agriculture and cocoa in past 12 months

	Atwima Mponua	Atwima Nwabiagya	Sefwi Wiawso	Wassa Amenfi West	Total
Average hours children work in agriculture in a week in past 12 months	4.0	7.6	6.4	5.3	5.8
5-12 years	3.8	7.4	5.1	4.9	4.9
13-14 years	3.3	6.7	5.7	5.2	5.3
15-17 years	5.3	8.7	8.6	6.2	7.6
Boys	4.6	7.6	6.8	5.7	6.2*
Girls	3.4	7.6	5.7	4.7	5.2*
Average hours children work in cocoa in a week in the past 12 months	3.4	5.2	4.8	4.2	4.5
5-12 years	3.0	5.1	4.4	4.0	4.1
13-14 years	3.6	4.9	4.3	4.1	4.2
15-17 years	3.9	5.7	5.7	4.9	4.3
Boys	3.6	5.7	5.0	4.5	4.7*
Girls	3.2	4.5	4.5	3.6	4.1*

*p <0.05

For further analysis in relation to the number of hours children are engaged in agricultural work, a correlation test was conducted to determine the significance of the relationship between school attendance and total weekly working hours. From Table 3.49, we observe some relationship between school attendance and the total number of hours children work in agriculture per week. From Table 3.27, about 32% of children work during the weekends while similar proportion work in other periods. We also find in Table 3.61 that 97% of children are in school. We can infer from this finding that most of the children in the project communities attend school but do work classifed as child labor either during the weekends or after school. It also suffices to note that while enrolment rate is high in the project communities, child labour rate is also high, suggesting that children in school also work along side schooling. Sometimes, these children skip school to go to the farm particularly during havesting seasons.

Table3.49 Correlation between school attendance and Working Hours

		Total working hours per week	L5. Are you currently enrolled in school?
	Pearson Correlation	1	0.281**
	Sig. (2-tailed)		0.000
	N	958	941

**. Correlation is significant at the 0.01 level (2-tailed).

3.10.1 Children exposure to agro-chemicals working in agriculture including cocoa sector

Data in Table 3.50 indicate that few economically active working children were exposed to agrochemicals used in cocoa and other crop agricultural production with marked variations across districts, with Atwima Nwabiagya recording the highest form of exposure and Wassa Amenfi West the lowest. Across the board, the study shows that working children are mostly exposed to agrochemicals through loading of insecticides, herbicides, fungicides and chemical fertilizers into spraying tanks.

Table 3.50 Level of children exposure to agro-chemicals by sex and districts

	Atwima Mponua		Atwima Nwabiagya		Sefwi Wiawso		Wassa Amenfi West		Total		
	Boys (%)	Girls (%)	Boys (%)	Girls (%)	Boys (%)	Girls (%)	Boys (%)	Girls (%)	Boys (%)	Girls (%)	All (%)
% of children exposed to agro chemicals		0.5	3.5	2.7	1.2	0.6	0.3		0.9	0.6	0.8
Type of involvement of children in agro-chemicals											
Purchasing of insecticides, herbicides, fungicide, chemical fertilizers			2.1						0.3		0.1
Transport/carrying of insecticides, herbicides, fungicide, chemical fertilizers			1.4						0.2		0.1
Storage of insecticides, herbicides, fungicide, chemical fertilizers			2.1		0.3				0.4		0.2
Loading of insecticides, herbicides, fungicide, chemical fertilizers		0.5	2.1		0.9	0.3	0.3		0.7	0.2	0.4
Spraying of pesticides, insecticides		0.5	2.8	2.7	0.3				0.5	0.4	0.4

3.10.2 Children exposure to environmental hazards

About 34% of the working children were found to be exposed to environmental hazards and other dangers in the agricultural production with marked variations across districts but with no significant changes by sex. In particular, more children in Atwima Mponua (62%) recorded exposure to agro-chemicals with Sefwi Wiawso recording the lowest. Regarding specific environmental hazards and other dangers children are exposed to, children exposed to extreme temperatures for working long hours appears high in Atwima Mponua; and low in Sefwi Wiawso. About 6% of economically active working children were exposed to chemicals for working on farm during spraying hours with marked variations between districts, Wassa Amenfi West recording the highest of 22% and Sefwi Wiawso the lowest of 1%. Close to 6% of working

children were exposed to dust/fumes during agricultural work with marked variations between districts, Atwima Mponua recording the highest of 15% and Sefwi Wiawso the lowest of 0.6%. The study also shows that exposure to dangerous gas; working at high heights; handling of chemicals during work; withdrawal of children from school for farming purposes were less common in the focus districts (Table 3.51).

Table 3.51 Children exposure to environmental hazards and other dangers while working in agriculture by district

	Atwima Mponua	Atwima Nwabiagya	Sefwi Wiawso	Wassa Amenfi West	Total
% of children exposed to environmental hazards and other dangers (Overall)	62.3	41.9	19.5	43.8	34.9*
Overall Boy	61.2	42.9	20.3	47.4	35.9
Overall Girl	63.6	40.6	18.6	40.4	33.7
5-12 years	58.2	35.4	16.9	36.1	35.3
Boys	61.0	39.1	15.3	40.0	37.6
Girls	55.0	31.2	18.5	32.2	32.7
13-14 years	75.7	46.8	20.6	42.7	43.1
Boys	68.8	42.9	20.7	45.3	40.9
Girls	81.6	81.6	52.6	20.4	45.4
15-17 years	70.8	57.5	25.6	56.5	48.5
Boys	74.3	74.0	53.8	31.4	52.1
Girls	67.6	68.0	64.3	18.6	44.4
Type of environmental hazards children are exposed to					
Dust or dangerous fumes	15.2	3.6	0.6	12.6	6.3
Fire, gas or flames	2.2	0.8		0.8	0.7
Long hours in the direct sun	33	16	8.1	19.5	15.9
Work at dangerous heights (high up on a tree, etc.)	0.4	1.3	0.6	2.4	1
Climbing trees higher than 3 meters to cut mistletoe with cutlass	0.2	0.7	0.6	1.6	0.8
Work in water, like, pond or river	0.2		0.5	1.1	0.5
Spraying of pesticides, insecticides	0.9	5.2	1.6	2.7	2.0
Being present or working in the vicinity of farm during pesticide spraying	2.8	4.4	1.4	22.5	6.9
Reentering a sprayed farm within less than 12 hours of spraying	1.1	2.1	0.2	1.0	0.7
Working alone on the farm in isolation (i.e. beyond visible or audible range of nearest adult)	1.2	2.1	2.1	2.7	2.1
Withdrawn from school during cocoa season to do farm work	0.9	1.6	0.5	3.5	1.4
The sale, transport, or handling of agro-pharmaceutical products (insecticides, herbicides, fungicide, chemic				0.2	
Other	19.9	19.8	7.5	5.5	10.4

*p <0.05

Table 3.52 presents health consequences from children exposure to environmental hazards. About 24% of children reported to have experienced health consequences due to exposure to environmental hazards. The most common health consequences resulting from exposure to environmental hazards are very bad pain (11%) and felt very sick or tired (8%). The data shows no significant differentials between boys and girls. Although children in Atwima Mponua recorded the highest form of exposure to environmental hazards, the results in Table 3.46 shows that children in Atwima Nwabiagya (43%) reported the highest health consequence with the lowest in Sefwi Wiawso (18%).

Table 3.52 Health consequence from children exposure to environmental hazards

	Atwima Mponua	Atwima Nwabiagya	Sefwi Wiawso	Wassa Amenfi West	Total
Very bad pain	20.0	12.9	9.0	10.2	11.6
Felt very sick or tired	10.4	8.2	4.3	12.2	7.6
Did not feel well for a long time	1.9	3.0	0.6	0.7	1.1
Had to receive treatment at a health center	1.4	0.3	0.2	0.5	0.5
Had to receive treatment at a hospital	0	0	0	0.5	0.1
Could not continue working	2.5	0.8	0.1	0.7	0.7
Could not go to school	1.6	2.1	0.5	2	1.2
Others	5.2	24	5.6	2.3	6.5
By sex					
Boys	31.6	44.7	16.3	19.6	24.7
Girls	39.9	45.9	15.9	17.7	23.2
All	35.2	43.9	18	19.7	23.9

The nature of work children are involved in may make them susceptible to occupational hazards and in the process, may be affected negatively. This may lead to irreversible damage to their physical and psychological development sometimes resulting in work related incapacitation. Carrying of heavy loads at a work place is one of the incidents that could lead to such a situation as it could affect the musculoskeletal development of children and hence affect their physical growth negatively. Nearly 53% of the children in the study area carried heavy loads at the place of work. However, Atwima Mponua and Wassa Amenfi West districts recorded the highest proportion of working children carrying heavy loads at work and Atwima Nwabiagya recorded the lowest.

Regarding specific loads working children carried, the results show that children mostly carried wood and other loads during land clearing with marked variations between districts, Wassa Amenfi West district recording the highest of 82% and Atwima Nwabiagya district the lowest of 52%. Children working on the cocoa plantations were also found to considerably perform a number of activities, such as collecting and heaping cocoa pods, carrying water for spraying, engaging in carting of fermented cocoa beans, and carting of dry cocoa beans to shed.

Table 3.53 Children carrying heavy loads

	Atwima Mponua	Atwima Nwabiagya	Sefwi Wiawso	Wassa Amenfi West	Overall
% of children who carried heavy loads in past 12 months	60.2	39.2	48.2	63.6	53.1
Boy	59.8	38.5	52.5	70.3	56.4
Girl	60.7	40.1	43.3	57.0	49.5
Age (5-12years)	53.3	30.7	36.9	54.7	43.5
13-14 years	82.6	51.7	57.6	81.2	66.7
15-17 years	70.4	60.1	76.7	77.8	74.7
Carrying wood and other loads during land clearing	66.4	52.5	56.0	82.2	65.2
Carrying water for spraying	12.5	45.2	14.3	59.9	28.8
Gathering and heaping cocoa pods	25.8	29.8	29.6	60.1	37.4
Carting fermented cocoa beans	1.0	8.5	12.9	30.3	15.0
Carting of dry cocoa beans to shed	4.5	12.5	8.0	18.1	10.4
None	37.4	23.8	34.7	15.4	29.1

3.10.3 Injuries and health consequence experienced by children working in agriculture Cocoa and non-cocoa

Generally, working children are not provided with appropriate safety gears. Working children are thus prone to various injuries and health problems. A large number of these working children work in hazardous environment which expose them to greater risks of danger and injuries. To find out the type of injuries experienced by children working in cocoa and other agriculture, children were asked whether they have experienced any form of injuries related to work in agriculture in the last 12 months. Overall, 28% of the working children in the project districts reported experienced some form of injury in the 12-months prior to the survey. The most common type of injury which affected the working children most was "superficial injuries or open wounds", with close to 31% of the working children being affected. Incidence of superficial injuries was highest in Atwima Mponua (39%). Other injuries include injuries from insect bites; back and muscle pains; broken bones, and snake bites among others (Table 3.54).

Table 3.54 Type of injuries experienced by children related to work in cocoa and other crop agriculture in the last 12 months

	Atwima Mponua	Atwima Nwabiagya	Sefwi Wiawso	Wassa Amenfi West	Total
% of children who experienced injury	34.1	33.8	25.2	28.5	28.4
Boy	35.2	30.5	30.1	29.4	30.9
Girl	32.9	37.9	19.8	27.7	25.6
Age (5-12 years)	28.8	25.3	16.3	22.8	21.0
13-14 years	50.5	53.3	34.9	43.3	41.3
15-17 years	42.7	46.8	45.7	34.7	42.7
Type of Injury					
Wounds / cuts	39.3	35.1	29.4	29.7	31.7
Skin itchiness or scratches	18.7	27	8.7	11.1	12.6
Insect bites	13.6	23.2	2.0	7.8	7.3
Other	2.0	5.9	4.8	4.7	4.3
Back pains	5.8	0.9	4.1	1.6	3.5
Muscle pains	4.0	1.6	3.6	1.5	2.9
Broken bones	0.0	0.0	0.4	0.6	0.3
Snake bites	0.0	0.0	0.1	0.9	0.3

On the frequency in occurrence of injuries experienced by children in cocoa and other agriculture in the last 12 months, Table 3.55 shows that, working children, on average, have experienced 2 injuries with no significant variations between male and female children. Across districts, the intensity of injuries is highest in Atwima Nwabiagya and lowest in Atwima Mponua. The results also indicate that the higher the age of children, the higher the chances of getting injured. Thus, children aged 15 to 17 years have an average number of injuries of 2.3 while those between 5 and 12 have an average injury at 2.0. This could partly be explained by increase in work intensity as age progresses. The injury trend is similar for both boys and girls.

Table 3.55 Average number of injuries experienced by children in cocoa and other crop agriculture in the last 12 months (Mean)

	Atwima Mponua		Atwima Nwabiagya		Sefwi Wiawso		Wassa Amenfi West		Overall		
	Boy	Girl	Boy	Girl	Boy	Girl	Boy	Girl	Boy	Girl	Total
5-12 years	1.8	2.0	3.0	1.5	1.9	2.3	2.1	2.1	2.0	2.0	2.0
13-14 years	2.0	1.8	2.1	2.6	2.2	3.5	2.7	1.8	2.5	2.1	2.3
15-17 years	2.9	2.3	2.5	3.4	2.2	2.4	2.4	2.1	2.0	2.6	2.3
Overall	2.0	2.0	2.5	2.1	2.0	2.6	2.3	2.0	2.3	2.0	2.2

As shown in Table 3.56, those who had injuries/illness due to work, 11% experienced very bad pain. The proportion that felt severe pain due to the injury incident was highest in Atwima Mponua (20%) and lowest in Sewfi Wiawso (9%). Evidence from Table 3.56 also shows that occupational injury/illness has minimal negative impact on the child's education. For example, 1% of the working children who experienced injury due to their work reported that the incidence caused them to stop schooling with children from Atwima Nwabiagya accounting for the largest proportion who stopped schooling after injury.

Table 3.56 Types of health problems experienced by children resulting from injuries while working in agriculture in the last 12 months

	Atwima Mponua	Atwima Nwabiagya	Sefwi Wiawso	Wassa Amenfi West	Total
Very bad pain	20	12.9	9.0	10.2	11.6
Felt very sick or tired	10.4	8.2	4.3	12.2	7.6
Did not feel well for a long time	1.9	3.0	0.6	0.7	1.1
Had to receive treatment at a health center	1.4	0.3	0.2	0.5	0.5
Had to receive treatment at a hospital				0.5	0.1
Could not continue working	2.5	0.8	0.1	0.7	0.7
Could not go to school	1.6	2.1	0.5	2.0	1.2
Others	5.2	24	5.6	2.3	6.5
Sex					
Boys	31.6	44.7	16.3	19.6	24.7
Girls	39.9	45.9	15.9	17.7	23.2
All	35.2	43.9	18	19.7	23.9

The survey sought to determine the types of treatment received by children after the occurrence of injury as a result of working in cocoa and other crop agriculture. As shown in table 3.57, about 34% of injured working children indicated that in the event of injury, they took medicine, followed by those reporting receiving medical care from a doctor and/or nurse in a hospital (32%). Across districts, majority of children in Wassa Amenfi West (65%) took self-medication with the least recorded in Sefwi Wiawso (23%). Many children in Atwima Nwabiagya (46%) claimed to have received medical care from a doctor and/or nurse in a hospital with the lowest recorded in Wassa Amenfi West (18%).

Table 3.57 Types of treatment received by children from injuries resulting from working in cocoa and other crop agriculture

	Atwima Mponua	Atwima Nwabiagya	Sefwi Wiawso	Wassa Amenfi West	Total
I took medicine	29.7	26.4	23.2	65.2	34.4
A doctor and/or nurse in the hospital cared for me	25.1	46.3	38.5	18.6	32.2
A nurse at the health center cared for me	34.3	22.9	11	29.5	20.6
I went to the drug store and the person who knows about drugs helped me	7.9	17.6	12.6	7.4	11
I received first aid	9.8	4.8	2.9	12.4	6.5
I took some herbal medicine	4.5	7.9	1.6	11.0	4.9
A spiritualist/religious person cared for me	1.2		0.2	0.4	0.4

3.11 Socio demographic characteristics of children in agricultural households who were interviewed

This section presents the demographic profile of children in agricultural households. It covers sex, age, education, literacy levels, and population of children (5-17 years) in agricultural households. Results presented in Table 3.58 shows that, majority (65%) of children in agricultural households are aged 5 to 12 years, followed by children between 15 to 17 years (18%). There are slightly more boys (52%) than girls (47%) in agricultural households interviewed.

Table 3.58 children (5-17 years) in agricultural households interviewed by Age, Sex and Districts

	Atwima Mponua		Atwima Nwabiagya		Sefwi Wiawso		Wassa Amenfi West		Overall		
	Boy	Girl	Boy	Girl	Boy	Girl	Boy	Girl	Boy	Girl	Total
5-12 years	73.0	65.8	63.2	69.0	63.3	64.5	63.7	64.2	65.2	65.0	65.1
13-14 years	12.5	16.2	18.6	17.6	17.2	15.0	16.3	17.6	16.3	16.1	16.2
15-17 years	14.4	18.1	18.2	13.4	19.5	20.5	19.9	18.2	18.5	18.9	18.7
Overall	53.2	46.8	55.1	44.9	52.8	47.2	49.6	50.4	52.3	47.7	

Education

This section presents detailed analysis on the education characteristics of the children interviewed. This includes school enrolment, literacy, highest education attainment, and main reasons why children do not attend school regularly etc. Table 3.59 presents information on education attainment.

The results show that more than half (58%) of children interviewed had completed basic education. Among districts, Atwima Nwabiagya had largest proportion of children who have completed basic education. Educational attainment is lowest for children in the Atwima Mponua district.

Table 3.59 Educational Level of Sampled Children between 5 and 17 years

	Atwima Mponua	Atwima Nwabiagya	Sefwi Wiawso	Wassa Amenfi West	Overall
No education	4.7	3.1	2.9	1.7	3.0
Pre-School	17.8	16.7	17.8	21.0	18.7
Primary	55.7	57.6	53.8	53.0	54.5
JSS	21.5	20.6	23.4	23.3	22.6
SHS	0.0	1.6	1.8	0.8	1.0
Non standard curriculum	0.2	0.4	0.2	0.2	0.2

Literacy

The baseline survey sought to ascertain children's literacy status by asking whether they can read and write a short simple statement and perform simple calculations. Table 3.60 shows that more than half of children interviewed can read/write a short simple statement and perform simple calculations with no significant variation between sexes. Across districts, children in Atwima Nwabiagya and Sefwi Wiawso recorded high literacy rates whiles children in Atwima Mponua have the lowest literacy rate. As expected, level of literacy

increases with age. Thus, in every district, children between 15-17 years displayed a high level of literacy than those in the 5 to 14 years' age group (see table 3.60).

Table 3.60 Literacy level of children interviewed in households

	Atwima Mponua		Atwima Nwabiagya		Sefwi Wiawso		Wassa Amenfi West		Overall		
	Boy	Girl	Boy	Girl	Boy	Girl	Boy	Girl	Boy	Girl	Total
Can perform simple calculation	60	54.1	76.5	70.4	68.4	67.7	60.7	53.5	65.9	62	64.1
Can write a short simple statement	52.5	55.1	58.1	60.6	61.9	65.2	55	50.3	58.3	59.4	58.8
Can read a short simple statement	38.9	45.4	63	59.6	60.2	64.9	51.2	45.6	54.6	56.3	55.4
Age group	5-14	15-17	5-14	15-17	5-14	15-17	5-14	15-17	5-14	15-17	Total
Can perform simple calculation	51.3	88.2	70.0	93.5	62.7	89.6	51.3	81.5	58.6	87.7	73.5
Can write a short simple statement	48.4	81.2	52	97	57.6	86.9	44.7	86.3	52.4	86.7	69.5
Can read a short simple statement	34.5	80.6	55.5	92.6	56.7	85.1	40.7	80.9	48.8	84	66.4

School Enrolment

Table 3.61 below groups the population of children aged 5 to 17 years into 3 broad categories of enrolment (5 to 12 years, 13 to 14 years and 15 to 17 years). The findings reveal that a vast majority (93%) of children in agricultural households have enrolled in school with no significant difference between boys and girls. Similarly, the enrolment trend is similar across districts. The difference between males and females in the proportions of children (5 to17 years) who are currently attending school in all the districts was found to be not significant. The findings suggest that generally, child enrolment rate increases and peaks between ages 5 to 12 decelerate after age 15 when most children complete JHS and are unable to transition to the next level (SHS) mainly due to financial challenges.

Table 3.61 Percent Children currently enrolled in school

	Atwima Mponua		Atwima Nwabiagya		Sefwi Wiawso		Wassa Amenfi West		Overall		
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Total
5-12 years	97.1	98.3	98.1	99.3	96.8	98.1	97.5	98.4	97.1	98.3	97.7
13-14 years	100	97.7	93.7	88.2	88.8	90.7	98.1	98	93.0	93.6	93.3
15-17 years	75	77.6	86.9	78	71.5	85.7	82.2	70.1	76.1	80.2	78.1
Overall	94.3	94.3	95.1	94.3	90.5	94.4	94.5	93.4	92.5	94.1	93.3

For children who are currently enrolled in school, the survey sought to find out the current class or form they are enrolled. Overall, majority of the children are enrolled in primary school with no significant differences among the districts and age groups. (Table 3.62)

Table 3.62 Class/form children are currently enrolled

	Atwima Mponua		Atwima Nwabiagya		Sefwi Wiawso		Wassa Amenfi West		Overall		
	Boy	Girl	Boy	Girl	Boy	Girl	Boy	Girl	Boy	Girl	Total
Pre-school	18.5	17.8	16.9	15.1	14.3	17.5	18.5	23.4	16.2	18.8	18.5
Primary 1	12.5	12.5	11.8	10.4	12.5	9.5	11.2	11.2	12.1	10.5	12.5
Primary 2	10.3	11.3	16.3	10.6	9.3	10	11	9.2	10.5	10.1	10.3
Primary 3	10.8	9.3	6.1	15.3	10.8	8.9	10.4	6.9	10.3	9	10.8
Primary 4	14	9.6	10.4	12.8	9.6	10.3	7.6	8.3	10	9.9	14
Primary 5	8	5.6	7.7	6.5	6.9	6.3	7.9	8.2	7.4	6.7	8

Primary 6	6.9	7.4	9	4.5	9.6	7.5	8.8	8.9	8.9	7.6	6.9
JHS 1	4.7	4.6	8.9	10.5	9	9.9	8.2	9.6			4.7
JHS 2	6.7	11.5	4.6	5.9	9.4	7.4	5.9	7.2			6.7
JHS 3	7.8	8.7	7.6	8.8	4.4	5.2	6.7	7.8			7.8
SHS 1	0.9	0.0	1.4	2	0	0.2	0.8	1.0			0.9
SHS 2	0.9	0.0	0.8	0.1	0.5	0.3	0.6	0.2			0.9
SHS 3	0.7	0.0	0.9	0.3	1.0	0.6	0.7	0.3			0.7
Other	0	0	2.8	2.4	0.2	0.3	1.6	1.4			0.1

Table 3.63 shows that, about 72% of children currently attend public schools with only about fifth (26%) attending private schools. Across districts, about the same proportion of boys and girls attend public schools with a slightly higher number of girls (74%) compared to boys (68%) in Wassa Amenfi West. Atwima Nwabiagya had the least proportion of children who attend private schools.

Table 3.63 Type of school children are currently enrolled (in percentage)

	Atwima Mponua		Atwima Nwabiagya		Sefwi Wiawso		Wassa Amenfi West		Overall		
	Boy	Girl	Boy	Girl	Boy	Girl	Boy	Girl	Boy	Girl	Total
Public	88.9	88.6	88	91.1	65.1	61.8	68.6	74.5	72.3	72.1	72.2
Private	8.9	9.8	12	8.9	32.6	36.8	29.6	23.2	25.7	26.3	26.0
Run by a church/ religious group	2.2	1.5			2.1	1.4	1.6	1.9	1.8	1.4	1.6
Other					0.3		0.3	0.5	0.2	0.1	0.2

3.12 Impact of children's work on health, safety and education

Children engagement in economic activities is likely to affect school attendance; thus, the more they engage in economic activities, the likelihood of low school attendance. The performance of school going children is significantly affected by the number of times they miss school in any given term. During the survey, children were asked whether they missed school days in the past 12 months.

Baseline results presented in Table 3.64 shows that 5% of children missed school days in the last 12 months, with boys (5.7%) constituting a higher proportion than girls (5.1%) though the difference is not significant. Similar pattern was observed across all districts. Further analysis revealed that slightly more girls in Atwima Nwabiagya missed school days compared to their counterparts in other districts. Also, more boys between 13 to 14 years in Sefwi Wiawso missed school days than other children in the other districts.

The data also shows that about 6% of children have ever attended school but are currently not in school. The data shows no significant differences between sex groups. Further assessment across age shows that majority of children who have ever attended school but are currently not attending school are those aged 15 to 17 years (21%).

Table 3.64 Proportion of children who missed school days in the last 12 months and children who have ever attended school but are currently not in school

	Atwima Mponua		Atwima Nwabiagya		Sefwi Wiawso		Wassa Amenfi West		Overall		
	Boy	Girl	Boy	Girl	Boy	Girl	Boy	Girl	Boy	Girl	Total
Missed school (Overall)	57.2	64.0	43.2	51.0	50.4	44.4	67.3	61.8	54.8	52.7	53.8
5-12 years	54.2	64.4	46.1	51.9	53.2	40.4	64.7	62.6	55.3	51.1	53.3
13-14 years	72.1	55.7	36.2	59.0	45.3	52.0	69.0	70.0	53.9	58.4	56.0
15-17 years	58.9	71.3	40.0	33.4	43.8	52.9	75.2	45.8	53.6	53.3	53.5
Attended but currently not in school (Overall)	5.7	5.7	4.9	5.7	9.5	5.6	5.5	6.6	7.5	5.9	6.7
5-12 years	2.9	1.7	1.9	0.7	3.2	1.9	2.5	1.6	2.9	1.7	2.3
13-14 years	0	2.3	6.3	11.8	11.2	9.3	1.9	2.0	7.0	6.4	6.7
15-17 years	25.0	22.4	13.1	22.0	28.5	14.3	17.8	29.9	23.9	19.8	21.9*

All children who missed school days within the last 12 months were asked reasons why they missed school. Table 3.65 shows that illness was the most common reason why children missed school accounting for 70% of children missing school during the period. Other reasons, such as financial problems ranked as the second most common reason why pupils miss school with 21% of children missing school. Injury, lack of interest in school, abandoning school for farming or household chores, bad weather, travelling outside the community were some of the reasons for absenteeism from school. About 6% of the children missed school because they were withdrawn to do farm work.

Table 3.65 Reasons for primary school children missing school in the last 12 months (in Percentage)

	Atwima Mponua	Atwima Nwabiagya	Sefwi Wiawso	Wassa Amenfi West	Overall
I was ill	67.3	66.7	66.5	80.3	70.7*
Other	17.4	23.4	25.8	17.2	21.5*
I had to do farm work	5.6	7.4	7.1	9.3	7.5
I was injured	4.8	7.6	1.9	12	5.8
I was not interested in school	7.7	6.5	4.8	5.8	5.8
I could not afford schooling	1.7	4.6	4.3	4.9	4.0
The school is too far	1.6	1.0	0.8	9.5	3.5
I had to help at home with household chores	2.6	2.0	1	4.1	2.3
My family did not allow me to go to school	3.3	5.3	0.7	2.6	2.1
The weather conditions were very bad	1.1		0.3	5.8	2.0
I had to travel	3.5	0.7	1.6	2.1	2.0
I worked for pay	0.7		0.4	0.9	0.6
My family needed me for the family business	1.1	2.6	0.2	0.3	0.6
An emergency happened in my family where I was needed		0.7	0.9	0.1	0.5
I was not very good in my studies	1.1		0.3		0.4
Education was not valuable to me	0.3	1.3			0.2
My school is/was not safe			0.4		0.2
I wanted to learn a job/skill instead		0.6	0.2		0.1

*p <0.05

3.11.1 Reasons for leaving School

Despite government efforts to ensure all children complete a course of primary schooling through the introduction of free education and interventions such as the school feeding program, free textbooks, the incidence of pupils dropping out before completing primary school is still common. There are various reasons why children leave school (see Table 3.60). These mostly include, I cannot afford schooling (19%) and loss of interest in school as a result of not being good in school (11%).

Table 3.66 Reasons why children leave school in the last 12 months

	Atwima Mponua	Atwima Nwabiagya	Sefwi Wiawso	Wassa Amenfi West	Overall
I have completed My compulsory schooling	28.7	38.7	16.5	19.9	20.6
I am not very good in my studies	15.1	25.7	7.2	38.6	16.4
Parental Negligence	9.1		18.8	5.3	10.7
Awaiting new enrolment	13.6	7.7	8.3	10.5	9.9
I am not interested in school	4.5	15.4	12.5	2.6	8.3
Pregnancy	4.6		6.8	11	6.9
I wanted to learn a job/skill instead	4.5		6.3	10.5	6.6
No special reason	9.1		6.3	5.3	5.8
My family does not allow me to go to s			4.2		2.4
School abuse			4.2	5.3	3.3
I am too old for school				1.4	0.3
I was ill			2.1		0.8
The school is too far			2.1		0.8
Education is not valuable to me		7.7			0.8
I worked for pay				2.6	0.8
My family needed me for the family bus				2.6	0.8
Peer Pressure	4.5				0.8

3.13 Programming

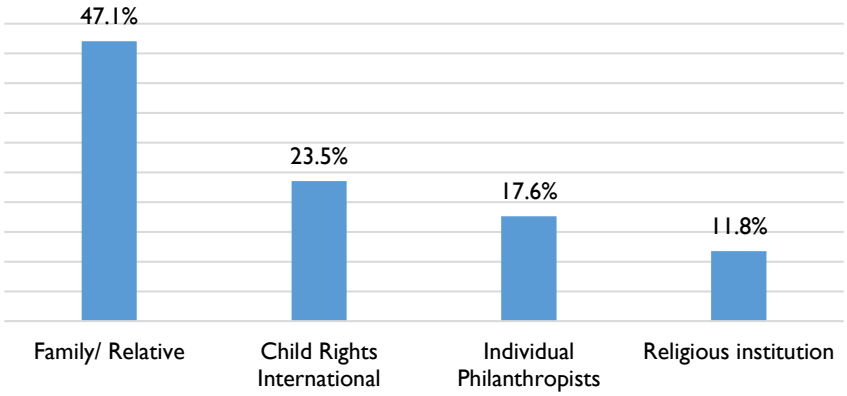
The survey sought to investigate children's involvement or engagement in work, such as formal jobs, internships or self-employed ventures. The findings indicate that only 2% of children aged 5-17 years are currently engaged in formal jobs/internship/self-employment. Only 0.6% of working children reported exposure to physical harm as a result of participating in work.

Table 3.67 Proportion of children currently participating in jobs/internship/self-employment

	Atwima Mponua		Atwima Nwabiagya		Sefwi Wiawso		Wassa Amenfi West		Overall		
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Total
5-12 years	1.3				2.1		0.6	5.7	1.4	1.6	0.7
13-14 years	9.6				11.5		2.4	5.7	7.9	1.6	3.9
15-17 years		10.4			2.6	3.4	3.5	11	2.2	6.2	4.9
Overall	2.1	1.9			3.8	1.1	1.5	3	2.6	1.6	2.0
Forms of work											
Formal jobs			3.3		11.8	6.5	3.9	3	3.9	3	3.5
Internships			5.1	28.9	24.5	6.5	6.7	12.6	6.7	12.6	8.9
Self-employment		18.8	16.6	35.6	13.5		13.8	15.7	13.8	15.7	14.5
Children exposed to physical harm as a result of work currently doing					1.0	0.4	0.6	1.5	0.6	0.6	0.6

Figure 3.7 present data on the proportion of children in the project districts receiving support for their apprenticeship training. It came to light that only one NGO (i.e. Child Right International), individual philanthropist and religious organizations were mentioned as providing support. Many of the children in apprenticeship are being sponsored by their families/relatives.

Figure 4.3 Source of support to children



The baseline study also looked at the proportion of working children who have previously received business start-up kits. At baseline, 0.2% of working children, all females, reported to have received business start-up kits or tools from any source. The types of support received by the children were tools and cash. The support was received in 2015 and 2016; thus, three received the support in 2016 while one person received it in 2015. Majority of the organizations that provided supports are church bodies; namely, Anglican Church and Christ Apostolic church.

Only 6.4 of children were found to belong to youth associations or cooperatives (See Table 3.68). These children were mainly in Sefwi Wiawso district. Most of the associations were found to be religious and school based clubs/associations. The lists of associations or groups include Catholic Youth Organization, Child Right Club, Church Youth Group, Ghana Muslim Mission Youth, Pentecost Youth Association and School Youth Clubs (Football, Scripture Union).

Table 3.68 Proportion of children currently members of youth associations or cooperatives

	Atwima Mponua		Atwima Nwabiagya		Sefwi Wiawso		Wassa Amenfi West		Overall		
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Total
5-12 years	3.2	4.9	0.0	0.0	0	9.4	3.5	0.5	2.4	5.5	3.9
13-14 years	15.5	4.4	0.0	0.0	14.2	9.3	2.3	3.0	10.2	5.8	8.1
15-17 years	0	24.1	0.0	0.0	15.2	24.8	4.3	4.8	9.0	18.4	13.5
Overall	4.3	8.3	0	0	7.7	12.5	1.2	1.7	4.9	8	6.4

3.14 Summary of Indicators

No.	Indicators	Baseline(%)	[95% Confidence Interval}	
1	% of households with at least one child engaged in child labor.			
	Overall	**58.3**	54.5	62.0
	Type of household			
	Male-headed	70.9	65.6	75.6
	Female-headed	72.9	66.1	78.8
	By District:			
	Atwima Mponua	71.2	64.1	77.4
	Atwima Nwabiagya	72.8	63.5	80.5
	Sefwi Wiawso	66.4	59.2	72.8
	Wassa Amenfi West	82.9	76.4 -	87.9
2	% of households with at least one child engaged in hazardous child labor.			
	Overall	**68.4**	63.8	72.7
	Type of household	68.7	63.7	73.3
	Male-headed	67.6	59.8	74.6
	Female-headed			
	By District:			
	Atwima Mponua	68.1	59.0	76.0
	Atwima Nwabiagya	67.9	52.2	80.3
	Sefwi Wiawso	62.9	55.4	69.8
	Wassa Amenfi West	81.6	75.0 -	86.7
3	% of children engaged in child labor.			
	Overall	**58.3**	54.5	62.0
	By Age:			
	5 to 12	47.6	43.6	51.7
	13 to 14	76.0	68.5	82.2
	15 to 17	80.0	75.2	84.1
	By Gender:			
	Boy	63.6	59.6	67.3
	Girl	52.4	47.2	57.6
	By District:			
	Atwima Mponua	58.1	52.3	63.7
	Atwima Nwabiagya	54.3	45.2	63.1
	Sefwi Wiawso	54.1	48.3	59.7
	Wassa Amenfi West	68.9	63.4	73.8
4	% of children working in hazardous child labor.			
	Overall	**54.5**	51.0	57.9
	By Age:			
	5 to 12	43.2	39.5	47.0
	13 to 14	70.3	63.8	76.1

No.	Indicators	Baseline(%)	[95% Confidence Interval}	
	15 to 17	80.0	75.2	84.1
	By Gender:	60.8		
	Boy	47.6	56.8	64.6
	Girl		42.9	52.3
	By District:			
	Atwima Mponua	55.6	49.3	58.8
	Atwima Nwabiagya	51.8	26.1	64.5
	Sefwi Wiawso	49.2	40.9	55.6
	Wassa Amenfi West	66.0	58.4	73.5
5	% of children at high risk of child labor			
	Overall	**39.2**	**36.0**	**42.4**
	By Age:			
	5 to 12	49.9	46.3	53.6
	13 to 14	20.3	15.3	26.5
	15 to 17	18.2	14.3	25.3
	By Gender:			
	Boy	34.5	31.2	37.9
	Girl	44.4	39.6	49.2
	By District:			
	Atwima Mponua	41.1	35.8	46.6
	Atwima Nwabiagya	43.2	35.9	50.8
	Sefwi Wiawso	41.8	37.1	46.6
	Wassa Amenfi West	30.7	25.9	36.0

4. Conclusion and Recommendations

4.1 Conclusions and Recommendations

The baseline findings indicate that MOCA objectives are relevant to the targeted areas and populations. Based on the data collected, only 2.5% of the children in households surveyed are not in child labor or at high risk of engaging in child labor. Thus, over 97.5% of children are either in child labor or at high risk of engaging in child labor. This is compounded by very low outcomes on socio-economic indicators such as

household income (GH¢7,183) and large families (6 persons per household) which are likely to overstretch household resources thus preventing households from removing their children from child labor or continuing to support their stay in school. The low household income in the intervention districts may lay an excessive burden on parents/caregivers. They are therefore likely to be less motivated to remove their children from child labor. The meagre family resources in a poor family are stretched to meet the needs of more members meaning that fewer resources are available for other uses such as paying of labor in place of using their children. Data from the survey also indicates that few households are engaged in production of other cash crops such as palm, rubber, timber among others on a commercial scale. This is further exacerbated by the number of needs that must be met for each member of the household, that is; food, shelter, clothing, and medical expenses among others. Prioritization in the allocation of the said resources will certainly be tilted in favor of the more basic needs and in some cases to the exclusion of education or vocational training.

The MOCA project should deepen the livelihood services to increase household income to address the demand-side bottlenecks influencing engagement of children in child labor which centers on poverty in the project communities. This may include empowerment programs such as the village savings and loans associations (VSLA) as well as exposure to other off-farm income generating activities.

The findings also reveal that female headed households are more economically disadvantaged compared to their male counterparts. This is because they have lower cocoa production compared to male headed households since other cash crops (e.g rubber, palm) are not prevalent in the project districts and even where avalabile are not controlled by them. Rather, the female headed households rely on income from non-cash crops which are not lucrative. The project should therefore target both children in both male and female-headed households as the area-based approach is being adopted by the project.

Considering the high prevalence of child labor and HCL in the project districts, MOCA may consider intensifying the community engagement and sensitization activities to sensitize both parents/caregivers and children on the effect of child labor and hazardous child labor on education, wellbeing and children's' future prospects. MOCA should also ensure learner-centered and gender-responsive vocational training programs to stimulate the interest of older children above the minimum working age to pursue the identified vocation as a career. Vocational training should therefore create a welcoming environment for older child laborers to foster learning, accommodate different learning styles, and motivate students to accept responsibility for skills training.

The findings of the study show that most children in the MOCA project districts who are child laborers in agriculture are involved in hazardous activities which are harmful to their health, safety and wellbeing. In particular, 44% of children in the project districts are using sharp tools in their work in cocoa and other crop agriculture which are also interfering with their schooling. Similarly, activities of children involved in economic activities is 15%. To achieve project results, the MOCA project should evolve activities to sensitize community actors including households, traditional leaders and school authorities on the dangers of usage of sharp tools by children. Also, MOCA should sensitize households on the negative effect of involvement of children in household work in the project communities. These household work activities may interfere with the children's schooling, health and wellbeing.

The study found that hiring of children for farm operations is particularly high in Atwima Nwabiagya compared to other districts. The project should therefore sensitize communities on the negative effects of children for farm operations.

The findings revealed that 3% of children reported applying agrochemicals with a higher proportion of children in Wassa Amenfi West exposed to agrochemicals (13% for males and 7% for females) compared to the other districts. The project should therefore intensify sensitization of communities, especially in Wassa Amenfi on the harmful effects of exposure of children to agrochemicals.

The study found that Atwima Mponua and Atwima Nwabiagya are poorer districts and have relatively low percentage of household employing children. There appear to be some unique factors in Atwima Nwabiagya that lead to high employment of children which may require further probing. This may be due to the fact that Atwima Nwabiagya is very close to Kumasi, the Ashanti regional capital, which is peri-urban in nature. Children in this district are more likely to be involved in economic activities compared to the other districts.

The study also finds that children start work in agriculture at about 8.6 years old within the focus districts. The children start time for agricultural work increases with age. The younger children (5-12 years) reported their initial agricultural working age as 7.4 years while older children (15 -17 years) reported their initial working age as 10.7 years; this is not significantly different from the age children begin work in cocoa. This gives an indication that households are increasingly involving their children in agriculture at an earlier age. The project should include in their program a targeted sensitization to create awareness to assure commitment from the grassroots (employers/users, parents, traditional authority) to appreciate the danger children, especially the youngest, are exposed in the conduct of agricultural work including cocoa activities.

ANNEXES

ANNEX 1

SURVEY QUESTIONNAIRES - I

ANNEX 2

File is attached to the report due to the size

ANNEX 3

Munites of Meeting_with NCLMC_

ANNEX 4

PILOT TEST REPORT - MOCA BASELINE.d

ANNEX 5

Correlations

	Children (under 18 years) workers employed by the household	Adults workers employed by the household	Total income of the household	Literacy rate	Household member ever attended school?	Children/adults employed to work in agriculture	Children/adults employed to work on a cocoa farm	Children/adults employed to work in economic activities other than agriculture	Children/adults employed to work in household work
Children (under 18 years) workers employed by the household	1	-.012	.039*	.017	.002	-.002	-.021	-.018	-.011
Adults workers employed by the household	.c	1	.001	-.024	-.002	.004	-.019	.019	.011
Total income of the household	.039*	.001	1	-.057**	-.033*	-.002	.004	-.059**	-.023
Literacy rate	.017	-.024	-.057**	1	.471**	.113**	.007	.047**	.133**
Household member ever attended school?	.002	-.002	-.033*	.471**	1	-.128**	-.014	-.024	.020
Children/adults employed to work in agriculture	-.002	.004	-.002	.113**	-.128**	1	.c	.197**	.489**
Children/adults employed to work on a cocoa farm	-.021	-.019	.004	.007	-.014	.c	1	-.041*	-.035*
Children/adults employed to work in economic activities other than agriculture	-.018	.019	-.059**	.047**	-.024	.197**	-.041*	1	.214**
Children/adults employed to work in household work	-.011	.011	-.023	.133**	.020	.489**	-.035*	.214**	1

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

c. Cannot be computed because at least one of the variables is constant.

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